



**Proposing a framework to support
intrapreneurial behaviour for improved
performance: A case of Botswana's large tertiary
education institutions**

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DECLARATION

I, Moono Millie Muungo Kapambwe with ID number ZP014553 and student number 31428010, hereby declare that this thesis submitted for this degree is my own work.

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ABSTRACT

This study aims to establish ample supporting empirical evidence for encouraging intrapreneurial behaviour in large tertiary education institutions in Botswana. Through this evidence, the study seeks to establish intrapreneurship as a strategic approach that can help large tertiary educational institutions enhance performance. Despite the Government of Botswana's investment of considerable resources in the development of human resources, there continue to be several challenges in the tertiary education institutions, which are regarded as a vital sub-sector of the economy. These include the mismatch between the supply and demand of skills in the economy, the insufficient development of human resources and the lack of specialised skills, the declining performance of students, the low levels of productivity among the labour force and very little collaboration between the institutions and the industry. The various interpretations of the importance of support for intrapreneurial behaviour enabling tertiary education institutions to seize opportunities and manage the challenges have to be studied. These interpretations provide in-depth insight into the nature of the support for and the organisational outcomes of intrapreneurial behaviour among academics in the purposively sampled tertiary education institutions. This will assist the researcher in developing a framework for supporting intrapreneurial behaviour for improved performance in tertiary education institutions.

The **methodology approach** that will be followed in this study is the qualitative research method. Semi-structured interviews will be used to collect the data, and the manual qualitative data analysis process will be applied.

Research limitations of this study included the very few prior research studies on the intrapreneurial phenomenon, especially in academia, where Botswana is concerned. This presented a limitation in laying a foundation for understanding the context of the research problem under investigation. Hence, literature on the support for intrapreneurial behaviour in other African universities, in countries such as South Africa and Nigeria, provided a reliable and adequate reference point.

The **findings** of this study will contribute to the literature on the nature and importance of the entrepreneurial university and academic entrepreneurship or intrapreneurship and

how to define and support intrapreneurial behaviour in universities to enhance performance. Furthermore, this study will clarify the pathways for applying the entrepreneurial university model. The nature of the intrapreneurial behaviour in the universities and top management's support for it has produced explicit results in innovation, strategic business renewal, organisational performance and productivity, and this study will provide this empirical evidence. The participants' lived experiences in their respective universities have been analysed to ascertain top management's deliberate efforts to facilitate and promote the academics' entrepreneurial initiatives. Most of the participants reported the existence of university support for process improvement, initiatives, business development, revenue generation and the enabling of industry engagement guided by developed policies and strategies. Further, the behavioural traits of high and low-performing intrapreneurial academics in the context of each participating university were provided. Finally, apart from the internal environmental factors, the external environmental factors that influence and impact intrapreneurial behaviour, the hindrances and challenges faced in the support for intrapreneurial behaviour, and the participants' advice and recommendations to overcome these have been recorded to answer this study's primary and secondary objectives. Further research is recommended on the micro-foundations of the Entrepreneurial University and its faculty members' engagement in the third mission.

Keywords: Intrapreneurship/Corporate entrepreneurship, Academic entrepreneurship, Entrepreneurial University, Intrapreneurial behaviour, Intrapreneurial academic, Tertiary Education Institutions/Higher Education Institutions/Universities, Organisational performance

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LIST OF ABBREVIATIONS

BG	Botswana Government
CE	Corporate Entrepreneurship
EA	Entrepreneurial architecture
EO	Entrepreneurial orientation
EU	Entrepreneurial University
ETSSP	Education and Training Sector Strategic Plan
HEIs	Higher Educational Institutions
HRDC	Human Resource Development Council
IB	Intrapreneurial behaviour
KTOs	Knowledge Transfer Offices
NDP	National Development Plan
OP	Organisational performance
TEP	Tertiary Education Policy
THM	Triple Helix Model

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CHAPTER ONE: NATURE AND SCOPE OF THE STUDY

“What we need is an entrepreneurial society in which innovation and entrepreneurship are normal, steady and continuous. So, innovation and entrepreneurship have to become an integral life-sustaining activity in our organisations, our economy, our society.”

(Peter Drucker, 1985:236).

1.1 INTRODUCTION

According to Özbozkurt (2019:1087), intrapreneurship is a growing field of research that refers to a firm-level vision built on intrapreneurial behaviour (IB) to intentionally and perpetually renovate the company. This aims to frame its range of business ventures by recognising and exploiting entrepreneurial possibilities. The reliance on intrapreneurial behaviour suggests that employees' corporate entrepreneurial skills and competencies take on a new significance (Blanka, 2018:2). Employees are viewed as entrepreneurs within an organisation or intrapreneurs who are instrumental in attaining strategic organisational goals and targets (Eze *et al.*, 2018:39). Intrapreneurship's importance is therefore in the intrapreneur's ability to develop innovative ideas and products, which ultimately improves organisational performance and growth (Ogidi, 2014:19). Intrapreneurship is thus crucial for organisational renewal and sustainable competitive advantage through its inception of novel ideas (Klofsten *et al.*, 2021). Organisations need to achieve innovation to attain competitiveness in today's increasingly globalised economy (Kuratko & Audretsch, 2013; Bierwerth *et al.*, 2015). Consequently, organisational innovation and efficiency have become very critical (Naveed *et al.*, 2022:1).

Based on the potential for organisational growth and survival that intrapreneurship offers, the need to understand this strategic concept is becoming greater for large organisations. Further, organisations that were not traditionally known as being entrepreneurial, such as education institutions, are now expected to orient themselves towards intrapreneurship or corporate entrepreneurship (Cantaragiu & Hadad, 2014:833). These educational organisations seek to adjust to today's rapidly

changing markets, consumer tastes, competition, and technologies that require them to support an innovative culture. This culture will enable educational organisations to respond quickly in order to attain objectives and adapt faster than competitors (Gursory & Guven, 2016:152; Olughor, 2014:9). Consequently, interest in intrapreneurship has been growing in the academic context for the inception of new ideas, opportunities and innovation as a means for addressing societal and national needs (Audretsch *et al.*, 2021; Guerrero *et al.*, 2021).

Entrepreneurship and innovation are clearly considered enablers of survival, growth and competitiveness for these organisations in the 21st century (Burns, 2016). Both practitioners and academics accept corporate entrepreneurship or intrapreneurship as the genuine way to improve organisational performance and competitive strategy (Hayton *et al.*, 2013:381; Hadad, 2015). Intrapreneurship activities include risk-taking, pro-activeness, and radical product innovations, which improve organisational growth and profitability over time, depending on an organisation's competitive environment (Farrukh *et al.*, 2016:598). Intrapreneurship, as a broad concept, is the process of organisational renewal (Lekmat & Chelliah, 2014:181), which is attained when organisations require their members to carry out commitments of an innovative mindset (Gursory & Guven, 2016:152).

Intrapreneurship can be perceived as a significant driver of innovative performance because it increases employees' abilities to identify and exploit new ideas, new strategies for business expansion and new business models for operating an existing business (Lambert, 2016). Intrapreneurship is further developed by members of an organisation who make the most of all production factors. Intrapreneurship must be adopted and internalised by employees who look for opportunities and innovations to attain organisational goals and objectives (Gursory & Guven, 2016:152).

The intrapreneurial phenomenon thus refers to an ordered series of actions by which an existing organisation conceives new business opportunities distinct from the current organisation (Piening & Salge, 2015:80). Intrapreneurial activities move an organisation in a new direction. However, most organisations, especially tertiary education institutions, tend to be inert, bureaucratic and resistant to change in their climates and cultures. This renders them unable to identify and benefit from new

business opportunities (Baruah & Ward, 2014:8). Yet, these organisations possess marked advantages such as branding, efficiency, supply networks and finance that they could leverage to survive and succeed in increasingly competitive environments (Bosch & Duysters, 2014:13).

Tertiary education comprises complex institutions mandated to develop human skills needed to increase an economy's production capacity and competitiveness in global markets (Gennaioli *et al.*, 2013:105). Universities worldwide have become centres for innovation and entrepreneurship as they produce successful ventures with economic benefits (Guerrero *et al.*, 2016). The research and high-level workforce in universities are vital for attaining national goals (Macarthy & Yang, 2017:1). How tertiary education institutions, such as universities, operate and reconstruct their roles remains an interesting area for research (Cunningham & Link, 2015).

As governments endeavour to develop knowledge economies in the 21st century, tertiary education institutions are expected to adopt entrepreneurial activities and business approaches for their research findings to birth knowledge-based businesses (Sambo, 2018:193). Governments adopt policies and strategies that include mobilising universities as stimulants for innovation, competitiveness, and economic growth (Audretsch, 2014; Urbano & Guerrero, 2013). In tandem with other national governments, the Botswana government (BG) has invested significantly in education and skills development, which receives a large share of the funding in the national budget. Over the past two decades, more than 25 % of the total annual budget has been allocated to the education sector. The aim is to provide quality and relevant education (Unicef, 2017:2).

The Botswana government further developed the Education and Training Sector Strategic Plan (ETSSP, 2015-2020) in May 2015, which aims to reform the human development landscape and address poor performance issues in the sector. The education sector, specifically tertiary education, faces many challenges, including the need to match the skills produced by the education system with the needs of the economy (NDP 11, 2016:54). To address these challenges, tertiary institutions are expected to embark on new strategies and reforms, which include: revision of curricula; up-skilling and motivation of lecturers; matching training with industry

needs; providing programmes that will develop skills in areas that have been identified as critical to improve the performance of Botswana's economy and increasing the use of technology. These reforms aim to improve the quality of graduates who will contribute positively to economic growth in all the key sectors of Botswana's economy (NDP 11, 2016:68).

The Botswana government expects the improvements in the quality of education to fast-track the country's move from a factor-driven to a knowledge-based economy (NDP 11, 2016:68). This places a demand on tertiary education institutions to become more entrepreneurial in providing education and training services by creating organisational environments where entrepreneurs and intrapreneurs can thrive (Pablos, 2013:108; Nicholson *et al.*, 2016).

Intrapreneurship, or Corporate Entrepreneurship (CE), can thus present tertiary educational organisations with the opportunity to transform their businesses to meet the demands of the Botswana government. The phenomenon involves entrepreneurial activities such as innovation, venturing, and strategic renewal, which bring about revitalisation and improved organisational performance (OP) (Sakhdari, 2016:5). Further, Baruah and Ward (2014:9) recommend that diverse universities and organisations be encouraged to generate more attention to the use of intrapreneurial approaches in innovation growth and the improvement of their curriculum and programs.

Intrapreneurship's potential to renew organisations through innovation-based initiatives has increased interest in perpetuating it within established organisations (Corbett *et al.*, 2013:812). According to Gundogdu (2012:63), intrapreneurship has become more recognised in the past three decades, focusing on inspiring managers and individual employees to be entrepreneurial by using innovation to obtain profit and growth. Intrapreneurship has thus become a vital aspect of organisational development, an activity of individual employees and a management tool (Sijde & Veenker, 2013:25). This study aimed to establish ample supporting evidence for encouraging intrapreneurial behaviour, specifically in tertiary education institutions. Therefore, the study's contribution will aid Botswana's large tertiary education institutions to design and sustain internal environments that support the

entrepreneurial mindsets of employees. This will ensure much-needed innovation and improved performance in training graduates who will drive Botswana's knowledge economy.

The rest of this chapter presents the underlying theory of the intrapreneurship phenomenon to identify the dimensions that encourage intrapreneurial behaviour. The importance of intrapreneurial behaviour for the improvement of organisational performance is stressed. The underlying theory also provides an overview of intrapreneurial behaviour in tertiary education institutions. This chapter includes the problem statement, the research objectives, and the research questions. It also covers the scope of the study, which encompasses the field of the study, the sector and institutions under investigation, and the geographical demarcations of the study. The chapter further presents the research methodology and the study's empirical aspects, including the research paradigm, the research design, the data collection protocol, the data gathering procedure, the study population, the sample and the data processing and analysis. The limitations of the study, the contributions of the study, and the ethical considerations to be made are also included in this chapter. The chapter concludes with the layout of the rest of the study and a summary of the key points of this study.

1.2 BACKGROUND OF THE STUDY

This section synthesises the reviewed literature that explains the intrapreneurship phenomenon. It includes a presentation of the various synonyms and definitions of intrapreneurship. It further highlights the importance and role of intrapreneurship in organisational success, specifically in tertiary educational institutions. The dimensions that support intrapreneurial behaviour are also identified and discussed.

1.2.1 Intrapreneurship

Peterson and Berger first introduced the idea behind intrapreneurship in 1971. According to Sakhdari (2016:5), this concept was introduced as a strategy and leadership style taken up by large organisations to survive the increasing market instability. Sakhdari further explains that the concept only attracted focused research

interest in the early 1980s. Intrapreneurship was, however, first defined by Pinchot in 1985 as innovation in an already existing organisation (Sakhdari, 2016:5). Pinchot introduced the concept of 'intrapreneur' to draw attention to internal entrepreneurship in organisations. The focus was on intrapreneurs' abilities to turn knowledge into new opportunities (Stokvik *et al.*, 2016:350). Intrapreneurs are seen as "dreamers" who assume the responsibility for creating different kinds of innovation within existing organisations (Gundogdu, 2012:63).

Entrepreneurship and management literature has been increasingly focused on this phenomenon of entrepreneurship within existing organisations, usually referred to as 'Intrapreneurship', 'Corporate Entrepreneurship', or 'Corporate Venturing' (Bosma *et al.*, 2013). This phenomenon has received a wide range of definitions that have evolved over the past five decades. In the 21st century, the concept refers to "a firm's efforts to establish sustainable competitive advantages as the foundation for profitable growth" (Ahmetoglu *et al.*, 2017:296). Intrapreneurship enables organisations to attain a competitive advantage as it flourishes on individual employees opting to take up new opportunities and assuming the responsibility to influence creative change (Obeidat *et al.*, 2014). These individuals, referred to as Intrapreneurs, are drivers of innovative products and services because they are constantly thinking of the next step in the future. They are passionate change agents who bring transformation to the whole organisation by being highly engaged, clear, and consistent in their work (Govindarajan & Desai, 2013:1-6).

Intrapreneurship provides an environment for intrapreneurs to sharpen their skills by building the infrastructure needed to engage in, support and sustain entrepreneurial thinking and action that sets the stage for innovation over time in the entire organisation (Schawbel, 2013). This is vital for improved organisational performance and, consequently, financial performance for the survival and sustainability of organisations in these times of increasing competitive pressure (Falola *et al.*, 2017:9). Based on this knowledge, this study seeks to establish intrapreneurship as a strategic approach that can help large tertiary educational institutions in Botswana to enhance performance, especially because many such organisations unknowingly marginalise their innovation efforts and create obstacles to the same growth they are seeking.

Therefore, there is an urgent need for these tertiary educational institutions to establish and maintain practices that encourage intrapreneurship. To compete effectively in today's global markets, these organisations must build their activities around continuous innovation of products/services, administrative processes and structures. Governments and managers admit that innovation is essential for accelerating organisational change in today's global economy and excelling in the 21st century.

1.2.2 Intrapreneurial elements/practices

It is understood that organisations have elements or practices that need to be managed to enhance corporate innovative or entrepreneurial capabilities (Kuratko *et al.*, 2014). Existing literature has covered various practices or intrapreneurial dimensions that organisations can use to encourage innovation, and these include reward systems, management support, managerial autonomy, freedom and independence to implement new ideas, transparency and open communication; and training programmes (Porcar & Soriano, 2018:113; Kuratko *et al.*, 2014:38). Adopting these practices stimulates organisations to achieve cultural changes favouring innovation, a vital element of the intrapreneurship phenomenon.

Outside the organisation or in the external environment exist forces and elements that also affect an organisation's intrapreneurial capabilities outside its boundaries. These elements comprise the institutional, legal and administrative context (Fernandez-Nogueira *et al.*, 2018). They refer to government and public administrations' facilitation of and participation in entrepreneurial activities through legislation, financing, and the provision of public infrastructures (Bezanilla *et al.*, 2020). The government's role is to create financing procedures for entrepreneurship education, forming university spin-offs and developing entrepreneurial programmes, activities and initiatives (Errasti *et al.*, 2018).

Intrapreneurship is an essential form of corporate innovation, whether influenced internally or externally. It is a process that can stimulate organisations to innovate and act entrepreneurially constantly, be revitalised, increase productivity, and create a superior market advantage that enables them to cope effectively in the competitive

global markets (Karimi & Walter, 2016; Zahra, 2015). Implementing the practices listed above can be complex and time-consuming but, if favoured by management, can yield trust, respect and appreciation of the intrapreneurs (Kuratko *et al.*, 2014:38). This kind of change is vital in an organisation as it prevents bureaucratisation and rigidity, exposing organisations to Shumpeter's creative destruction element. Therefore, intrapreneurial activities lead to emergent behavioural intentions and organisational behaviours related to departures from the customary (Stokvik *et al.*, 2016:350).

Kuratko *et al.* (2014:38) explain that all organisations deal with times that demand innovative vision, courage, calculated risk-taking, and strong leadership. There is a need to deviate from prior routines, strategies, business models and operating environments in which individuals are not free to carry out activities and initiatives due to rules (Kuratko, 2014:68). However, organisations must understand the strategic importance of intrapreneurship for this to happen. According to Alt and Craig (2016), individual employees' intrapreneurial behaviour influences organisational performance. However, this is subject to the organisational constraints under which an intrapreneur acts. Therefore, an organisation can enable or inhibit an intrapreneur's attitudes, behaviour and actions (Neessen *et al.*, 2018:565).

Establishing and perpetuating intrapreneurial activities is thus difficult for organisations mainly because these activities are not inherently cumulative, productive or strategically relevant (Kuratko *et al.*, 2014). Organisations struggle with identifying the right strategies to initiate innovative activities among their employees (Kuratko *et al.*, 2014). However, organisations are supposed to achieve a competitive advantage in today's business environment. In that case, managers must integrate entrepreneurial activities in all organisational strategies and create work environments conducive to initiating and sustaining innovation and entrepreneurial behaviours (Kuratko *et al.*, 2014). In such internal environments, individual employees become willing and able to act on their personal innate entrepreneurial capabilities (Neessen *et al.*, 2018).

Intrapreneurship is done well by enabling employees to identify and exploit highly creative business ideas on radical innovations, making change permanent through

organisational learning and unlearning in knowledge-intensive organisations (Blanka, 2017:22). Practical intrapreneurial activities are inclusive. They invade corporate traditions, resulting in strategic renewal, which is a requirement in today's information and innovation age (Anton, 2016). This is possible because intrapreneurship is "an activity-based concept that takes the organisational products and services, technologies, structures or operations into new directions" (Baruah & Ward, 2014:3).

Intrapreneurship brings an understanding that the key to sustainable transformation will come through the democratisation of innovation. This will be facilitated by organisations that decide to embrace and reward employees who generate new ideas, examine and learn from them as they perform their day-to-day duties, not only when they are executing special projects (Baruah & Ward, 2014:3). This indicates that goal-achieving behaviour is characterised by efforts to address organisational complexities and achieve certain objectives by performing efficient actions (Srivastava, 2013). All these are characteristics of an entrepreneurial culture. According to Ireland *et al.* (2003:975), an entrepreneurial culture is one in which novel ideas and creativity are expected, risk-taking is promoted, failure is tolerated, learning is encouraged, product process and administrative innovativeness are supported, and continuous change is viewed as a bearer of opportunities.

This study explored how five practices promoting intrapreneurial behaviour are implemented to encourage intrapreneurial behaviour in Botswana's tertiary education institutions. The specific intrapreneurial practices, which are also key elements of an organisation's internal environment, are adopted from Kuratko *et al.* (2014:39) and are as follows: Top management support, Work discretion or Autonomy, Rewards or Reinforcement, Resources in terms of time availability as well as financial resources and Organisational boundaries. This study further explored the role of external organisational dimensions in promoting intrapreneurial behaviour. These dimensions include changes in technology, changes in student numbers and demographics, changes in government regulations, changes in the number and type of competitors, changes in the number and types of local and international partnerships and the level of organisational growth. These internal and external dimensions are vital to achieving continuous and comprehensive innovation and improved performance among tertiary education institutions.

1.2.3 Intrapreneurial behaviour (IB) in tertiary education institutions

Large tertiary education institutions, just like many large organisations, do not typically behave entrepreneurially and struggle to promote intrapreneurial activities (Sambo, 2018:193). The majority of academic professionals are convinced that if they adopted entrepreneurial initiatives, their more fundamental university qualities, such as critical inquiry, intellectual integrity and commitment to learning and understanding, would be lost (Rizk & Azzazy, 2016:98). Academic professionals do not see themselves as entrepreneurs but as teachers and researchers. Further, most academic managers are more concerned about having their key staff involved in entrepreneurial activities and the possible negative effects this may have on the research performance of their institutions (Hadidi & Kirby, 2016:141).

However, the tertiary education sector in Botswana is currently facing increasing competitiveness as the number of tertiary education providers (both public and private) has been steadily growing (NDP 11, 2016; HRDC, 2015). Therefore, this demands management in these institutions to support intrapreneurial activities within their organisations to attain sustainable competitive advantages.

Further, the tertiary education institutions are mandated to develop Botswana's human capital as the country endeavours to develop a knowledge economy. The government expects tertiary education institutions to improve their research and innovation capacities by training market-ready graduates to influence an entrepreneurial and prosperous society. The tertiary education institutions are to align their research and education standards to a culture of innovation in the country (Vision 2036, 2016; NDP 11, 2016:54).

The growth of an economy and the knowledge society is the result of four interconnected aspects: the generation of new knowledge, its dissemination through education and training as well as through information and communication technologies and their use in industrial processes or services of the new kind (Cillo *et al.*, 2015:129).

Tertiary education institutions as hubs for research, innovation and education, therefore, hold the keys to developing economies and knowledge and entrepreneurial societies (European Commission, 2004; Hoskinson & Kuratko, 2014:29). According to Guerrero *et al.* (2016), academia has contributed to economic development through entrepreneurial education, opportunity recognitions and intention, the creation of spin-offs, technology transfers, and science parks incubators as well as the establishment of relationships with the industry. This has resulted from the changing nature of universities in terms of content, structure, governance and strategies as multiple stakeholders continue to shape the university model (Miller *et al.*, 2014).

Therefore, tertiary education institutions are expected to adapt to intrapreneurial activities to repeatedly regenerate themselves if they fit into current markets, remain sustainable, and promote entrepreneurial activities in communities (Sambo, 2018:193). This is critical because Botswana, like other African countries, is making notable investments in entrepreneurial education and eco-systems to boost start-ups and efficacious entrepreneurial learning despite continuous resource challenges and business sustainability issues (Sheriff & Muffatto, 2015). Further, the infrastructural and institutional challenges hinder the growth of intrapreneurship as innovation tends to be considered risky by the managers in organisations in such market conditions (UNDP, 2017).

More specifically, Botha and Nyanjom (2011) found out that intrapreneurship orientation in Botswana is affected by a wide range of barriers, such as organisational structures, policies and procedures, established control systems, management, leadership and organisational culture. All these internal organisational factors determine the nature of prevailing support for intrapreneurship (Stam & Spigel, 2016:7). Kuratko *et al.* (2014:39) recommend that establishing an internal environment conducive to individual entrepreneurial activity must be supported by managers who conduct proper assessments of the key intrapreneurial dimensions. Managers must measure the existence of support for these elements and how employees perceive them. Kuratko *et al.* (2014:39) further recommend that managers fully commit to establishing intrapreneurial behaviours.

This study focused on the potential for intrapreneurial systems to renew organisations through innovation and how this phenomenon can be maintained as a vital activity for growth-oriented businesses. It further focused on enhancing the understanding of specific dimensions that must be implemented to promote intrapreneurial behaviour and improve performance in Botswana's large tertiary education institutions. There are two implications of this study. Firstly, large tertiary education institutions will obtain information on the prevailing status of intrapreneurial behaviour in their organisations and how it affects their relevance, competitiveness and survival. Secondly, they will have practical information on successfully implementing the dimensions that promote intrapreneurial behaviour for better organisational performance. The tertiary education institutions will understand the multi-level nature of intrapreneurship and the value of stimulating how the internal and external organisational dimensions influence intrapreneurial employee behaviour and organisational outcomes (Kuratko *et al.*, 2014:39; Neessen *et al.*, 2018).

1.3 PROBLEM STATEMENT

The tertiary education institutions in Botswana have not been able to sufficiently produce a highly skilled and productive workforce (Vision 2036, 2016). This is even though considerable resources have been invested in developing Botswana's human resources (NDP 11, 2016:54).

There continue to be several challenges in this sub-sector of the economy. These include, among others, the mismatch between supply and demand of skills in the economy; the insufficient development of human resources and the lack of specialised skills; the declining performance of students, the low levels of productivity among the labour force and very low collaboration between the institutions and the industry (NDP 11, 2016).

The NDP 11 (2016) highlights a clear need for tertiary institutions to produce a globally competitive human resource based on identifying demands in the labour market. In this context, this study aimed to establish evidence supporting intrapreneurial behaviour among Botswana's tertiary education institutions to successfully attain the much-needed improvements in organisational performance.

Training institutions urgently need to identify and develop priority skills to produce market-ready graduates. A critical need exists for these institutions to develop human capital and make it more effective and relevant to the needs of Botswana and the global economy (HRDC, 2015). As such, tertiary institutions are seen as knowledge hubs (Youtie & Shapira, 2008:1188) that focus on the commercialisation of knowledge and research findings (Roessner *et al.*, 2013), yet they are faced with the related challenges and opportunities of technology transfer (Owen-Smith & Powell, 2003:1695) for economic development. Therefore, this study explored the various interpretations of the importance of support for intrapreneurial behaviour, enabling tertiary institutions to seize opportunities and manage the challenges.

Literature has paid much attention to intrapreneurship. Many organisations have not fully explored the opportunities to engage their employees' intrapreneurial potentials profusely as well as to provide the environment for the proper development of intrapreneurial activities (Falola *et al.*, 2017:10; Kuratko *et al.*, 1990, 2001; Hornsby *et al.*, 2009; Kuratko *et al.*, 2014). Specifically, tertiary education institutions, seen as major sources of the skills and knowledge that support economic growth and innovation (Kruss *et al.*, 2016), need to make changes that will enable them to create entrepreneurial thinking to stimulate business creation and exploit ideas in the economy. The prevailing challenges faced in the tertiary education sector in Botswana (Vision 2036, 2016) indicate this need and confirm that the existing strategies for improved organisational performance and growth in many of these organisations need to be aligned with intrapreneurial possibilities.

These organisations need to have an authentic and genuine entrepreneurial mindset and the infrastructure necessary to support their work and what they do. This supports intrapreneurs' key contributions to sustainable, innovative and transformational initiatives for improved organisational performance as they know and accept their organisational goals (Boon *et al.*, 2013:211; Jairam, 2016:1).

Kuratko *et al.* (2014) explain that innovation is thriving in organisations where the intrapreneurial potential of employees is identified and developed. However, managers fail to promote internal environments that support intrapreneurial activities. In line with this, the Botswana government calls for quality and relevant training

programmes to produce efficient and effective human resources. The government is working to improve the capacity of research and innovation to build an entrepreneurial and prosperous society (Vision 2036, 2016). This is the role that tertiary educational institutions are expected to assume urgently despite the challenges they are faced with.

Botha and Nyanjom (2011) identified the need to establish determinants encouraging intrapreneurship in Botswana. The study proposed the promotion of intrapreneurship as a means for employees in corporate organisations to pursue innovation within corporate borders. It identified the need to establish systems and structures that do not work against the intrapreneurship inherent in organisations. It clearly stated that organisations in Botswana must provide avenues for employees to act entrepreneurially without hindrances.

Further, in the country's Vision 2036, the Government of Botswana has advocated for organisational competitiveness, productivity and efficiency and the unleashing of the entrepreneurial spirit of the people through education and training (Vision 2036, 2016). This confirms the urgent need for intensive service and product (programme) innovations or intrapreneurial activities among tertiary education institutions that lead to economic developments (Guerrero *et al.*, 2016).

Therefore, this study aimed to explore the nature of the support for and the organisational outcomes of intrapreneurial behaviour among employees in Botswana's tertiary education institutions. This study thus looked into how dimensions of the internal and external environment that influence intrapreneurial behaviour can be better promoted to encourage intrapreneurial behaviour for improved performance among Botswana's tertiary education institutions. The outcome of this study was to propose a framework to support intrapreneurial behaviour for improved performance in these education institutions in Botswana.

1.4 RESEARCH OBJECTIVES

The purpose of this study is defined under primary and secondary objectives, which are as follows:

1.4.1 Primary objective

The primary objective of this study was to develop a framework based on the nature of the support for intrapreneurial behaviour and the organisational performance outcome among Botswana's large tertiary education institutions.

1.4.2 Secondary objectives

The following secondary objectives of this study are presented in three categories: literature review objectives, empirical study objectives, and the conclusions and recommendations objectives.

1.4.2.1 Literature review objectives

The literature review objectives of this study were:

- To provide a general review of intrapreneurship, intrapreneurial behaviour and intrapreneurship in tertiary education (*Chapter two*).
- To present relevant and up-to-date information on the challenges faced in Botswana's tertiary education sector (*Chapter two*).
- To examine the association between entrepreneurship, intrapreneurship and organisational performance (*Chapter two*).
- To review the literature on the dimensions of an organisation's internal and external environment that influence intrapreneurial behaviour (*Chapter three*).
- To review the literature on the outcomes of the support for intrapreneurial behaviour's elements on organisational performance (*Chapter two and chapter three*).
- To examine the literature on the entrepreneurial university globally and in Botswana (*Chapter four*).
- To review the challenges in supporting intrapreneurial behaviour among academics and in implementing the entrepreneurial university concept (*Chapter four*).
- To review the research process and design an appropriate research approach for the collection of primary data (*Chapter five*).

1.4.2.2 Empirical study objectives

The empirical study objectives were:

- To obtain insight into the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions.
- To explore the interpretations of the importance of support for intrapreneurial behaviour in Botswana's large tertiary education organisations.
- To identify the internal and external environment factors that influence the support for intrapreneurial behaviour in Botswana's large tertiary education organisations.
- To describe the significant challenges experienced in supporting intrapreneurial behaviour in Botswana's large tertiary education organisations.
- To explore intrapreneurial behaviour's contribution to the improvements in organisational performance.
- To generate recommendations on supporting intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and enhancing performance through intrapreneurial behaviour within Botswana's large tertiary education organisations.

1.4.2.3 The conclusions and recommendations objectives

The following objectives guided the drawing of this study's conclusions and recommendations:

- To interpret the study's findings and conclude how the nature of intrapreneurial behaviour in Botswana's tertiary education institutions contributes to improved organisational performance.
- To conclude on the strategic practices that can be supported to enhance intrapreneurial behaviour in Botswana's tertiary education institutions.
- To recommend a framework that will enable tertiary education institutions to understand the multi-level nature of intrapreneurship and how these links make a process that enables intrapreneurial behaviour and organisational performance.

1.4.3 Research questions

The overall research questions were thus formulated as follows:

- What is the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions?
- What are the managers' interpretations of the university's support for intrapreneurial behaviour in Botswana's large tertiary education organisations?
- What are the internal and external environmental factors that influence the support for intrapreneurial behaviour?
- What are the major challenges experienced in the support for intrapreneurial behaviour?
- How does intrapreneurial behaviour contribute to improvements in organisational performance?
- What are the recommendations for improving support for intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and improving performance through intrapreneurial behaviour?

1.5 SCOPE OF THE STUDY

The scope of this study was as follows:

1.5.1 Field of the study

The study field of this research is intrapreneurship or corporate entrepreneurship. According to Stokvik *et al.* (2016:349), intrapreneurship refers to the system of an organisation's innovative processes, proactive behaviour and willingness to take up risks. It emphasises the building of intrapreneurs who can use patterns of recognition and mental risk maps as they perform intrapreneurial activities.

1.5.2 Sector under investigation

The sector under investigation is Botswana's tertiary education or higher education and training sector, which is responsible for developing human skills needed for both the local and global markets. This sub-sector of Botswana's economy has seen improvement and growth after introducing the new Tertiary Education Policy (TEP) by the Botswana Parliament in April 2008. This new policy improved coordination and promotion of the tertiary education sub-sector as Botswana embarked on improving the educational attainment of her people through the vision to move the country towards a knowledge society (HRDC, 2015).

1.5.3 Geographical demarcation

In terms of geographical demarcation, this study focused on the large tertiary education organisations in Gaborone, the capital city of Botswana. Most of Botswana's large tertiary education institutions are located in Gaborone. The map of Botswana on the next page indicates the location of Gaborone.

Figure 1.1: Map of Botswana



Source: Public Domain, <https://commons.wikimedia.org/w/index.php?curid=183918>

1.6 RESEARCH METHODOLOGY

This study was conducted in two phases. The first phase was the literature review on intrapreneurship, which was conducted to clearly understand this phenomenon and the elements or practices of an organisation's internal and external environment that influence intrapreneurial behaviour. Further, the literature on intrapreneurship in tertiary education institutions, the entrepreneurial university concept and the tertiary education sector in Botswana provided further understanding of how intrapreneurship enables improved organisational performance.

The second phase was an empirical study evaluating the existing support for intrapreneurial behaviour in Botswana's large tertiary education institutions and the consequent improvements in organisational performance.

1.6.1 Literature/theoretical study

According to Onwuegbuzie and Frels (2016:9), a literature review is an informative evaluation of primary research at one or more stages of the research process. Therefore, it provides a comprehensive understanding of the knowledge on a topic and the context of the study. As such, this literature review aims to better understand the intrapreneurship phenomenon, the existence of support for it in tertiary education institutions, and the impact of intrapreneurial behaviour on organisational performance.

Based on the literature review objectives, this study first reviewed the literature on intrapreneurship or corporate entrepreneurship to gain in-depth insight and knowledge on the subject matter. Secondly, existing literature was reviewed to highlight the dimensions or practices of an organisation's internal and external environment that influence intrapreneurial behaviour or an entrepreneurial mind among employees. As such, literature on the entrepreneurial university phenomenon was extensively reviewed. Emerging issues on best practices were also identified. Thirdly, the literature review provided insight into the existence of support for intrapreneurial behaviour in tertiary education and the reasons for the support or the lack thereof. Further, literature on the consequent impacts on organisational

performance was explored. Literature on tertiary education in Botswana and the existence of support for intrapreneurial behaviour was also reviewed.

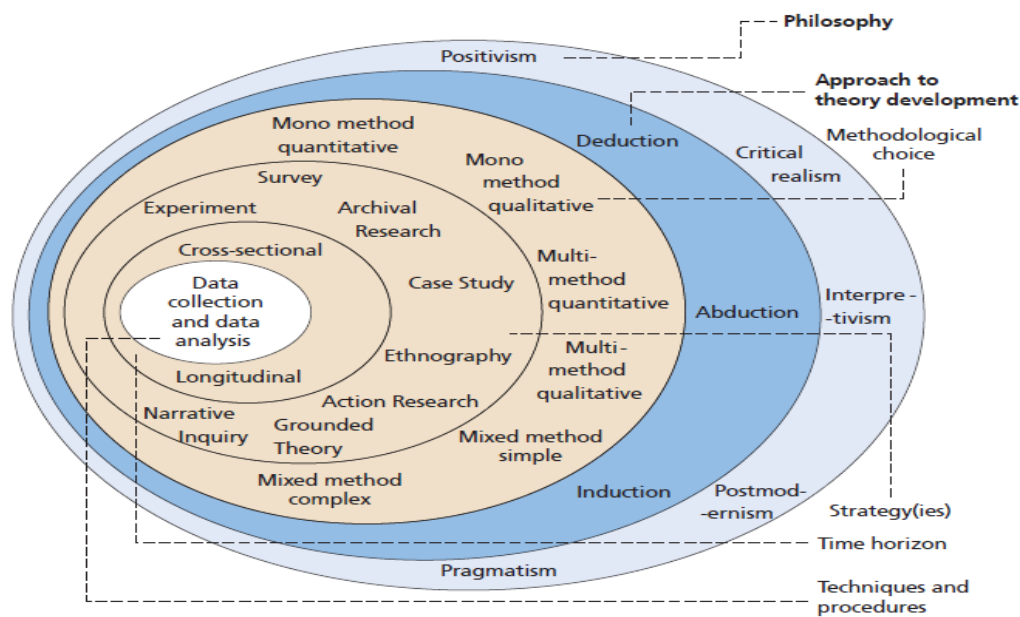
The following keywords were used in the literature search: Intrapreneurship, corporate entrepreneurship, intrapreneurship in organisations, intrapreneurship and organisational performance, entrepreneurial universities, intrapreneurship in tertiary education and intrapreneurship in Botswana. Different search engines were used to review the literature, and sources that were consulted include, but are not limited to, the following:

- Peer-reviewed journals
- Reports, including Botswana's strategic visions 2016, 2036 and the 11th National Development Plan
- Internet searches to explore prevailing issues on intrapreneurship, intrapreneurship and organisational performance and entrepreneurial universities.
- Books and other published materials on the topic of this research study.

1.6.2 Empirical study

The empirical part of the study aimed to develop an in-depth understanding of the existence of support for intrapreneurial behaviour among Botswana's tertiary education institutions and the consequent improvements in organisational performance through a suitable research paradigm, research approach, interview structure, study population, sample, sampling procedure, data gathering procedure and data analysis. This being a qualitative study, the trustworthiness of qualitative research was also covered in this section. According to Saunders *et al.* (2009:108), this part of the research process can be depicted as an onion with several layers and approaches that must be coherently used when conducting research. The diagram below shows that the research onion's contents include the research philosophy, approach, strategy, methodological choices, time horizon, and techniques and procedures.

Figure 1.2: Research onion



Source: Saunders *et al.* (2009:108)

1.6.2.1 Research paradigm and approach

According to Saunders *et al.* (2009:109), the research philosophy or paradigm is the initial layer of the research onion representing the guiding principle of the methods for gathering, analysing and using data. It is seen as a system of beliefs and presumptions about knowledge development. There are different philosophies in the research onion, namely epistemology, ontology and axiology. Each of these philosophies consists of different philosophical stances. These are positivism, realism, pragmatism and interpretivism (Saunders *et al.*, 2009:109).

The positivism paradigm is a scientific philosophy in the social sciences that combines the natural and social worlds. It highlights the differences between the real world and the observable world. This paradigm relates to scientific inquiry (Saunders *et al.*, 2009:114).

Realism is an ontological position that reveals an awareness of existing reality, which comprises the assumptions built into particular phenomena (Saunders *et al.*, 2009:116; Creswell & Clark, 2017).

Pragmatism is an epistemological approach that evaluates the practical applications of theories or beliefs. Observable phenomena and subjective meanings are seen as sources of acceptable knowledge subject to the research question. This philosophy is based on practical applied research, combining various perspectives to interpret the data (Saunders *et al.*, 2009:119).

Interpretivism examines reality and how it is known to be real (Du Plooy-Cilliers *et al.*, 2014:34). This study employed the interpretative paradigm, which ensured that attention was paid to the uncovering and interpreting of meaning through the context in which the intrapreneurial phenomenon exists in the sampled tertiary education organisations (Ritchie *et al.*, 2013:13). This paradigm was applied through a tradition of ethnography. It required thorough, in-depth observation and description of behaviour, which enabled the attainment of this study's objectives. According to Creswell (2014:6-8), the Interpretative worldview is an approach that involves understanding multiple participant meanings, social and historical construction as well as the generation of theory. This paradigm, therefore, enabled the understanding of the tertiary education sector in Botswana.

The interpretative paradigm is based on the subjectivity and agency of the individual (Hua, 2016:8-12). This means that individuals are seen to generate various subjective but important meanings of their experiences (McNabb, 2015:52). Further, the goal of this paradigm is to depend as much as possible on the respondents' views, so the generated meanings are negotiated socially and historically (Creswell, 2014:6-8; McNabb, 2015:43-44).

The research approach, the second layer of the research onion, is divided into the deductive, abduction and inductive approaches. The deductive approach moves from general to more specific reasoning and is called the top-bottom approach (Saunders *et al.*, 2019:153-254). According to Awuzie and McDermott (2017), the abductive approach involves a process in which a researcher seeks to identify with and report historical events, depending on the testimonies of other authors, assuming that the testimonies are of equal standing.

On the other hand, the inductive approach is seen as a process that involves the analysis of specific concepts in a general and flexible manner as data are collected, leading to theory development from the outcome of the data analysis. It is a bottom-up, subjective approach with a definite meaning that uses observation, tentative hypothesis and theory (Saunders *et al.*, 2019:153-156). This study employed the inductive approach to develop theory from the collected data (Ritchie *et al.*, 2013:12).

1.6.2.2 Research design

This study employed a mono-method qualitative methodological choice and an exploratory, descriptive strategy to form a qualitative research design related to the Interpretative worldview (Rubin & Babbie, 2015:66). According to Crossman (2018), the mono-method qualitative choice is a social science research approach that involves collecting and interpreting meaning from non-numerical data to understand social life through the study of a targeted population. Creswell's exploratory, descriptive research strategy involves content and thematic analysis (Creswell & Clark 2017:153). It is used to explore and understand the meaning ascribed to a human problem (Creswell, 2014:4). As such, this qualitative research strategy aims to attain a possible accurate description of the social reality being studied, undisturbed by the researcher because the knowledge obtained is close to the perspectives of the social actors (Hammersley, 2013:11). Therefore, this strategy enabled the researcher to represent how the participants in this study comprehend reality regarding the motives and manners of their actions.

The qualitative design calls for open-ended questions and intensive listening by the researcher to what the participants say of their life setting (Creswell, 2014:4). Comprehensive knowledge was thus built by presenting phenomena in their natural context. Qualitative research is inductive, primarily using an ideographic way of explanation, thereby highlighting the unique elements of the intrapreneurship phenomenon being studied (Ciesielska & Jemielniak, 2018:16).

1.6.2.3 Time horizons

According to Saunders *et al.* (2009), there are two time horizons in which a researcher may conduct a study. These are the longitudinal time horizon, which involves collecting data at repeated intervals over some time and the cross-sectional time horizon, which involves a snapshot collection of data during a particular time slot, with no possibility of returning to make corrections after the study. This study was conducted within the cross-sectional time horizon due to limitations in the available time for the research and financial resources. Therefore, collecting data on intrapreneurial behaviour in the sampled tertiary educational institutions was a once-off. Any changes after the data was collected did not contribute to this study.

1.6.2.4 Semi-structured interview

According to Siedman (2013:20-21), the principal way a researcher can examine an educational organisation, institution, or process is through the experience of the individual people who are part of the organisation or who carry out the process. Based on this fact, the data collection happens in the respondents' setting, and a semi-structured qualitative interview is used. This data collection technique presents a sufficient means of inquiry. It enables the researcher to explore the participants' lived experiences, which are narrated in relation to the theoretical aspects of interest (Edwards & Holland, 2013:3).

Further, a semi-structured interview enables a researcher to sufficiently address specific themes while at the same time allowing the respondents to provide new meanings. This type of interview involves an arrangement of questions that enhances the generation of considerable and multi-dimensional data (Galletta, 2013:24). The researcher was guided by an interview protocol or guide when conducting the interviews using the semi-structured interview. This generated a rich flow of data and enabled the researcher to follow the direction of the conversation according to the managers' and staff's responses. Therefore, consistency was maintained in all interviews (Siedman, 2013:20-21).

The semi-structured interviews were segmented, entailing that the respondents were more engaged with the segments of the interview, each being more progressively structured. Interviews can range on a scale from unstructured to semi-structured (Edwards & Holland, 2013:2-3). The broad and general interview questions enabled the respondents to construct the meaning of the situation under study. At the same time, the researcher was able to probe to obtain comprehensive information on the respondents' feelings, perceptions and opinions. The process also involved emerging questions and procedures during the research study to attain a high response rate (Galletta, 2013:24).

1.6.2.5 Study population and sample

The total population size of tertiary education institutions in Botswana is 39, with 16 private institutions and 23 public institutions (HRDC, 2015:41). As the approach for the study is qualitative, a sample of five universities was selected, namely, The University of Botswana, The Botswana College of Distance and Open Learning, The Botswana College of Accountancy, Botho University, and Baisago University. These universities were sampled because they are the largest among Botswana's tertiary education institutions in Gaborone.

The interview participants comprised those in management, both senior managers and middle managers at each of the sampled universities. The sample frames were finalised after the North West University ethical clearance process was completed because the researcher needed ethical clearance to conduct the research at the participating universities. The researcher also had to obtain a research permit from the Department of Research, Science and Technology, a government research regulatory body in Botswana, which was used to obtain research permits from the Ethics Committees in each of the sampled universities.

A combination of quota and purposive sampling was used to draw the sample. These sampling methods involve several strategic choices on where, when and from whom data is collected and are done in line with the study's objectives and research questions, indicating a form of purpose. These sampling procedures enabled the selection of information-rich cases (Creswell, 2014:4-8). To be more specific, the

intrapreneurial behaviour trait was used to select the sample. The researcher provided a list of intrapreneurial behavioural traits in a letter written to the sampled universities' Ethics Committees to request permission to collect data. Further, maximum variation and homogeneous sampling, which fall under purposive sampling, were employed to identify each university's participants. This technique enabled the researcher to identify individuals who present diverse attitudes and perspectives on the intrapreneurship phenomena in tertiary education institutions. This was aimed at developing a theory that reflects much of the relevant behaviour (Aurini *et al.*, 2016:56).

It was envisioned that at least three senior and middle management managers would be interviewed at every institution. However, the number of 10 managers who were interviewed was influenced by data saturation. This was important as it ensured sufficient representation of the participating institutions. Further, the small sample size allowed the researcher to be more meticulous and thorough with each interview, thereby producing findings with depth and significance (Adler & Adler, 2011).

1.6.2.6 Gathering of data

Interviews were conducted at the five sampled universities until data saturation was attained. Data saturation is attained when issues in the data collected begin to be repeated such that further data collection becomes redundant (O'Reilly & Parker, 2013; Nelson, 2017).

Each interview lasted between 60 to 90 minutes. The interviews were mainly conducted on-line because of the COVID-19 social Distancing regulations. However, a few of the interviews were conducted in the managers' offices at their respective universities. The interviews were audio-recorded to avoid depending purely on the researcher's memory and notes. The recording enabled the researcher to focus on the conversation and take notes that may not be directly related to the content of the interview, such as the environment, surrounding circumstances, facial expressions and general body language that enhanced the coding and interpretation phase (Ciesielsk & Jemielniak, 2018:89-92). Appointments for interviews were arranged, and an interview schedule was drawn and adhered to for each university. Further,

confidentiality matters were clearly explained, and consent forms were issued. Only participants who agreed to complete the consent forms were interviewed (refer to the informed consent form).

1.6.2.7 Data processing and analysis

The data analysis was generally built from particular to general themes as the researcher made interpretations of the meaning of the data. This approach enabled the researcher to be inductive in style, focusing on individual meanings and matching them against opposing meanings to derive insight into patterns and themes (Yin, 2013:12). The building of explanations brought out findings on the importance of the complexity of the situation facing Botswana's tertiary education institutions regarding supporting intrapreneurial behaviour.

The analysis of the collected data began with transcribing the interviews from recorded to textual data using OTranscribe, a free, open-source transcription software. Apart from transcribing the interviews, this stage also involved typing up field notes and sorting and arranging the data depending on the source of the information (Creswell & Poth, 2018:186). Each interview was considered independently to enable pattern matching, so each interview was stored under a different file name. The researcher read and reread the transcripts, taking notes while reading and employing reflexive thinking. This enabled the researcher to fully immerse in the details and build a sense of the data (Creswell & Poth, 2018:186).

In order to ensure accuracy, the transcription comprised all interview statements in their original wording, together with pauses, hesitations, laughter and any other non-verbal cues. This was followed by the coding and the identification of ideas. Coding enabled a focus on empirical evidence using an anthropologic frame of mind. This allowed the researcher to identify new phenomena within the respondents' well-known and seemingly trivial behaviours and descriptions (Bazeley & Jackson, 2013:2-4). The researcher coded individual fragments of the collected data and assigned observations to specific categories and theoretical analyses of the created codes. Coding, therefore, brought out specific categories in the collected data that

formed the basis for the theory generation because codes reflect the narratives obtained from the respondents (Ciesielsk & Jemielniak, 2018:183-184).

In coding, the researcher further compared the different aspects of the collected data. This enabled the researcher to generate interesting codes, resulting in compelling and captivating theories. The meaning of the codes was determined by the context of the comparisons, which involved juxtaposing statements that fall under similar topics and condensing the data (Miles *et al.*, 2014:12). Therefore, codes and categories and their specific meanings were an outcome of comparing statements. The developed set of codes was used to organise and interpret the empirical material and identify the most important categories that were used to formulate a theory on intrapreneurship in Botswana's large tertiary education institutions (Ciesielsk & Jemielniak, 2018:191-192).

Coding and categorising were followed by identifying the themes, patterns and relationships within the responses of the sampled respondents about the specified codes. The responses were scanned for words and phrases that were commonly used and those with unusual emotions (Miles *et al.*, 2014:12). These responses were also compared with the literature review to bring out the differences. This was done to develop, assess and interpret the responses (Creswell & Poth, 2018:186). Aspects of the research problem not brought up by the respondents were also identified. Finally, the representation and visualisation of the data was done by linking the research findings to the study's objectives to highlight the major themes within the findings and possible contradictions (Ciesielsk & Jemielniak, 2018:192; Creswell & Poth, 2018:186). The researcher created a point of view by displaying and reporting the data using diagrams and an account of the findings.

Non-interview data was also included in the data analysis. This data contains policy, processes and procedure documents on areas of intrapreneurship in each sampled university reviewed during the literature study. This was used to triangulate and support the coding. Therefore, the data from the interviews and documents were used in the final analysis, and the results obtained were used to draw conclusions and compile the management framework (Miles *et al.*, 2014:13).

1.7 TRUSTWORTHINESS OF QUALITATIVE RESEARCH

According to Roller and Lavrakas (2015:10-30), the goal of the qualitative design research process is to minimise research bias and researcher-created variability to bring about results that are a reasonably accurate account of reality. This is what leads to the trustworthiness of qualitative research. According to Gunawan (2015:10), a research study report is trustworthy when readers judge it. Further, the trustworthiness of qualitative research is derived from the scope and data gathering. Scope refers to how well the study finally represents the population being studied (Roller & Lavrakas, 2015). To attain trustworthiness, under scope, the researcher has to define the target population, choose a sample design and decide on the sample size to be used.

Trustworthiness is divided into four tests that qualitative research passes through, namely credibility (internal validity), dependability (reliability), transferability (external validity) and confirmability (objectivity) (Wahyuni, 2012:77; Gunawan, 2015:10).

According to Lincoln and Guba (1985:317), credibility is attained by ensuring that participants in a research study are accurately identified and described to establish the truthfulness and accuracy of the research findings. Credibility, therefore, has to do with how the study findings coincide with reality (Merriam, 1998). In order to achieve credibility in this study, strategies such as triangulation, saturation, self-description/self-reflexivity, iterative questioning, member checking, prolonged engagement, rapport building, peer debriefing, thick descriptions and inclusive coding were used (Sandelowski, 2015; Kammerlander, Dessi, Bird, Floris & Murru, 2015; Thomas, 2017; Forero, Nahidi, De Costa, Mohsin, Fitzgerald, Gibson, McCarthy & Aboagye-Sarfo, 2018:2-3).

Methodological triangulation was used in the form of two varied data collection procedures, which will enable the confirmation of the findings (Bekhet & Zauszniewski, 2012:40-43). Data was collected using semi-structured interviews with managers and academic staff in the five universities. The documents on policies, processes and procedures pertaining to intrapreneurship in these universities were

also analysed. Further, all themes were coded iteratively instead of only reducing them to align with predetermined criteria and reflexivity (Forero *et al.*, 2018:2-3).

Accurate and accepted data collection procedures were followed to ensure credibility (Fusch & Ness, 2015:1408; Roller & Lavrakas, 2015; Amankwaa, 2016). Further, the researcher also came up with strategies for gaining access and cooperation from the sample for prolonged engagement and rapport building. These strategies were used in ethically justifiable ways (Iphofen & Tolich, 2018). Further, the researcher did a personal evaluation and an evaluation of the participants as sources of bias and inconsistency as part of self-description/self-reflectivity. Peer debriefing involves a number of activities, such as the researcher discussing the research methodology, data analysis and interpretations continuously throughout the research process with peers who are skilled qualitative researchers and the study supervisor. Further, the study's preliminary and final research findings will be presented at conferences and for any other interested groups (Amankwaa, 2016; Connelly, 2016; Levitt *et al.*, 2018:26).

Dependability, on the other hand, refers to the sturdiness of the collected data over time such that the study could be replicated under different conditions. Still, the findings remain consistent (Wahyuni, 2012). Dependability was attained through member checking and inquiry audits. Member checking involved checking the study's findings and participants' conclusions. In contrast, the inquiry audit involved the review and examination of the research process and data analysis by independent people to ensure the consistency and replicability of the findings (Gunawan, 2015).

According to Burchett *et al.* (2013:418), transferability refers to a situation in which a study's findings in one setting are applicable in another setting. Transferability entails the possibility of extrapolation, and it depends on the understanding that findings can be applied to other settings, contexts, populations or phenomena (Vaismoradi *et al.*, 2016:100). Strategies used to enhance transferability include data saturation, purposeful sampling, audit trail and thick descriptions. The researcher considered data saturation when new themes could no longer be derived. Therefore, data saturation is evident when the data collected is rich in quality and quantity (Fusch &

Ness, 2015:1408). Quota and purposive sampling were also used to enable the researcher to attain data saturation. The audit trail was made through a detailed description of sources, data collection techniques, data analysis, interpretations, decisions taken, and possible influences. The thick descriptions provided rich and sufficient details about settings, sample characteristics, data collection and analysis methods (Forero *et al.*, 2018:2-3).

Finally, confirmability refers to the objectivity or the degree of neutrality in the research study's findings and the possibility for conformity between two or more autonomous people about the data's accuracy, relevance, or meaning (Polit & Beck, 2012). Triangulation, self-description/self-reflexivity and audit trail are the strategies that enhanced the confirmability of this study (Gunawan, 2015:10-11). The researcher kept a journal of reflective thoughts, observations and related literature reviewed during the research process. The journal also helped in reducing the researcher's biasness. The researcher further wrote clearly during each interview, and the collected data was noted accurately to avoid bias. In order to achieve this, the interview schedule was followed (Forero *et al.*, 2018:2-3).

1.8 LIMITATIONS OF THE STUDY

This study was limited by the very few prior research studies on Botswana's topic. This presented a limitation in laying a foundation for understanding the research problem under investigation. Further, access to managers and members of functional teams in the selected universities proved not to be easy as these people had busy schedules. Therefore, access was dependent on the goodwill of the participating universities. Formal and firm schedules were negotiated, drawn and adhered to. Time was yet another limiting factor, as the researcher was studying full-time while simultaneously being a full-time employee. However, being a lecturer provided time for the research during semester breaks.

1.9 ETHICAL CONSIDERATIONS

The researcher made several ethical considerations in this study, as these are mandatory in designing a research study (Neuman, 2014:145). These included attaining acceptable levels of integrity and quality by providing all the details on the nature of the research, such as any potential risks and benefits, to uphold the participants' human dignity (Du-Plooy Cilliers *et al.*, 2014:262). The researcher prepared contingencies to maximise the benefits, reduce the risks of the study, and manage incidents. The study was conducted independently and impartially to ensure integrity and quality further. Participants were selected equitably, and informed consent was acquired from them to ensure voluntary participation (Neuman, 2014). The participants' confidentiality and anonymity were upheld, and they were informed of their right to ask questions. Further, participants were allowed to withdraw from the study at any time (Huang *et al.*, 2016).

1.10 LAYOUT OF THE STUDY

The structure of this study is as follows:

Table1.1: Chapter classification

NAME OF CHAPTER	CLASSIFICATION
Chapter 1	Problem Statement, Objectives and Scope of Study
Chapter 2	Literature Review on Intrapreneurship/Corporate Entrepreneurship
Chapter 3	Literature Review on the dimensions/practices of the internal and external environment that support intrapreneurial behaviour
Chapter 4	Literature Review on the Entrepreneurial University concept, intrapreneurship in Tertiary Education Institutions and Tertiary Education in Botswana
Chapter 5	Research Methodology
Chapter 6	Discussion and Interpretation of findings
Chapter 7	Conclusions and Recommendations

Chapter One: Problem Statement, Objectives and Scope of Study

This chapter gives a brief introduction and background to the phenomenon of intrapreneurship. This first part highlights the increase in the need for organisations, specifically tertiary education institutions, to understand and implement intrapreneurial activities. This is vital for their survival and improved performance in the 21st century's highly competitive and demanding business environment. Further, the Botswana government's investment in the tertiary education sector is reviewed, and the government's expectations of the sector are represented in the national development plans and economic development strategies. The problem in the study is stated together with the objectives and research questions that guided the data collection. The scope of the study is also presented.

Chapter Two: Literature Review on Intrapreneurship and Entrepreneurship

This chapter reviews a wide range of current literature on the definitions of intrapreneurship, its link or relationship to entrepreneurship, corporate entrepreneurship, and entrepreneurial orientation. This chapter further discusses and analyses the literature on the origin of the intrapreneurship concept and its historical development to date. Key proponents of the concept and their contributions are presented to clearly explain the details of intrapreneurship and bring out the importance of this phenomenon for organisational growth. The challenges in intrapreneurship are also presented. However, reference is also made to the successful implementation of intrapreneurship.

Chapter Three: Literature Review on the elements/dimensions of the internal and external environment that influence intrapreneurial behaviour (Elements/Practices of Intrapreneurship)

Chapter 3 presents a literature review on five of the major practices/elements of intrapreneurship, which are also key dimensions of an organisation's internal environment. These include top management support, work discretion/autonomy, reward and reinforcement, time availability and organisational boundaries. These are critically discussed to highlight what they involve and how they promote

intrapreneurial behaviour in organisations, leading to innovation development and improved organisational performance. The literature also highlights how the external environment's elements influence intrapreneurial behaviour. It explains how these elements/dimensions can be used to develop a framework for enhancing intrapreneurial behaviour in Botswana's tertiary education sector. This presents a tool for diagnosing and improving intrapreneurship's managerial and employee interpretations and a guide for supporting or promoting the phenomenon in these organisations. The literature emphasises the need to support the elements in the intrapreneurship process.

Chapter Four: Literature Review on the Entrepreneurial University concept, intrapreneurship in Tertiary Education institutions and Tertiary Education in Botswana

This chapter presents literature on the Entrepreneurial University phenomenon, confirming intrapreneurship in tertiary education institutions. A further focus is on the literature on intrapreneurship in Botswana's tertiary education and its critical role in the economy of Botswana. Literature on the internal and external environments where tertiary education organisations operate is also critically reviewed. Finally, the knowledge gaps in the Entrepreneurial University phenomenon are identified and critically discussed.

Chapter Five: Research Methodology

Chapter 5 explains the research paradigm, the research approach, the interview structure, the study population and sample, the sampling procedure, data gathering, and the analysis employed in this study.

Chapter Six: Discussion and Interpretation of findings

Chapter 6 critically discusses and interprets the data collected to highlight what the study found out in line with the study's primary and secondary objectives. In-depth discussion and interpretation of the findings effectively develop a framework for

enhancing intrapreneurial behaviour. This tool is recommended to successfully implement intrapreneurial practices in Botswana's tertiary education institutions.

Chapter Seven: Conclusions and Recommendations

Chapter 7 draws key conclusions and implications of the study based on the findings. Recommendations on clear courses of action are outlined to guide managers in Botswana's tertiary education institutions on how to gain insight into the practices/elements of their internal and external environments and how to support intrapreneurial behaviour among employees through the use of the intrapreneurship enhancement framework.

1.11 SUMMARY

The current business environment is becoming progressively more competitive, demanding and challenging for academic institutions, especially the tertiary education sector. These organisations are expected to become more entrepreneurial, yet they have traditionally not considered their business activities. Governments are emphasising their critical role in economic development by developing human capital that possesses the right skills for the industry. Therefore, tertiary education organisations need to work on their products, services, and business models to survive these demands and successfully maintain a competitive advantage. This study supports the implementation of intrapreneurial initiatives to improve performance in Botswana's tertiary education organisations. Support for the dimensions or practices of intrapreneurship, namely top management support, work discretion, reward and reinforcement, time availability and organisational boundaries, as well as the consideration of elements in the external environment, will encourage intrapreneurial behaviour among employees leading to the development of innovative activities that will consequently result in better performing tertiary academic institutions.

CHAPTER TWO: LITERATURE REVIEW ON INTRAPRENEURSHIP AND ENTREPRENEURSHIP

2.1 INTRODUCTION

The intrapreneurial behaviour of employees is becoming increasingly crucial for the strategic improvement of organisational performance (Neessen *et al.*, 2018:545). This is becoming a vital strategic stance for organisations as history proves that organisations should rapidly innovate, change, and transform to respond to the fast-changing marketplace (Tseng & Tseng, 2019:108). According to Lee and Pati (2017), organisations can swiftly adapt by enhancing their innovation prowess by tapping into their employees' creative power. Therefore, the need for intrapreneurship has,, become obvious (Tseng & Tseng, 2019:108). As such, the role of employees in organisations is being transformed as decision-making processes are becoming more decentralised, and employees are awarded more discretion and responsibility (Foss *et al.*, 2015).

Intrapreneurship, therefore, places employees at the centre of influencing corporate innovation performance (Amore *et al.*, 2013; Tian & Wang, 2014; Bai *et al.*, 2016) as it enables organisations to draw on the innovative talents of their employees and managers (Kuratko, 2017:57). Bai *et al.* (2016) also add that innovation performance is determined by an organisation's networking capability, which enables the acquisition of international business knowledge, a vital prerequisite to innovation. From this perspective, it can be seen that intrapreneurship significantly contributes to the organisational learning processes that reinforce employees' potential to explore markets and develop new products (Zahra, 2015:727).

Intrapreneurship provides much-needed potential to organisations as they navigate through today's challenging conditions that threaten their potential for productivity and growth (Tseng & Tseng, 2019:108). These conditions include many new cosmopolitan competitors, a loss of trust in traditional corporate management methods, downsizing of influential organisations, and migration of critical innovators (Kuratko *et al.*, 2015). Therefore, employees have to become innovators (Bowen,

2016) who implement new logic in organisations by identifying opportunities that bring about change in the entire organisation (Heinze & Weber, 2016:157). Organisational change is of great necessity in the 21st century if organisations are to remain competitive in today's rapidly changing global market (Shepherd *et al.*, 2012:880) and overcome bureaucratic practices that make an organisation fail to adjust to this market flux (Farrell & Morris, 2013:1376).

Tertiary education institutions or universities are no exemption to the challenges mentioned above and the need for employees with intrapreneurial potential. These institutions are becoming hubs for innovation and entrepreneurship, which develop business ventures that benefit a country's economy (Peppler, 2013:5). Tertiary education institutions perform the vital role of producing a workforce and research that significantly contributes to attaining national goals (Macarthy & Yang, 2017:1). Therefore, the focus of this research study is to explore how the support for intrapreneurial behaviour could lead to improved performance in large tertiary education institutions in Botswana.

Promoting intrapreneurial behaviour can enable an organisation to remain competitive and overcome bureaucratic processes (Zahra *et al.*, 2013). Further, intrapreneurship is an innovative strategy that tertiary education institutions could use to enter new markets and achieve growth (Zahra, 2015:727), and this will reduce the impact of the above-mentioned prevailing difficult conditions. Failure to adopt this innovative strategy would reinforce stagflation, employee turnover and the risk of becoming obsolete (Kuratko, 2017).

Therefore, this study aims to develop a scientifically sound and reliable strategic framework for intrapreneurial behaviour in Botswana's tertiary education institutions. The framework will provide an implementation process for intrapreneurship that will meet the need for outputs in internal innovation performance, organisational growth and profitability. Tertiary education institutions, just like other organisations, have the responsibility to learn about and implement such a strategic framework as part of their accountability to stakeholders and the achievement of business and developmental goals (Tseng & Tseng, 2019:110).

The literature review for this study is covered in three chapters. The first chapter provides the underlying theory on the relationship between entrepreneurship, entrepreneurial orientation (EO) and the concept of intrapreneurship or corporate entrepreneurship. It also covers an in-depth review of the intrapreneurship phenomenon and discusses the barriers to its activation. The second chapter discusses the elements or dimensions of an organisation's internal environment that support intrapreneurial behaviour or an entrepreneurial mind among employees. The third chapter covers literature on intrapreneurship in tertiary education, tertiary education in Botswana, and support for intrapreneurial behaviour.

2.2 THE ASSOCIATION BETWEEN ENTREPRENEURSHIP AND INTRAPRENEURSHIP

According to Douglas and Fitzsimmons (2013), entrepreneurship and intrapreneurship are two distinct ways of acting entrepreneurially. Entrepreneurship is linked to entrepreneurs viewed as individuals who independently bear the risk of building a business, but it is also related to intrapreneur and corporate entrepreneurship (Burgers & Covin, 2016 Parker, 2011). Corporate entrepreneurship refers to employees in existing organisations (intrapreneurs) who actively identify and exploit business ideas or opportunities (Bosma *et al.*, 2013).

Corporate entrepreneurship is also called intrapreneurship (Rajshekhar *et al.*, 2014; Rekha *et al.*, 2015). However, a slight difference is noted between the two terms. Intrapreneurship is seen as a bottom-up approach to the employees' intrapreneurial behaviour, while corporate entrepreneurship refers to the top-down approach related to the innovation process within an organisation (Rigtering & Weitzel, 2013 Sinha & Srivastava, 2013). Both concepts, often used as interchangeable terminologies, refer to entrepreneurship within an existing organisation (Sinha & Srivastava, 2013; Baruah & Ward, 2015).

In order to fully understand intrapreneurship, the knowledge of the relationship between entrepreneurship and intrapreneurship is vital. This is so because the intrapreneurship phenomenon has its origin in entrepreneurship (North, 2015:11) and is often considered as organisation entrepreneurship or corporate venturing

(Kuratko, 2017:2). This shows that entrepreneurship does happen in existing organisations; it is not restricted to new start-ups (Doran *et al.*, 2018:3). The concept of entrepreneurship, therefore, has to be discussed.

2.3 ENTREPRENEURSHIP

The twenty-first century realised that entrepreneurship is vital in fostering a country's economic growth (Park, 2017:159; Tomaa *et al.*, 2014:437). As such, the global economy is significantly changing organisations and industries throughout the world as it forces them to reevaluate their purposes and adopt strategies that have the likelihood of satisfying many stakeholders (Kuratko, 2017:57). Entrepreneurship has become one of the primary desired strategies to drive activities within organisations as they infuse entrepreneurial thinking into their structures. This infusion is termed corporate entrepreneurship, corporate innovation, intrapreneurship or simply the “21st-century entrepreneurial imperative” (Kuratko, 2017:57). In adopting this imperative, entrepreneurial organisations are risk-takers, and their decision-making processes are innovative and proactive (Mkhavale & Ntshakala, 2018:641). This behaviour is referred to as entrepreneurial orientation (EO), which is believed to be an essential attribute of high-performing organisations (Covin & Wales, 2012).

2.3.1 Definitions of entrepreneurship

Entrepreneurship has a wide range of definitions that have evolved (Parker, 2018:6; Hisrich & Ramadani, 2017:3). From the initial writings about entrepreneurship, there has been no consensus on a definition of the concept. The principal reasoning is based on the fact that entrepreneurship is a multifaceted phenomenon, which is broken down into a process, a resource, or a state of being (Naudé, 2013:5). Entrepreneurship is, therefore, too complex to be defined using a single set of factors. Scholarly views of entrepreneurship have advanced into three main classifications: behavioural definitions, occupational definitions, and synthesis definitions (Naudé, 2013:5). Table 2.1 on the next page provides a trace of a sample of definitions of entrepreneurship from authors at different time intervals and includes a synthesis definition of these three main classifications:

Table 2.1: Sampled definitions of entrepreneurship

AUTHOR	DEFINITION
Cantillon (1730)	Entrepreneurship is self-employment of any kind, and entrepreneurs are non-fixed income wage earners and risk-takers as they invest a known amount without knowing how much amount it will generate.
Schumpeter (1939)	Entrepreneurship is the driving force of modernisation, having characteristics such as innovation-seeking spirit, pro-activeness and risk-taking tendencies.
Sheehan (1950)	Entrepreneurship is the basic decision-making regarding the combination and use of human labour, natural resources and capital instruments for producing goods and services that men need and want for living.
Cole (1959)	Entrepreneurship refers to the purposeful activities (including) an integrated sequence of decisions of an individual or group of individuals undertaken to initiate, maintain or aggrandise a profit-oriented business unit to produce or distribute economic goods and services.
Mises (1949)	Entrepreneurship is an active process whereby an entrepreneur identifies an opportunity and takes action for profit maximisation.
McClelland (1961)	Entrepreneurship is a dynamic process created and managed by an individual, the entrepreneur, who strives to exploit economic innovation to create new value in the market toward achieving a particular need.
Leibenstein (1968)	Entrepreneurship refers to the activities involved in coordinating and carrying on a well-established going concern in which the parts of production function in use (and possible alternatives to current use) are well known and operate in well-established and clearly defined markets.
Howell (1972)	Entrepreneurship is the act of founding a new company where none existed before. An entrepreneur is a person, and entrepreneurs are a small group of new company founders.
Kirzner (1973)	Entrepreneurship is related to seizing economic opportunities, where the entrepreneur is characterised by "alertness to hitherto undiscovered opportunities".
Jones and Sakong (1980)	Entrepreneurship is a force that mobilises other resources to meet unmet market demand.
Miller (1983)	Entrepreneurship is a behaviour that re-combines or re-distributes resources with innovativeness, an enterprising spirit and a risk-taking mind to create a new value.
Stevenson and Gumpert (1985)	Entrepreneurship is creating value by pulling together a unique package of resources to exploit

	an opportunity.
Stevenson and Jarillo (1986)	Seizing an opportunity regardless of available resources.
Gartner (1989)	Entrepreneurship is the creation of a new enterprise.
Bygrave and Hofer (1991)	Entrepreneurship is the process of creating a new venture and to pursue it.
Petrin (1994)	Entrepreneurship is an innovative activity that involves the adoption of new forms of business, business organisations, new technologies and new enterprises producing goods not previously available at a location.
Hisrich and Peters (1998)	Entrepreneurship is a discernment that an enterprise considers necessary rather than defining it as his/her psychological state.
Timmons (1999)	The way of inferring, thinking and behaving focusing on the overall approach and specific leadership based on the importance of recognising the opportunities
Shane and Ven-kataraman (2000)	Entrepreneurship is an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organising, markets, processes and raw materials through organising efforts that previously had not existed.
Kuratko (2005)	Entrepreneurship involves seeking opportunities, taking risks beyond security, and having the tenacity to push an idea through to reality.
Ács and Szerb (2010)	Entrepreneurship is a dynamic interaction of attitudes, activities and aspirations.
Gries and Naudé (2011)	The resource, process and state of being through and in which individuals utilise positive opportunities in the market by creating and growing new business firms.
Amiri and Marimaei (2012)	Entrepreneurship involves innovation, development, recognition, seizing opportunities and converting opportunities to marketable ideas while bearing the risk of competition.
Berglund and Holmgren (2013)	Entrepreneurship is a dynamic and social process where individuals, alone or in cooperation, identify opportunities and do something with them to reshape ideas into practical or aimed activities in social, cultural, or economic contexts.
Drucker (2015)	Entrepreneurship is the managerial process in which there is creation and innovation management

The different definitions in the table above indicate no consensus on the concept of entrepreneurship, although it has been studied for a long time (Henrekson & Sanandaji, 2014:1760; Mwatsika *et al.*, 2018:451). This is mainly because definitions of the concepts and constructs of study in the field are determined by a researcher's

conceptualisation of what makes entrepreneurship (Mwatsika *et al.*, 2018:451). However, the differences are mainly minor and insignificant (Davidsson, 2016:5).

What is notable is that at the core of entrepreneurship is a positive energy that challenges existing conventions by acutely responding to the changing environments with an innovative and creative mind, which promotes profitability, growth, innovation and change (Ncanywa, 2019:2). This potential of entrepreneurship was realised as far back as 1890 by Alfred Marshall, who formally acknowledged that entrepreneurship is a significant factor of production, the creation and running of cost-effective organisations, and as such, is the driving force behind organisations (Ncanywa, 2019:2).

The definitions of entrepreneurship presented above are based on the conceptualisation of entrepreneurship from Say (1767-1832) as well as the classical and neoclassical economic theorists who perceived entrepreneurship as the process of coordinating, organising and directing the factors of production to produce economic value in the form of goods and services (Mwatsika *et al.*, 2018:455; Ncanywa, 2019:2). These definitions provide an understanding of the process of entrepreneurship and its outcomes (Mwatsika *et al.*, 2018:455). They highlight the decision-making involved in the entrepreneurship process as well as the activities involved in the coordination of the factors of production. The opportunities that exist in the entrepreneurship process are also defined. The definitions further emphasise the main stages of discovery, evaluation and exploitation in entrepreneurship (Mwatsika *et al.*, 2018:457). Concerning entrepreneurship outcomes, the definitions focus on new venture creation, which is valuable and definitive for entrepreneurship (Mwatsika *et al.*, 2018:457).

With regards to the earliest perceptions of entrepreneurship presented in Table 2.1, the focus was on highlighting either discrepancy between supply and demand or market imperfections as being the opportunities that needed to be taken advantage of by entrepreneurs in an attempt to balance the economy (Mwatsika *et al.*, 2018:457; Ncanywa, 2019:2-8). For instance, Kirzner (1973) viewed entrepreneurial action as the process by which supply and demand were

equilibrated, whereas Schumpeter (1939) perceived entrepreneurial action as the process by which markets were disequilibrated (Mwatsika *et al.*, 2018:457; Ncanywa, 2019:2-8).

In Kirznerian and Schumpeterian perceptions, innovation is at the centre of all entrepreneurial activities, resulting in different levels of creative destruction that push markets towards equilibrium or new disequilibrium. The emphasis on creative destruction in Schumpeter's conceptualisation has led to many scholars associating radical innovation with Schumpeterian entrepreneurship (Mwatsika *et al.*, 2018:457; Ncanywa, 2019:2-8). From this conceptualisation, innovation is now seen as the strategic tool of entrepreneurs within organisations that enables them to attain a strategic competitive advantage (Amo, 2010; Ncanywa, 2019:2).

In summary, entrepreneurship can represent initiative, innovation, decision-making and the responsibility of undertaking risks by individuals who possess specific capital during an organisation's business activities (Cadaru & Badulescu, 2015:658). The degree to which an organisation behaves entrepreneurially, referred to as entrepreneurial orientation (EO) (Covin & Wales, 2018), is one of the most critical factors that will lead to successful business performance under today's highly uncertain business environment (Cho & Lee, 2018).

2.3.2 The entrepreneur

The conceptualisation of entrepreneurship and entrepreneurship has changed with time (Al Qudah, 2018:158). In the 14th century, entrepreneurs were considered individuals who could handle extensive production projects (Padilla & Cachanosky, 2016). The focus was on the entrepreneur's ability to use the resources at hand to manage the projects. However, this conceptualisation of an entrepreneur changed in the 17th century because risk was now considered to be inherent in entrepreneurship (Al Qudah, 2018:158). At this time, an entrepreneur was seen as an individual who supplied required products or services to the government with the possibility of making a profit or loss, therefore taking a risk (Al Qudah, 2018:158). This was related to the 1723 Irish-French economist Richard Cantillon's 17th-century

theory that explained an entrepreneur as a risk-taker who buys products at a particular price and sells them at a different but unknown price, creating stability in the market system (Rusu *et al.*, 2012:3571; Buekens, 2014:581; Al Qudah, 2018:158). This idea was later improved by Joseph Schumpeter, who saw entrepreneurs as innovators who challenged the status quo of the existing products and services by coming up with new products and services (Buekens, 2014:581).

Another change in perspective came in the 18th century when entrepreneurs were now viewed as venture capitalists (Rahatullah Khan, 2013). This was enhanced in the 19th and 20th centuries and slightly changed the conception of an entrepreneur. The entrepreneur was now seen as an individual who handled and ran a business for personal gains while paying for the company's materials, land, capital, and other personal services (Al Qudah, 2018:158). It was recognised that an entrepreneur contributes personal initiative, ingenuity, and skill in the planning, administering and organising of a business while at the same time assuming the possibility of making a profit or a loss due to uncontrollable and unforeseen occurrences (Bridge, 2017).

The innovation component was included in the 20th and 21st century concept of entrepreneurship. The entrepreneur became known as an individual with the potential to transform production patterns by exploiting an innovation (Fooladi & Kayhani, 2003). Therefore, entrepreneurs are now seen as individuals who use attributes such as risk-taking, innovation, and creativity to attain a set objective, which is the driver of entrepreneurial orientation (EO) (Hvide & Panos, 2014; Kozubíková *et al.*, 2015).

2.4 ENTREPRENEURIAL ORIENTATION (EO)

Entrepreneurial orientation, as a concept, has its foundation in the strategy-making literature. It was first introduced by Miller (1983) to institute appropriate behaviour for successful entrepreneurs (Yusoff *et al.*, 2018). Miller's definition of entrepreneurial orientation pointed to an entrepreneurial organisation as one that takes part in product-market innovation, undertakes somewhat risky ventures, and is the first to

introduce 'proactive' innovations, beating competitors to the punch (Miller, 1983:770). The concept was later improved by Covin and Slevin (1989, 1991).

According to Miller (1983), entrepreneurial orientation (EO) is one of the main aspects commonly used to evaluate organisational entrepreneurship and to closely indicate an organisation's actual entrepreneurial behaviour (Stambaugh *et al.*, 2017). EO is further considered to be positively associated with an organisation's performance (Wang, 2008; Wales, 2016) as it enables organisations to discover new business opportunities which determine their differentiation from other organisations (Omisa-kin *et al.*, 2016). An entrepreneurial orientation, also called an entrepreneurial strategic posture, leads to an advanced positive relationship between knowledge-based resources, organisational performance and effective corporate entrepreneurship (Dess & Lumpkin, 2001.) EO also leads to a high growth level among organisations that exercise it (Sarker & Palit, 2015). An organisation is regarded as entrepreneurial if innovative, proactive and risk-taking (Rezaei & Ortt, 2018:879).

Therefore, innovativeness, proactiveness, and risk-taking are the main components of entrepreneurial orientation (Lumpkin & Dess, 1996). Innovativeness refers to the practice of creativity and experimentation (Lumpkin & Dess, 1996). It involves generating new ideas and creative processes that result in new products, services and processes (Lumpkin & Dess, 1996). Innovativeness is a significant part of EO because it enables organisations to exploit new opportunities (Lumpkin & Dess, 1996). On the other hand, proactiveness refers to a process that aims to forecast and act on future opportunities such as products, technologies and markets (Schillo, 2011) instead of reacting to situations after they have happened (Lumpkin & Dess, 1996). Proactiveness enables the introduction of new products before competitors and enables organisations to be pioneers (Reijonen *et al.*, 2014).

Risk-taking is an internal organisational element vital for the support of entrepreneurship within organisations, and it refers to an organisation's propensity to willingly engage and commit necessary resources to opportunities with uncertain outcomes (Lumpkin & Dess, 1996). The risk-taking capability enables organisations to engage in bold rather than cautious actions (Lumpkin & Dess, 1996). In the

following pages of this chapter, additional components of entrepreneurial orientation are covered under intrapreneurship or entrepreneurship in existing organisations.

Entrepreneurial orientation further relates to entrepreneurs' potential and diverse competencies to manage a business's primary functions, ranging from technical, human resources, marketing, and finance (Yusoff *et al.*, 2018). Entrepreneurial orientation also refers to entering, exploring, and exploiting new markets (Lumpkin & Dess, 1996). The entrepreneurial orientation can explain the process, practice, and decision-making process for entering new markets that distinguish this concept from entrepreneurship (Lumpkin & Dess, 1996).

Therefore, entrepreneurship is a strategy that organisations continually adapt to maximise innovation performance, competitiveness, and overall organisational performance (Lumpkin & Dess, 2001; Kuratko, 2007). An organisation's entrepreneurial orientation is thus recognised as a tool for improving performance (Rezaei & Ortt, 2018:880). Further, it has been observed that EO has an identical effect on organisational performance in diverse contexts, such as in different countries, markets and different kinds of organisations (Rezaei & Ortt, 2018:880).

2.4.1 The relationship between entrepreneurial orientation and organisational performance

An organisation's entrepreneurial orientation (EO) results from intrapreneurship (Cadar & Badulescu, 2015; Ibrahim, 2016). It is attained by developing intrapreneurial individuals within the organisation (Mohedano-Suanes & Benítez, 2017; Neessen *et al.*, 2018). It is through these intrapreneurial employees that EO empowers organisations to reinvent themselves (Duncan *et al.*, 1988), to adapt to the volatile global business environment (Whitelaw & Garcia-Lorenzo, 2017) for organisations to remain sustainable through improved performance (Buekens, 2014; Pedersen *et al.*, 2016). The relationship between entrepreneurial orientation (EO) and organisational performance (OP) is influenced by several aspects (Rosenbusch *et al.*, 2013). These are as follows:

2.4.1.1 Learning and knowledge

Entrepreneurial orientation (EO) comprises knowledge, learning capabilities and learning orientation, all of which affect organisational performance (OP) (Wang, 2008; Alegre & Chiva, 2013; Real *et al.*, 2014). Li *et al.* (2009) state that EO influences knowledge creation processes, consequently affecting organisational performance. This means that knowledge creation processes are essential to EO's effect on organisational performance (Rezaei & Ortt, 2018:881) as these processes lead to innovation performance (Mahmood & Hanafi, 2013). Because of this reason, there is a rising demand for entrepreneurs within organisations, and so organisations are increasingly initiating training programmes to encourage innovative behaviour among their employees (Ward & Baruah, 2014). However, to increase the possibility of employees behaving in this manner within an organisation, it is important to stimulate an environment that enables employees to demonstrate ingenuity and reward them for such efforts (Falola *et al.*, 2018).

2.4.1.2 Network resources

Network resources refer to network capabilities and network orientation, reinforcing the link between EO and organisational performance (Stam & Elfring, 2008; Zhang & Zhang, 2012.). For instance, an organisation's network capability is its potential to establish and use inter-organisational relationships, which builds up EO's effect on the performance of spin-off companies (Rezaei & Ortt, 2018:881). The inter-organisational relationships are often the work of employees who desire to realise their entrepreneurial vision (Pinchot, 1985). This entrepreneurial vision is actualised as employees establish new spin-off organisations or identify a new business opportunity and exploit it (Åmo, 2010). Employees also improve, develop or invent new products. They further demonstrate their innovation initiatives by developing cost-reducing routines and improving job routines. All these organisational changes benefit organisations through renewal affected by the employees' innovation initiatives (Åmo, 2010).

2.4.1.3 Exploitative and explorative activities

EO is seen to be positively linked to the exploitative and explorative capabilities of an organisation. These competencies positively influence an organisation's overall performance (Lisboa *et al.*, 2011; Chen *et al.*, 2012). Entrepreneurial exploitative and explorative capabilities involve identifying new applications for existing resources that are not fully visible and creating resources because of dispersed knowledge about the means-ends relationship (Goel & Jones, 2016:95). Many entrepreneurial organisations begin small using exploitative and explorative capabilities, making entrepreneurs viewed only as small business owners. Entrepreneurship is generally associated with small businesses because small businesses provide conducive environments for entrepreneurship to thrive (Sahut & Peris-Ortiz, 2014:663). However, entrepreneurs can also be the owners of big businesses, especially when they engage in exploitative and explorative activities which enable organisations to achieve successful innovations, business growth and performance (Mahmood & Hanafi, 2013; Sinha & Srivastava, 2013; Omisakin *et al.*, 2016).

Other specific internal organisation aspects that have been found to influence the relationship between entrepreneurial orientation and organisational performance include market orientation (Buli, 2017), leadership behaviour (Engelen *et al.*, 2015), knowledge sharing (De Clercq *et al.*, 2015), absorptive capacity (Engelen *et al.*, 2014) and cross-functional behaviour within organisations (Schneider & Engelen, 2015). All these aspects enable organisations to identify and exploit new opportunities continuously while at the same time developing new innovative values that make them leaders in markets (Cho & Lee, 2018:125). This is necessary because today's markets demand organisations to develop innovation, proactiveness, risk-taking, courage, and entrepreneurial leadership (Kuratko, 2017:57).

Entrepreneurial leadership is attained through the establishment of new successful business ventures or parts of new business ventures as per the innovations of Bill Gates, Mark Zuckerberg, Steve Jobs, 3M, Abbott Laboratories and Procter & Gamble (Parker, 2018:6; Kuratko, 2017:57; Morris *et al.*, 2011:35). Such individuals

and organisations are seen as dynamic, flexible and always ready to exploit new business opportunities as they arise. They possess an entrepreneurial orientation of innovation, pro-activeness and risk-taking that must be developed today for organisational success (Kuratko, 2017:57).

These individuals are creative visionaries who identify and pursue the innovative exploitation of business opportunities, transforming them into actual activities that increase the profitability and competitive power within an organisation (Morris & Kuratko, 2002:85). Organisations need to identify these individuals and encourage them to manifest their entrepreneurial abilities by supporting their creativity. This will improve the performance of organisations through innovation activities and provide a competitive edge (Güner ve Serinkan, 2017:494).

Kuratko (2017:57) further emphasises the need for organisations to continuously innovate their products, processes, structures, administrative routines, management functions, business models, value chains and capacities to effectively compete in the highly competitive global market environments. This is possible through the nurturing of entrepreneurial attitudes and behaviours among employees. Therefore, this perspective gives entrepreneurship its current conceptualisation, which was added to its definition in the 20th and 21st centuries, as a process through which individuals within organisations (intrapreneurs) revolutionise production patterns by exploiting inventions (Qudah, 2018:158). As such, the sub-field of entrepreneurship termed intrapreneurship, which reflects an organisation's entrepreneurial orientation, has become a matter of importance in organisations as a strategy to get employees to contribute to innovation, service and product development as well as an ultimate competitive advantage for organisations (Guerrero & Peña-Legazkue, 2013).

It is essential to note the distinction between entrepreneurial-oriented behaviour and intrapreneurial behaviour. According to Antoncic and Hisrich (2001), entrepreneurial-oriented behaviour has been linked to creativity and innovation. At the same time, intrapreneurship is seen as a unique composition of entrepreneurial behaviour and creativity within an organisation.

2.5 INTRAPRENEURSHIP

Intrapreneurship, a concept that is closely related to the entrepreneurial orientation (EO) of an organisation, has received much attention in the literature in the past 45 years (Hjorth & Kuratko, 2017) because of its potential to improve organisational performance and to enable growth in the turbulent business environment (Deprez *et al.*, 2017). It is also recognised as a means for corporate reinvention or venturing, vital for an organisation's future well-being because it enhances business competitiveness (Duncan *et al.*, 1988).

Intrapreneurship is a new domain of entrepreneurship (Ozbozkurt, 2019:1087). It is a term that was first introduced in a document by Gifford Pinchot and Elizabeth Pinchot in 1978 as a combination of "intra" or internal and entrepreneurship (intra-corporate entrepreneurship (Perez-Urbe *et al.*, 2018:320). This term refers to employee engagement in their workplace setting, where they may or may not be encouraged to think and act innovatively. According to Ma *et al.* (2016), these company employees are called corporate entrepreneurs who involve themselves in their lives as though they own it. Gifford Pinchot gave these intra-corporate entrepreneurs the term 'intrapreneurs' (Pinchot & Pinchot III, 1978).

There is a wide range of definitions for intrapreneurship, but there is not much consensus on the definition. Fischer (2011) defined intrapreneurship as a process of corporate renewal in existing organisations. Pinchot (1987:14) and Moriano *et al.* (2014:103), on the other hand, define intrapreneurship as bottom-up, proactive work done by individual employees who can generate business success through their novel ideas. Halme *et al.* (2012:743) and Garcia-Morales *et al.* (2014:1468) conceived intrapreneurship as a process that involves individuals in an organisation taking up new activities and departing from the norm to pursue new opportunities. Salama (2016:1) further defines intrapreneurship as the process of continuous innovation within an existing organisation.

Intrapreneurship is, therefore, a process that involves employees pursuing novel ideas for innovative goods, services or opportunities that create value and are unique from those of competitors. Their actions include intrapreneurial dimensions

such as the taking of risks and change processes that result in efficient innovation (Rekha *et al.*, 2015) and increased profits (Bierwerth *et al.*, 2015) as well as increased organisational effectiveness and public value creation (Kearney & Meynhardt, 2016). According to Neessen *et al.* (2018), intrapreneurship involves behaviours that exceed expectations, change the organisation's course, and define the organisation's personality as innovative, proactive, and involve risks.

2.5.1 The intrapreneur

Intrapreneurs are recognised by their behaviours, attitudes and characteristics (Neessen *et al.*, 2018:542). The behaviour dimensions include innovativeness/creativity, proactiveness, opportunity recognition and exploitation, risk-taking and networking. These behavioural dimensions are the same behaviours referred to in the definition of intrapreneurship (Neessen *et al.*, 2018). When creating a new product or process, intrapreneurs identify opportunities and use resources and knowledge to exploit the opportunities successfully (Baczynska *et al.* 2016.; Urbano & Turro 2013). According to Baggen *et al.* (2016), there is a relationship between entrepreneurial employee activities and opportunity identification competence. This is because self-perceived creative self-efficacy influences opportunity recognition.

Intrapreneurs proactively identify market trends and internal organisational conditions to keep track of opportunities and innovations. Intrapreneurs can also network and take up risks as an essential part of their intrapreneurial behaviour (Razavi & Ab Aziz, 2017). Networking is recognised as the main distinction between intrapreneurs and entrepreneurs because intrapreneurs operate from within an organisation with a specific climate and political field (Smith *et al.*, 2016).

The attitudes of intrapreneurs are observed through the employees' commitment to the organisation and their intentions to leave. The behavioural dimensions of innovativeness, proactiveness and risk-taking are seen to be associated with organisational commitment (Giannikis & Nikandrou, 2013). According to Farrukh *et al.* (2017), there is a relationship between commitment and intrapreneurial behaviour in that identification with the organisation or a sense of belonging to the organisation influences employee intrapreneurial behaviour. Also, employee job satisfaction is

recognised to enhance commitment to the organisation and, consequently, intrapreneurship (Antoncic & Antoncic, 2011; Giannikis & Nikandrou, 2013).

The characteristics that describe intrapreneurial employees are varied. One of the characteristics is observed through the employees' self-efficacy, which refers to an individual's perception or belief that he or she can successfully perform a particular task (Wang *et al.*, 2013). It is recognised that entrepreneurial behaviour, opportunity recognition, and product performance increase when employees have higher self-efficacy (Urbano & Turro, 2013). Another characteristic of intrapreneurs has to do with employees' experience concerning intrapreneurship. According to Urbano *et al.* (2013) and Guerrero and Pena-Legazkue (2013), the past entrepreneurial experience of an employee leads to increased intrapreneurial activities and corporate venturing. Also, knowledge obtained from previous experiences improves identifying opportunities (Wang *et al.*, 2013).

Personal knowledge, which is obtained from education and training, is another characteristic of intrapreneurs. According to Martiarena (2013) and Urbano and Turro (2013), intrapreneurs tend to possess high educational qualifications or previous participation in intrapreneurship training in relation to other employees. Alrumaithi *et al.* (2015) add that intrapreneurial training leads to an increase in spin-offs. However, other characteristics of intrapreneurs have to do with their skills and abilities, including social skills, teamwork skills (Van Dam *et al.*, 2010), persistence, endurance, and implementation of new ideas (Sundin & Tillmar, 2008). All these aspects of an intrapreneur reflect the full spectrum of the dimensions of intrapreneurship.

2.5.2 Dimensions of intrapreneurship

The intrapreneurship phenomenon has peculiar characteristics broken down into seven dimensions in different models and dimensions as represented by different researchers. Most of these dimensions are also components of entrepreneurial orientation, including innovativeness, risk-taking, proactiveness, autonomy, new business venturing, organisational self-renewal, and competitive aggressiveness

(Rigtering & Weitzel, 2013; Gawke *et al.*, 2018:508; Gawke *et al.*, 2019). Table 2.2 below presents explanations of these dimensions:

Table 2.2: Dimensions of intrapreneurship

DIMENSION	DESCRIPTION	RESEARCHERS
Innovativeness/Innovation	Process of creating new products, services, processes, technologies and methods.	Covin and Slevin (1991); Lumpkin and Dess (1996); Knight (1997); Antoncic and Hisrich (2001); Morris and Kuratko (2002)
Risk-Taking	They are making investment decisions and taking strategic actions in an uncertain environment to evaluate new opportunities despite the risks.	Miller and Friesen (1983); Covin and Slevin (1991); Lumpkin and Dess (1996-2001); Hornsby et al.(2002); Morris and Kuratko (2002); Antoncic and Hisrich (2003)
Proactive Behavior	The tendency of the organisation to pioneer and initiate the first venture, especially by the top management	Miller and Friesen (1983); Covin and Slevin (1991); Lumpkin and Dess (1996-2001); Knight (1997); Morris and Kuratko (2002); Antoncic and Hisrich (2003)
Autonomy	The independence that an individual, group or organisation demonstrates an idea or vision.	Zajac vd. (1991); Lumpkin and Dess (1996); Culhane (2003)
New Business Venture	Creating new products, new jobs and new autonomous units or semi-autonomous firms within existing organisations.	Zahra (1991, 1993, 1995); Stopford and Baden-Fuller(1994); Zahra and Covin(1995); Antoncic(2000); Antoncic and Hisrich(2001)
Renovation/Self-Renewal/Strategic Renewal	Reformulation of purpose and strategy, redefinition of business concept, reorganisation and organisational change.	Guth and Ginsberg(1990); Zahra(1991, 1993); Stopford and Baden-Fuller(1994); Antoncic(2000); Antoncic and Hisrich(2001, 2003)
Competitive Aggression	Attacking aggressively against the racquet or challenging the competitors directly and intensely.	Covin and Covin(1990); Lumpkin and Dess(1996); Antoncic(2000); Antoncic and Hisrich(2003)

Source: Ağca and Kurt (2007:92)

Based on its dimensions, intrapreneurship can be said to refer to an organisational-level endeavour to coordinate and run an internally generated venture (Ozbozkurt, 2019). This can be seen by the increasing social change from an information and knowledge society to a creative one that has birthed a wide range of business ventures (Ozbozkurt, 2019). These rapid changes have led to developments in business trends, noticed through the expansion of new

industries such as the design industry. Opportunities for traditionally small and non-specialised design businesses have consequently increased (Kim *et al.*, 2018:1-2).

Notwithstanding, innovativeness and co-innovation are crucial current research areas, especially in business-to-business (B2B), whose resources and capabilities need to be clearly understood (Yeniyurt *et al.*, 2019:3). Innovation refers to significant improvements of a product or process and such intrapreneurial efforts are often to execute innovations that result from the research and development efforts of individuals or teams (Baum *et al.*, 2014). Organisations that successfully attain rapid growth tend to apply innovative solutions in their daily business activities, which result in new and improved goods and services (Ozbozkurt, 2019). Such organisations quickly adapt to the business's internal and external environment changes to retain the acquired positions (Ionescu & Dumitru, 2015:99).

The dimension of self-renewal is an intrapreneurial strategy that refers to organisational information creation, which involves correlating the type of information derived with other information through a chain reaction (Ozbozkurt, 2019). This works hand-in-hand with the dimension of proactiveness, including environmental scanning, opportunity identification procedures, and an organisation's complete awareness of its competition in the marketplace through the knowledge of its competitors (Alarape, 2013).

Intrapreneurs are responsible for converting ideas into profitable products or services through innovation and confident risk-taking, enabling organisations to commit to exploiting identified opportunities (Ozbozkurt, 2019). The risk-taking dimension refers to an organisation's strategic posture regarding its desire and capability to commit increased resources to business activities whose outcomes are difficult to foresee (Lumpkin & Dess, 1996).

The dimension of autonomy refers to employees who have a propensity to independently develop an idea, vision, and innovation within the existing organisation (Ozbozkurt, 2019). Top management needs to value such employees' ideas, support self-determination, and include them in decision-making processes by restructuring organisational functions (Gürsoy & Güven, 2016:156). On the other hand, the dimension of competitive aggressiveness refers to an organisation's ability to challenge and compete with its competitors to become noticeable and dominant among its rivals (Alipour *et al.*, 2011). Organisations that implement these seven dimensions of intrapreneurship tend to be more effective in pursuing innovation through exploitation (Baum *et al.*, 2014: 248).

Although it is not easy to implement intrapreneurship, this phenomenon can take advantage of the human capital in an organisation. This concept is established on the notion that inestimable human capital dwells in entrepreneurial employees (Guerrero & Pena-Legazkue, 2013; Parker, 2011). As such, intrapreneurship harnesses individuals' creative talent, knowledge, skills, abilities, ideas and organisational support to bring about organisational success and improved performance when executed correctly (Lekmat & Chelliah, 2014; Rekha *et al.*, 2015; Saks, 2006). For it to be implemented correctly, the intrapreneurship process must involve monitoring opportunities and organisations' voluntary taking of risks (Gawke *et al.*, 2019).

Organisational or management support is vital for the creation of an ideal setting, resources, conditions and motivation that enhances intrapreneurial behaviour among employees (Kuratko & Montagno, 1989; Urban & Nikolov, 2013; Garcia-Morales *et al.*, 2014; Globoenik & Salomo, 2015; Puech & Durand, 2017). Leaders in an organisational environment with a sustained commitment to transferring knowledge into improved organisational performance and consequent growth are important to the intrapreneurial concept (Rivera, 2017).

Top management support is therefore critical for the facilitation and encouragement of intrapreneurship which in turn enables an organisation to attain innovation,

strategic renewal and sustainable profitability (Garcia-Morales *et al.*, 2014; Kuratko *et al.*, 2014; Neessen *et al.*, 2018; Zhang *et al.*, 2018). Lambert (2016) explains that intrapreneurship is a vital driver of innovation because it increases employees' abilities to identify and exploit new ideas and strategies for running an existing business and leading it to grow.

Supporting intrapreneurial behaviour in an organisation determines its success and survival (Lekmat & Chelliah, 2014; Rehka *et al.*, 2015). According to Kuratko *et al.* (2014a), an organisation that commits itself to adopting innovation as a strategy can attain success because it will develop structures and facilities that encourage an entrepreneurial spirit or mind throughout the organisation. The resulting entrepreneurial efforts or actions are undertaken at different levels of the organisation (Miller, 1983; Sharma & Chrisman, 1999; Antoncic & Hisrich, 2003; Maritz, 2010; Kuratko *et al.*, 2005a; Fellnhofer *et al.*, 2017; Kollmann *et al.*, 2017.)

2.5.3 Levels of intrapreneurship

According to Kuratko *et al.* (2005b:275), intrapreneurship is a multi-level construct. Various researchers refer to the individual-level approach, including the team-level perspective (Gapp & Fisher, 2007; Iacobucci & Rosa, 2010) and the organisational-level approach (Antoncic & Antoncic, 2011; Moriano *et al.*, 2014; Wakkee *et al.*, 2010). The individual-level approach is also called intrapreneurship and is seen as a bottom-top process in which individual employees demonstrate spontaneous intrapreneurial behaviour (Amo, 2010; Rigtering & Weitzel, 2013).

On the other hand, the organisational level approach is called corporate entrepreneurship or entrepreneurial orientation. This is when the organisation's planning, promotion and monitoring of intrapreneurial activities use a top-bottom approach (Sharma & Chrisman, 1999). The individual level of intrapreneurship is said to precede organisational-level intrapreneurship (Rigtering & Weitzel, 2013; Fellnhofer *et al.*, 2016).

2.5.3.1 Individual-level approach

Employee individual innovative behaviour forms the micro-foundation of innovation and intrapreneurship in organisations (Felin *et al.*, 2015:575). According to Rigtering and Weitzel (2013:8), the choice to take up intrapreneurship remains an individual and personal decision because this is remotely part of a standard job description. Intrapreneurship, therefore, reflects the autonomous behaviour of employees who can generate, determine, and utilise new opportunities to create value for the organisation (Blanka, 2018; Ma *et al.*, 2016). This is the individual or employee level of intrapreneurship that involves an individual employee assuming an agent who demonstrates anticipatory behaviour that results in creating new businesses for an organisation (venture creation) (Gawke *et al.*, 2017). Gawke *et al.* (2017) further explain that the employee level of intrapreneurship also boosts an organisation's capacity to respond to internal and market developments (strategic renewal). In this context, organisational innovation is seen as an outcome of entrepreneurially inclined individual employees (Hecker, 2017:376).

Hecker (2017) further explains that entrepreneurial individuals within an organisation tend to depart from the norm or the customary. This is to say that at the individual level, employees demonstrate proactive efforts that lead to "out-of-the-box" thinking in processes that have a bottom-up setup (Bosma & Kelley, 2018:32; Bosma *et al.*, 2013; Moriano *et al.*, 2014; Pinchot, 1985; Wiethe-Körprich *et al.*, 2017). They experiment with new inventions in the form of practices, processes, structures and techniques. Entrepreneurial individuals solicit support from colleagues and management to acquire the resources necessary to implement and internally commercialise these inventions. The inventions represent the organisational innovations often initiated by individual employees at the operational and middle management levels (Felin *et al.*, 2015). Hecker (2017) notes that the individual level of intrapreneurship can be easily hampered, and as such, organisations need to know the process through which individual intrapreneurial behaviour influences organisational outcomes in order for them to stimulate the process.

The Employee-level intrapreneurship process involves employees at all levels of management in an organisation (Hornsby *et al.*, 2009). It has been recognised that

this process is mainly driven by the intrapreneurial roles and actions of managerial and non-managerial employees (Belousova & Gailly, 2013; Blanka, 2018). The process requires that top-level managers assume the leading role of developing an organisational vision and infrastructure that promotes intrapreneurship. Further, they are responsible for rationalising the value that new businesses and strategic choices bring to the organisation (Gawke *et al.*, 2019). On the other hand, middle-level managers assume an evaluative role of advocating, clarifying, and expediting productive bottom-up ideas to senior management. They are also responsible for endorsing intrapreneurship strategies generated by top-level executives to the primary implementers, the low-level managers (Gawke *et al.*, 2019).

The low-level managers and the employees who work under them have the role of operationalising and experimenting with the resources that the organisation makes available to exploit identified opportunities that have not been observed or have not been effectively exploited by others (Belousova & Gailly, 2013). Non-managerial employees contribute to the intrapreneurship process by allocating substantial amounts of time to nurturing entrepreneurial ideas before formally disclosing them to management (Globocnik & Salomo, 2015). This means that they deviate from their formal work requirements to increase the variety of their work to contribute to the intrapreneurial goals of an organisation (Gawke *et al.*, 2019).

From these types of employee intrapreneurial behaviours at the different levels of management, it has been recognised that the specific type of employee behaviour displayed in the intrapreneurship process is agentic and strategic (Gawke *et al.*, 2017). It involves employee venture behaviour and employee strategic renewal (Gawke *et al.*, 2017). These displays of employee activity aim to create, add, or invest resources in new businesses (Gawke *et al.*, 2019). On the other hand, strategic renewal behaviour demonstrates employee activities that involve more opportunity-seeking and advantage-seeking. The purpose here is to progressively renew existing products, services, operation procedures and organisational strategy (Basile & Beauregard, 2016; Coenen & Kok, 2014).

Given the potential it brings to organisations, employee intrapreneurship is conceptualised and measured in three main ways. Firstly, it is seen to be built on the

entrepreneurial orientation literature as its work behaviour is defined in terms of proactivity, risk-taking, and innovativeness (Rigtering & Weitzel, 2013). Secondly, employee intrapreneurship is defined as intrapreneurial output or contributions to the employer, such as developing new products or services (Guerrero & Pe~na-Legazkue, 2013; Stam, 2013). Thirdly, employee intrapreneurship is conceptualised in terms of employees' agentic and strategic work behaviours whose purpose is to create new businesses for the organisation (venture behaviour) and to progressively improve an organisation's potential to respond to internal and external advancements (strategic renewal behaviour) (Gawke *et al.*, 2019).

2.5.3.2 Organisational-level approach

Peterson and Berger (1971) first introduced the organisational level of intrapreneurship to refer to the strategy and leadership methods used by large organisations to adapt to the growing market turbulence. Based on this, organisational-level intrapreneurship is also referred to as corporate entrepreneurship (Blanka, 2018). Further, it is on this concept that Pinchot (1985) developed his work on intrapreneurship, defining the role of entrepreneurial-thinking employees (intrapreneurs) who are crucial to an organisation's survival in turbulent markets.

Antoncic and Hisrich (2003) established two main areas under the organisational level of intrapreneurship. The first area is the entrepreneurial orientation (EO) approach, which presents the view that innovation is an aspect of strategy development (Wales, 2016). EO, therefore, presents entrepreneurship as an organisation's strategic posture and as an organisational-level phenomenon (Miller, 1983:771; Miller, 2011:873).

Therefore, EO is an organisational-level phenomenon, presenting a strategic positioning of the whole organisation and the behaviours within the organisation. These behaviours are a desired outcome of an organisation's top-level (Anderson & Covin, 2014; Covin & Wales, 2012) to attain the dimensions of intrapreneurship (Bouchard & Basso, 2011; Covin & Slevin, 1991; Lumpkin & Dess, 1996; Miller, 1983; Wales, 2016).

The second area is corporate entrepreneurship (CE), which Antoncic and Hisrich introduced (2003). This concept refers to cultivating innovation and exploiting opportunities within an organisation (Rigtering & Weitzel, 2013). It is similar to entrepreneurial orientation; however, CE has two key outcomes. It results in corporate venturing (CV) and new business or replicating an existing one. It also leads to strategic entrepreneurship and strategic renewal, which involves opportunity and advantage-seeking (Kuratko & Audretsch, 2013; Gawke *et al.*, 2019).

It must be noted that the importance of corporate entrepreneurship and individual-level intrapreneurship (employee intrapreneurship) is for the development of entrepreneurship at the organisational level (corporate entrepreneurship), which is vital for economic growth and the development of global competitiveness (Lumpkin & Dess, 1996; Morris & Kurratko, 2002:85; Bolton, 2012; Douglas & Fitzsimmons, 2013).

2.5.4 Models of corporate entrepreneurship

Employees with entrepreneurial potential are supported by several models (Carroll, 2014: 10-20; Karacaoglu *et al.*, 2013:163; Wolcott & Lippitz, 2007). These models are derived from two types of initiatives management employs to drive intrapreneurship at the organisational level (Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007). According to Wolcott and Lippitz (2007), one of these initiatives is organisational ownership, which points to the person within the organisation who is accountable for the innovation and new business that is an outcome of corporate entrepreneurship. The responsibility and accountability for creating new business can be assigned to a group or groups or spread throughout the organisation (Garcia-Morales *et al.*, 2014; Heavey & Simsek, 2013; Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007). The other initiative is resource provision, which addresses how time and financial resources are allocated for new business (Wolcott & Lippitz, 2007; Puech & Durand, 2017; Neessen *et al.*, 2018:560).

Therefore, the two initiatives bring up a four-by-four matrix of four models: the opportunist, the enabler, the advocate, and the producer. Through these different

types of models, corporate entrepreneurship is implemented as determined by the entrepreneur's mind (Carroll, 2014; Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007).

2.5.4.1 The opportunist model

This model involves diffused ownership and ad hoc allocation of resources. It is based on the suggesting that all organisations begin as opportunists (Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007). This is so because the ownership or allocation of resources is not clear (Garcia *et al.*, 2014; Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007). The success of corporate entrepreneurship initiatives, at this point, depends on the employees who pursue their ideas despite the barriers that may exist within an organisation (Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007). These employees tend to assume the role of project champion as they begin and complete the corporate entrepreneurship initiatives successfully (Wolcott & Lippitz, 2007). For this model to be effective, there must be a disparate management structure in which managers can collectively support the experimentation of corporate entrepreneurship initiatives (Castrogiovanni *et al.*, 2011; Zur & Walega, 2015). The organisation must also embrace a trusting corporate culture of innovation (Wolcott & Lippitz, 2007).

2.5.4.2 The enabler model

According to Wolcott and Lippitz (2007), this model is based on the notion that employees within an organisation are willing to develop new ideas. This model works for organisations where management provides enough support to enable employees to work on innovative ideas. According to Neessen *et al.* (2018), management support is of great importance to the employees willing to take intrapreneurial activities. This model involves diffused ownership and dedicated resources in an organisation. There is a dedication to resources and processes without formal organisational ownership (Buekens, 2014:585; Neessen *et al.*, 2018:560). Therefore, such an organisation has leaders who offer operational support that guides entrepreneurially-minded employees (Wolcott & Lippitz, 2007).

These business leaders are given funding and executive attention, which empowers them to hire and retain employees who work through project teams to attain an

organisation's strategic goals (Heavey & Simsek, 2013; Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007). A culture of innovation is developed in this model as employees are trusted by management and are allowed the flexibility to keep working on innovative ideas (Buekens, 2014:585). However, for this model to be effective, there is a need to find and satisfy project leaders (Wolcott & Lippitz, 2007).

2.5.4.3 The advocate model

This model thrives in organisations where funding for corporate entrepreneurship initiatives is available (Kuratko & Morris, 2018). Such organisations have focused ownership and ad hoc resource allocation in that organisational ownership for the development of new business is assigned, yet the funding provided is modest (Wolcott & Lippitz, 2007). Teams or business units are formed, coached, directed and given access to minimum financial resources to enable them to pursue entrepreneurial projects (Heavey & Simsek, 2013). The pursuit of these projects results in the transformation of business units and consequently supports corporate entrepreneurship initiatives and the achievement of an organisation's strategic goals (Kuratko & Morris, 2018). However, there is pressure to achieve the business units' short-term goals (Wolcott & Lippitz, 2007).

2.5.4.4 The producer model

In this model, corporate entrepreneurship is supported by a defined allocation of funds and the use of disruptive technologies (Wolcott & Lippitz, 2007). The organisation has focused ownership and dedicated resources. Further, employees are provided with active leadership to develop their entrepreneurial potential (Heavey & Simsek, 2013:837-855; Wolcott & Lippitz, 2007). According to Wolcott and Lippitz (2007), this model encourages latent entrepreneurs and protects them from organisational politics by enabling their control over business units. Interdepartmental collaborations are also encouraged for the business units to prevent the adverse effects of organisational politics. However, leadership contentions in succession tend to be challenging in this model (Wolcott & Lippitz, 2007).

All these models discussed above indicate a unique way of implementing corporate entrepreneurship in different ways and through the latent employee entrepreneurial potential or behaviour of intrapreneurs.

2.5.5 Intrapreneurial behaviour and its outcomes

Intrapreneurial behaviour (IB) is voluntary employee behaviour involving identifying opportunities, producing ideas, and creating new products and business lines (Antoncic & Zorn, 2004; De Jong *et al.*, 2011). Also, Bau and Wagner (2015:231) define intrapreneurial behaviour as the process by which employees can identify, advance and implement new business opportunities and create economic value within an existing organisation. Intrapreneurial behaviour, therefore, refers to employee behaviour in which employees identify business opportunities and develop innovations that benefit the organisation without being asked to do so (Antoncic & Hisrich, 2001:495). Through their intrapreneurial behaviour, employees demonstrate their skills and competencies, which are of great importance to organisational performance. This is why Pinchot (1985) calls these employees to be intrapreneurs. This term is a combination of “intracorporate” and “entrepreneur”.

According to Pinchot and Pellman (1999:16), intrapreneurs are like entrepreneurs who transform ideas into realities within an organisation with their policies and bureaucracy (Baruah & Ward, 2014). Their behaviour further includes identifying opportunities and establishing innovations from within an existing chain of command (Camelo-Ordaz *et al.*, 2012). Intrapreneurs are, therefore, seen as the needed human capital that forms a foundation for innovation and the resultant competitive advantage of organisations, leading to the success of ventures (Guerrero & Pena-Legazkue, 2013; Parker, 2011).

Intrapreneurship assumes that innovative employee behaviour affects an organisation's performance through strategic renewal and new resources and skills (Kuratko & Audretsch, 2013). According to Pinchot (1985), these intrapreneurs are, firstly, dreamers who control the innovation process that transforms ideas into profitable realities. Organisations, therefore, need to provide a supportive environment for intrapreneurial behaviour to thrive as it is critical to an organisation's

ability to remain competitive, profitable and relevant (Pinchot, 1985; Van der Sijde *et al.*, 2013). Intrapreneurial employees are thus of great value to an organisation as they employ opportunistic tactics and take advantage of small changes to influence more significant changes within the entire organisation through the turning of ideas into business success (Heize & Weber, 2016; Moriano *et al.*, 2014; Pinchot, 1987). The behaviours of intrapreneurial employees enable them to become implementers of new logics, and so they come up with initiatives that can impact organisational performance at different levels (Fellnhofer *et al.*, 2017); Kollmann *et al.*, 2017).

Intrapreneurship is thus characteristic of employee behaviours that affect an organisation's direction and performance levels that exceed expectations. This is possible because intrapreneurs behave in ways that go against traditional practices within an organisation (Berzin *et al.*, 2016) in identifying opportunities and their use of knowledge and resources to exploit the opportunities (Baczynska *et al.*, 2016; Urbano & Turro, 2013). Employees' intrapreneurial behaviour results explicitly in innovation, strategic business renewal, organisational performance and productivity (Baggen *et al.*, 2016; Rigtering & Weitzel, 2013; Neessen *et al.*, 2018). However, for these results to manifest, intrapreneurial behaviour depends on factors such as resource availability, management support and work discretion, which tend to require the skilful navigation of bureaucratic impediments to success (Engzell, 2024; Johnson *et al.*, 2017; Neves & Brito, 2020).

2.5.5.1 Innovation

Innovation is considered to be of great importance in organisational and business competitiveness as well as existence. It has become a significant part of management strategy and a priority goal to be pursued through the commitment, ability, ingenuity and creativity of employees (McGowan & Hu, 2014:1). More than ever before, organisational leaders need to identify or develop strategies for implementing innovation at all levels of the organisation. This innovation can be attained through intrapreneurship or the support for intrapreneurial behaviour (Kuratko & Audretsch, 2013).

Intrapreneurial behaviour consists of creative work that focuses on generating and implementing incremental and radical innovations (De Jong & Marsili, 2015; Messmann & Mulder, 2017). This is possible because the intrapreneurial process involves the perception of innovation prospects, referred to as opportunity recognition, and the exploitation of these innovation prospects within projects, referred to as opportunity realisation (Bosma *et al.*, 2013:8; Frank *et al.*, 2016; Pinchot, 1985). Opportunity recognition is characterised by risk-taking predispositions (Boon *et al.*, 2013:210-220) and openness (Madrid *et al.*, 2014). In contrast, opportunity realisation involves implementing the identified innovations, personal initiative (Frese & Fay, 2001) and resilience against organisational barriers (Carmelo-Ordaz *et al.*, 2012).

Intrapreneurial behaviour is also built on errors, which are viewed as possessing positive outcomes that can be a foundation for organisational learning and innovation processes (Gartmeier & Winkler, 2015). In the intrapreneurial process, an error is always used for evaluation because it only happens when there is a priori set norm, such as a goal from which an action can deviate (Heid, 2015). Therefore, the culture that is characteristic of the intrapreneurial process is one of trial and error by innovative mindsets who are given the opportunities to continuously experiment on and refine new ideas (Hagedorn & Jamieson, 2014). Problems or errors inspire these intrapreneurs as an element of an innovative culture that enables the adoption and internalisation of intrapreneurship (Gürsoy & Güven, 2016). Once this happens, organisations can achieve sustainable and competitive advantage. In today's rapidly changing environment, organisations need to support an innovative culture to increase their ability to respond quickly, achieve their objectives, and adapt faster than their competitors (Gürsoy & Güven, 2016).

2.5.5.2. Strategic business renewal

It is presumed in intrapreneurship that innovative employee behaviour influences an organisation's performance by promoting strategic business renewal and access to new resources and skills (Kuratko & Audretsch, 2013). According to Baruah and Ward (2014), intrapreneurship is viewed mainly as an activity-based concept through

which organisational products, services, technologies, structures or operations are moved into new directions, resulting in the creation of a new business that renews the existing organisation and proactively shapes the future direction of the organisation (Güven, 2020:229-230). This is a vital necessity for organisations to successfully achieve their goals and survive today's intense global competitive environment, which requires constant identification of new opportunities and possibilities. Intrapreneurship enables organisations to effectively exploit these opportunities by taking up measures against threats (Güven, 2020:229-230).

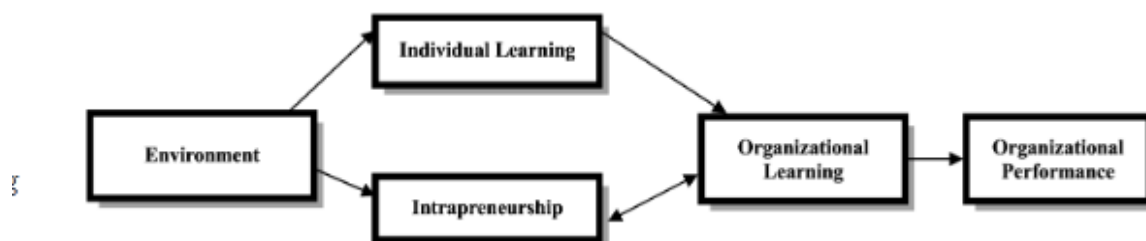
In achieving strategic business renewal, intrapreneurs respond to situational challenges resulting from changes such as technological developments, market threats, or problems (Kuratko *et al.*, 2015). They use organisational resources efficiently to meet the demands of new products and markets. As a result, intrapreneurs enable ongoing organisational renewal and growth and continuous effectiveness in competitive environments (Hisrich *et al.*, 2017).

2.5.5.3 Organisational performance and productivity

According to Antoncic and Hisrich (2001), intrapreneurs enable organisations to improve their performance and recreate organisational structures and strategies for better adaptation to environmental demands. Molina and Callahan (2009) add that an organisation's external environment produces the conditions for both intrapreneurship and individual learning among employees, which inclusively sustains the organisational learning that results in improved organisational performance. This is to say that organisations learn and improve their performance through intrapreneurs who can identify opportunities in the environment and deviate from existing organisational paradigms (Antoncic & Hisrich, 2001; Pinchot, 1985). As illustrated in figure 2.1 on the following page, individual learning involves employees learning from the organisation's external environment and works with intrapreneurship to influence organisational learning and performance. Intrapreneurs are known to discover opportunities they exploit through learning as individuals first and later through organisational learning by sharing knowledge obtained with teams they work with (Hisrich, 1990). Profitable innovations are then developed in the business domain (Pinchot & Pellman, 1999).

Through their positive frame of mind, intrapreneurs can adapt to new unlearning and learning processes and handle any form of change in the business environment (Molina & Callahan, 2009:391). This makes them a sustainable resource for developing long-term competitive advantage for their organisations as they enhance organisational learning (Molina & Callahan, 2009:392). As an organisation's intrapreneurial intensity grows, it leads to improved performance in terms of growth and profitability. This results from developing new products and services and improved processes and systems that improve efficiencies ((Molina & Callahan, 2009; Loveday & Ogidi, 2015).

Figure 2.1: Intrapreneurial learning and performance



Source: Molina and Callahan (2009:390)

According to Sathe (2003:), several reasons exist for intrapreneurship's potential to improve organisational performance and productivity. These reasons include intrapreneurship's ability to help organisations overcome the uncertainty that is not usually controlled. Another reason is that intrapreneurship encourages employees to exceed organisational settings (Sathe, 2003). As a result, intrapreneurship can promote sustainable organisational growth as it exploits even the most minor opportunities. Further, intrapreneurship encourages long-term consistency in organisations as it is a process that involves optimal management (Baruah & Ward, 2014; Rekha, 2015).

Despite its potential to enable organisations to face the current challenges of attaining innovation competitiveness through the support of intrapreneurs' motivations and skills, intrapreneurship remains a managerial challenge (Castellion & Markham, 2013; Heidenreich & Spieth, 2013).

2.6 BARRIERS AND CHALLENGES TO INTRAPRENEURSHIP

According to Buekens (2014), projects to activate intrapreneurship fail due to several challenges in the organisation's internal and external environment. Intrapreneurial projects are said to have a failure rate of between 70% and 90% (Altringer, 2013:1-7). To begin with, scientific management techniques tend to work against the innovative power in organisations. This is because the abstract analytic techniques employed in centralising decision-making are not aligned with the way people in organisations think and do not help with deciding on new ideas, thereby working against the concept of intrapreneurship (Buekens, 2014).

Heinze and Weber (2016) explain that institutional bureaucracy is a barrier to adopting intrapreneurship in organisations, especially large ones. As a result, entrepreneurial individuals tend to find it challenging to pursue ideas from within the job positions they hold in the organisation, such that they opt to leave to become entrepreneurs (Govindarajan & Desai, 2013). Excellence is therefore lost from old companies to new ones. This is because the organisational culture is resistant to change and unwilling to try new ideas, business models, or markets that discourage intrapreneurs' enthusiastic spirit. Intrapreneurs leave to set up their ventures when their organisations do not see intrapreneurship as a vital tool for growth (Buekens, 2014).

According to Bysted and Jespersen (2014), stimulating employees' entrepreneurial work behaviour is a complicated process that demands an internal climate that encourages generating and realising ideas through financial, participative and decentralisation mechanisms. However, because of uncondusive EO environments in organisations, highly skilled intrapreneurs are forced to leave to become successful entrepreneurs on their own (Thulin, 2018).

The ownership of intellectual property (IP) rights (Ibrahim, 2016) and remuneration (Maier & Iancu, 2016:40–45) are the other barriers to intrapreneurship. According to Ibrahim (2016), the lack of intellectual property rights and rewards presents difficulties for innovators and discourages inventions within organisations. Further,

Morris and Lewis (1995) and Baruah and Ward (2014) explain that another challenge faced by intrapreneurs is the present global environmental turbulence, leading to the rise of organisational complexity. As a result, organisations have to cope with more customer demands and preferences, forcing them to search for newer innovations that the market desires to secure their existence (Aparicio, 2017). The turbulence in the environment hurts organisations as it increases the threats to the organisations' missions and outputs. Consequently, these negative factors reduce an organisation's profit margins, thereby placing additional pressure on attaining radical innovation to sustain the industry life cycle (Rambakus *et al.*, 2020).

Intrapreneurial organisations face the challenge of quickly adapting and evolving the market's rapidly changing trends and demands (Guyen, 2020). Intrapreneurs must learn to monitor the present and future conditions of the target market. This is vital for developing innovations that offer more excellent customer value and satisfaction if organisations attain a superior advantage over their rivals through behaviour change and timely establishment in the market (Baruah & Ward, 2014; Cadar & Badulescu, 2015; Neessen *et al.*, 2018).

However, another challenge faced by organisations is the nurturing of intrapreneurial initiatives. This tends to be difficult because of the pressure it exerts on the organisational structure and process, limiting its innovative capabilities (Aparicio, 2017). Intrapreneurship requires a total modification of the internal work methods as the structure and processes in an organisation affect the innovative capabilities. However, when the focus is mainly on the process, the exploratory activities that lead to increased radical innovations are impeded (Benner & Tushman, 2015). This is made worse because organisations tend to lack the ability to identify and develop intrapreneurs strategically (Parker, 2011).

According to Sathe (2003), another challenge is the ineffectiveness of traditional management techniques in organisations regarding developing new ventures. Several reasons mainly cause this. Firstly, organisations fail to align their visions with the realities of the marketplace (Loveday & Ogidi, 2015). Secondly, organisations fail to adopt a flat management structure and maintain small project teams (Loveday & Ogidi, 2015). Thirdly, managers in organisations tend to inhibit the parallel

development of projects and develop ideas across traditional functional lines. This includes discouraging groups from functioning outside traditional lines of authority (Loveday & Ogidi, 2015). Despite these aspects that inhibit intrapreneurship, many others facilitate intrapreneurship, which will be reviewed in the following chapter.

2.7 SUMMARY

The contribution of employees' behaviours to an organisation's innovativeness is termed intrapreneurship or corporate entrepreneurship, an area of research that has its foundation in entrepreneurship and is closely linked to entrepreneurial orientation. Intrapreneurship is, therefore, a concept that refers to entrepreneurship in existing organisations and involves intrapreneurs, entrepreneurial-thinking people, who form the basis for innovation and, consequently, improved performance and competitive advantage. It is a process that occurs at the individual, team and organisational levels, facilitated by different initiatives and models. This is vital for strategic organisational renewal, sustainability, competitiveness, improved performance and growth despite the barriers that impede the intrapreneurial process. The next chapter of the literature review will discuss the dimensions or aspects of an organisation's internal environment that facilitate intrapreneurial behaviour or an entrepreneurial mind among employees.

CHAPTER THREE: LITERATURE REVIEW ON ENVIRONMENTAL FACTORS THAT INFLUENCE INTRAPRENEURIAL BEHAVIOUR

3.1 INTRODUCTION

Different researchers have highlighted the importance of intrapreneurship (the individual level) for the development of corporate entrepreneurship (the organisational level), which is vital for economic growth and the attainment of global competitiveness (Lumpkin & Dess, 1996; Morris & Kurratko, 2002; Bolton & Lane, 2012; Bolton, 2012:91; Douglas & Fitzsimmons, 2013). Intrapreneurship provides how organisations overcome growth and profitability challenges (Rigtering & Weitzel, 2013; Desai, 2015; Oprha & El Oualidi, 2017; Giannikis & Nikandrou, 2013). Bierwerth *et al.* (2015:255-278) conducted a meta-analysis of studies done on 13,237 organisations and confirmed a positive relationship between corporate entrepreneurship and organisational performance. Muzafer and Bahrija (2015) further confirm that intrapreneurship affects an organisation's financial growth.

In order to continuously improve performance, one of the significant organisational goals is to sustain a competitive edge in today's turbulent competitive economic environments and as such, entrepreneurial mindsets are vital for the attainment of the desired business prosperity (Hornsby *et al.*, 2013; Ambad & Wahab, 2016; Paunovic & Dima, 2014; Kraus & Rigtering, 2017). It is also imperative for organisations to revise key goals, supported by extensive feedback (Lekmat & Chelliah, 2014; Rekha *et al.*, 2015) to adopt intrapreneurship as part of their competitive strategy (Hadad, 2015). This will enable enhancing the internal environment dimensions conducive to promoting intrapreneurial behaviour given a particular organisational context (Arz, 2017:361-409).

Internal environment dimensions are under management control, unlike the external environment. However, these dimensions of intrapreneurial intentions continue to lack empirical studies in the literature (Marchiori *et al.*, 2018). One notable fact is that

the data did not support most of the hypotheses proposed and tested by Douglas and Fitzsimmons (2013). Research on the specific conditions under which internal entrepreneurial initiatives of firms can prosper in particular types of organisations is also scarce (Rigtering & Weitzel, 2013). A recent stream of research even shows that different intrapreneurial conditions may explain employees' intrapreneurial behaviour in SMEs and large firms (e.g. Zellweger & Sieger, 2012; Hughes & Mustafa, 2017).

3.2 DIMENSIONS THAT INFLUENCE INTRAPRENEURIAL BEHAVIOUR

Various researchers have studied the dimensions within and without an organisation that encourage intrapreneurial behaviour among employees. (Miller, 1983; Antoncic & Hisrich, 2004; Hornsby *et al.*, 2002; Bhardwaj *et al.*, 2011; Stevenson & Jarillo, 1990; Baruah & Ward, 2014).

3.2.1 Internal dimensions that influence intrapreneurial behaviour

The internal environment comprises two main types of internal dimensions that facilitate an intrapreneurship orientation. This is referred to as the interactionist perspective, which suggests that intrapreneurial behaviour is a consequence of the interaction between personal or individual dimensions of intrapreneurs and those of the organisational context or the work environment conditions (Hornsby *et al.*, 1993). Both organisational factors and the individual self-determined behaviour of employees are vital for enabling intrapreneurial behaviour within established organisations (Åmo & Kolvereid, 2005).

The personal or individual dimensions that stimulate intrapreneurial behaviour include individual entrepreneurial cognitions or motivational dimensions (Kuratko *et al.*, 2005b). These are considered the main dimensions in an organisation's intrapreneurial efforts, which must be assessed in order to determine an organisation's level of preparedness to stimulate intrapreneurial behaviour (Hornsby *et al.*, 2013; Croneen *et al.*, 2016). The dimensions represent the organisational context in which employees operate and include organisational support or the support of the top management team; the organisational structure and culture;

reward and reinforcement systems for employees; a transparent promotional system for the intrapreneurs; work discretion; time availability; organisational boundaries and resource availability (Hornsby *et al.*, 2013; Rekha *et al.*, 2014; Kuratko *et al.*, 2014a; Hughes & Mustafa, 2017). All of these elements demand a radical shift in an organisation's internal work.

3.2.1.1. Personal/Individual intrapreneurial dimensions

A few studies have empirically studied the dimensions that influence the intentions of individuals to become intrapreneurs (Marchiori *et al.*, 2018:916). Research on the review of individual-level intrapreneurship is, therefore, not standard, and so there is a need for more research at this level (Blanka, 2019:921). This is because entrepreneurial employees and their human capital are vital to the success of intrapreneurial initiatives. As such, intrapreneurial dimensions that influence intrapreneurs need to be closely studied (Blanka, 2019:921). Further, this level of research is necessary because intrapreneurial behaviour is mainly a result of employees' individual and personal decisions (Rigtering & Weitzel, 2013:342).

According to Marchiori *et al.* (2018:916), two studies by Monsen *et al.* (2010) and Douglas and Fitzsimmons (2013) can be identified. Monsen *et al.* (2010.) developed a theoretical model that combined financial, risk, and effort factors to explain intrapreneurial behaviour. Their findings indicated that employees' intrapreneurial intentions are not influenced by their view of risk exposure and the level of extra work to be done (Marchiori *et al.*, 2018). Intrapreneurs possess an entrepreneurial orientation that enables them to thrive in demanding working conditions without experiencing burnout (Kattenbach & Fietze, 2018). This is because intrapreneurs are intrinsically motivated by their ability to tolerate personal risk, be persistent, search for new opportunities, ideas and improvements, and the sense of achievement they get from the work they do (Smith *et al.*, 2016; Hanson, 2017:309).

Douglas and Fitzsimmons (2013) studied five factors influencing individuals' intrapreneurial intentions: income expectation, decision-making autonomy, company ownership, risk tolerance and tolerance for extra work. Their findings showed that

risk aversion seems to influence intrapreneurship exclusively (Marchiori *et al.*, 2018:917).

Intrapreneurs are further said to possess personal motivation, mainly determined by their personalities, characteristics, and personal situations. These are influenced by the individual intrapreneurs' temperament, experience, personal career goals and current or future value rewards (Carrier, 1996:12). According to Monsen *et al.* (2010), their study established that intrapreneurial intentions are influenced by expectations of profit distribution derived from intrapreneurial initiatives in an organisation. Therefore, personal motivation to take action leads to intrapreneurship success. As such, studies that examine individual-level intrapreneurial dimensions focus on personality traits (Blanka, 2019:932).

Williamson *et al.* (2013) examined personality factors to identify intrapreneurs within organisations based on their specific characteristics. Sinha and Srivastava (2013) also examined how personality traits and work values affect employees' innovative behaviour. This has been referred to as intrapreneurial orientation (Blanka, 2019:932). To successfully adopt an intrapreneurial orientation, it is essential to note that the factors that motivate employees to act entrepreneurially depend on their specific traits, which the organisation must be aware of (Hanson, 2017:319).

Researchers have leveraged the Big Five model to structure and explain the distinct personality traits that influence employee innovative behaviour (Blanka, 2019:932). The Big Five, extraversion, agreeableness, conscientiousness, neuroticism and openness to experience, refer to five broad, bipolar trait dimensions that comprise the most widely used model of personality structure (Soto, 2018).

The Big Five model constitutes a wide range of interconnected behavioural characteristics. Extraversion refers to an individual's varying behavioural characteristics as observed in social engagements, assertiveness, and energy levels. Agreeableness, on the other hand, is a trait dimension that is observed through differences in compassion, respectfulness, and acceptance of others (Soto, 2018). Conscientiousness is about differences in organisation, productiveness, and responsibility. Neuroticism, also referred to as emotional stability, represents

differences in the frequency and intensity of negative emotions, and lastly, openness to experience or intellect indicates differences in intellectual curiosity, aesthetic sensitivity, and imagination (Soto, 2018). Together with the four distinct groups of personal motivations for intrapreneurs identified by Carrier (1996:12), these personality traits can be looked at.

3.2.1.1.1 Intrinsic personality-related motivations

Intrinsic motivations are long-term motivations that influence employees to work because they consider the task they perform to be valuable (Bloom & Colbert, 2011:79). This means that intrinsic motivations arise from employees' positive feelings towards the work being performed (Bloom & Colbert, 2011:80). These motivations, therefore, include the autonomy and freedom needed for intrapreneurs to develop their work (Carrier, 1996:12).

Employees' positive attitude towards their work is also cultivated by an organisation that allows employees enough extra time to identify and achieve innovative organisational outcomes, thereby encouraging intrapreneurial behaviour (Kuratko *et al.*, 2014a). This improves employee performance as they balance work and life duties (Mas-Machuca *et al.*, 2016). Also, Gilley *et al.* (2015:3) explain that management needs to consider employees' workload to balance their work and non-work lives.

These motivations influence employees with personality traits such as extraversion and altruism, creativity, management and achievement to behave more entrepreneurially (Sinha & Srivastava, 2013:97–113). Further, according to Camelo-Ordaz *et al.* (2012) and Zhu *et al.* (2014), the individual's values that influence innovation performance include persistence, ambition, creativity, risk-taking initiative and optimism, which are the same personality traits like openness to experience, conscientiousness and extraversion. These individual characteristics are vital in influencing intrapreneurial behaviour and intrapreneurial initiatives or projects (Rigtering & Weitzel, 2013:342; Martiarena, 2013; Blanka, 2019:933).

3.2.1.1.2 Extrinsic reward-related motivations

These motivations refer to satisfaction with the nature of the job and include aspects such as organisation characteristics, type of work, work welfare, job security, advancement opportunities, access to capital, or earning a salary above market rates or the wage levels in that industry (Carrier, 1996:12; Godwin, 2020:59). These aspects benefit the employees and improve their standard of living (Agusiom *et al.*, 2019:76-82). The management of an organisation makes efforts to meet the needs of their workforce in order to improve their productive capacity and work loyalty (Godwin, 2020:59). These reward-related motivations are considered extrinsic because they are outside the work that employees do, and their provision is controlled by managers who determine their size and the possibility of them being granted (Singh, 2016:199).

Managers who use transformational leadership styles to provide these rewards influence the intrapreneurial behaviour of employees (Moriano *et al.*, 2014:103). This implies that intrapreneurs and their motivation to behave entrepreneurially are influenced by how they are treated by their managers (Moriano *et al.*, 2014:103). As such, managers must have a clear sense of the mission, an aspiration to attain the mission, view employees as individuals, assume a mentorship role and encourage employees to be innovative (Moriano *et al.*, 2014:115). These factors present guidelines that managers can use to increase the motivation in their intrapreneurial employees across all personality types.

3.2.1.1.3 Motivations based on past experience and future career goals

These motivations include the desire to be self-employed, past experience as an intrapreneur, the attraction of doing business in one's place of origin and being in the same job for an extended period (Carrier, 1996:12). In this case, business opportunity recognition plays a vital role in enhancing intrapreneurship (Urbano & Turro, 2013). Opportunity recognition has been identified as a significant factor in defining intrapreneurs as employees who recognise business opportunities (Martiarena, 2013).

Intrapreneurs are further seen as employees with brokering abilities who can integrate knowledge with organisational knowledge, social capital and networking skills to initiate and develop intrapreneurial projects (Blanka, 2019). As such, intrapreneurs are said to possess an intrapreneurial characteristic referred to as self-efficacy, one's belief that one can successfully execute a particular task (Wang *et al.*, 2013). Intrapreneurial behaviour increases when employees have higher levels of self-efficacy (Douglas & Fitzsimmons, 2013; Hanson, 2017), which is a consequence of different factors that include past experience (Lee *et al.*, 2016; Hockerts, 2017:105-130; Pfeifer *et al.*, 2016), education and training (Kubberod & Pettersen, 2017; Gielnik *et al.*, 2017) and the presence of role models and mentors (Vanevenhoven & Liguori, 2016; Austin & Nauta, 2016; Farashah, 2015).

Intrapreneurs are elaborate planners as they participate in organisational planning activities, leading them to have high growth expectations (Blanka, 2019). All these reflect motivations that influence employees with personality traits such as openness to experience, conscientiousness, extraversion and agreeableness to behave more entrepreneurially.

3.2.1.1.4 Motivations based on the organisational context

These refer to a management style that supports intrapreneurship, a sense of belonging for the intrapreneurs, a shared vision with the intrapreneur and confidence, and the relationship's quality (Carrier, 1996:12). This implies that intrapreneurs thrive in organisations with a particular climate and political field (Smith *et al.*, 2016). Being identified with the organisation, which builds employees' sense of belonging to the organisation, influences their intrapreneurial behaviour (Edu Valsania *et al.*, 2016).

According to Zhu (2014), intrapreneurs develop a higher level of creativity when encouraged to contribute a higher number of ideas and a higher level of proactivity when a large number of their ideas are accepted. This builds job satisfaction in employees of all personality traits, which inherently enables intrapreneurship in the organisation (Antoncic & Antoncic, 2011; Giannikis & Nikandrou, 2013; Mustafa *et al.*, 2016).

3.2.1.2 Organisational context intrapreneurial dimensions

Intrapreneurial behaviour is not determined by individual employees only, but it is also an outcome of situational components influenced by organisational conditions and the job position (Rigtering & Weitzel, 2013; Moriano *et al.*, 2014). As such, the entrepreneurial orientation of an organisation and, more specifically, the organisation's support for the initiatives suggested by its employees can boost the employees' intrapreneurial behaviour. The intrapreneurial dimensions of the organisational context include:

3.2.1.2.1 Top Management Support

Top management comprises senior executives in charge of an organisation's functional areas (Menz, 2012:45). According to Amo (2010:145), intrapreneurship begins at the top management level through the support for intrapreneurial ideas. Kuratko *et al.* (2014a) explain that top management support is the degree to which top managers support, facilitate, and promote entrepreneurial behaviour. This support is seen through top management's deliberate efforts to facilitate and promote employees' entrepreneurial initiatives (Zbierowski, 2016). Top management leads in the generation of innovative ideas and the provision of the required resources guided by organisational policies and appropriate managerial practices (Alpkan *et al.*, 2010; Bloodgood *et al.*, 2015:384; Banumathi & Samudhararajakumar, 2015:5).

Since management is in charge of the resources that employees depend on for success, management's desire to replace the status quo with long-term risk-taking and organisational change gives an organisation a strategic focus for intrapreneurship (Aparicio, 2017:32). As such, top management support determines the ultimate direction of progress in an organisation's intrapreneurial activities. Therefore, intrapreneurship activities are a consequence of top management's desire to support intrapreneurship initiatives and can only flourish through top management's solid support (Bloodgood *et al.*, 2015; Banumathi & Samudhararajakumar, 2015; Antoncic & Hisrich, 2004).

Top management support is the primary facilitator for entrepreneurial behaviour and process innovation (Lekmat & Chelliah, 2014; Wood *et al.*, 2014; Armesh *et al.*, 2014). Zbierowski (2016:84) adds that corporate entrepreneurship results from the positive attributes of top management leadership.

Lukes and Stephan (2017) state that top managerial support significantly influences employees' innovative behaviour. It is vital for the growth and progression of an innovative culture as it enables intrapreneurs to communicate and execute their innovative ideas (Baruah & Ward, 2014). According to Zbierowski (2016:84), intrapreneurial behaviour results from top management's transformational leadership. This implies that if management support for idea generation, risk-taking and reward systems is lacking, employees are most likely to get frustrated with rigid and conservative organisational policies that do not encourage innovation (Alpkan *et al.*, 2013:1).

Inconsistencies between top-level and middle-level management's attitudes toward the support of intrapreneurial activities can further hinder intrapreneurial behaviour among employees (Aparicio, 2017:32). A lack of informal managerial mechanisms that encourage interactions among employees can also hinder intrapreneurial behaviour (Hughes & Mustafa, 2017).

Bysted and Jerspersen (2014) further explain that increasing employees' innovative work behaviour is challenging as the process involves establishing an internal environment that supports idea generation and attainment through financial, decentralisation and participative mechanisms. Top management support is therefore vital for inducing employees' intrapreneurial behaviour and must be seen by providing training, time, and resources to develop novel ideas (Hashimoto & Nassif, 2014; Desai, 2015a).

Intrapreneurial behaviour can be induced or autonomous; however, top management has a critical role in inducing this behaviour in employees (Hashimoto & Nassif, 2014). Parker (2011) explains that potential intrapreneurs only indicate their interest in intrapreneurship when top management provides suitable opportunities. Therefore, top management's visible commitment to intrapreneurship heralds an

organisation's intrapreneurial activities and an intrapreneurship-friendly environment (Blanka, 2019).

Regular access to training also enables employees to acquire extensive knowledge and skills vital to innovation, as proficiency is the foundation of creativity (Desai, 2015a). As such, management needs to provide suitable training instruments that would pioneer the intrapreneurial behaviour of employees (Blanka, 2019). Further, management must ensure employees have access to time and resources to empower them to develop or implement novel ideas (Desai, 2015a). Receiving this kind of management support is of great importance to employees who are willing to undertake intrapreneurial activities (Neessen *et al.*, 2018), and as such, this needs to be made a norm within the organisation (Garcia-Morales *et al.*, 2014).

3.2.1.2.2 The organisational structure

The structure of an organisation is seen as an essential factor that leads to intrapreneurship (Delić *et al.*, 2016:44; Hayton, 2005; Hornsby *et al.*, 1999; Kanter, 1985). An organisational structure is a dimension that represents the levels of flexibility of the organisation, the communication patterns in the entire organisation and the centralisation of decision-making (Zur & Walega, 2015) concerning the design of specific positions within the organisational structure (Mintzberg, 1993). The specific positions represent two parameters, namely, task specialisation and formalisation. Task specialisation refers to horizontal participation, the degree to which tasks are highly specialised, and vertical participation refers to the degree to which responsibilities are clearly defined (Mintzberg, 1993).

On the other hand, formalisation refers to the degree to which organisations attempt to control and direct employee behaviour through formal job descriptions, procedures for work and rules (Mintzberg, 1993). It describes the degree to which organisations' decision-making processes are guided by formally explained and documented procedures, plans, and policies and not informal processes (De Clercq *et al.*, 2015). Organisations that exhibit high formalisation levels and high specialisation of tasks are said to possess mechanical organisational structures. Those with low

formalisation levels and specialisation of tasks are seen as having organisational structures that are organic and flexible (Alexander & Randolph, 1985).

Lower levels of formalisation promote innovative processes in organisations (Kanter, 1983). This is because an organic organisational structure promotes flexibility, adaptability and open interaction within organisations, leading to the facilitation and support of intrapreneurship (Daft, 2009).

Available research reflects a debate on which of the two levels of formalisation and task specialisation promotes or inhibits intrapreneurial behaviour (Wasowska *et al.*, 2018). Kuratko and Montagno (1989) highlight the need for caution in that when rules and procedures are too many, they tend to inhibit intrapreneurship. On the other side of the debate, the view is that the lack of control mechanisms in organisations tends to foster dysfunctional behaviour among employees, which works against developing an entrepreneurial spirit (Delić *et al.*, 2016:44). Zahra (1993) suggests the application of a “levers of control” framework that provides a level of control that does not permit anarchy but allows for an adequate generation of creative ideas.

However, an organisation’s task specialisation and formalisation level determines the existence of open communication channels and procedures that enable the evaluation, selection, and implementation of intrapreneurial ideas (Castrogiovanni *et al.*, 2011). Open communication is a success factor resulting in employee job satisfaction and self-efficacy (Globocnik & Salomo, 2015), strengthening employees’ commitment and participation (Blanka, 2019). This is because open communication involves transparency, resulting in effective information exchanges and sharing ideas whose quality and quantity are vital for successful intrapreneurial initiatives (Zahra, 1991; Zahra, 1993). Therefore, open communication is crucial for innovation in organisations by facilitating information sharing and empowerment (Pinchot, 1985).

Another critical element of the organisational structure is the number and arrangement of hierarchical levels that exist. Organisations are traditionally organised through functional organisational structures in which tasks of a specific function equivalent, similar, or inter-dependent are linked and grouped in the suitable

organisational unit (Delić *et al.*, 2016:44). However, such an organisational structure prohibits an organisation's ability to adapt to environmental changes in today's business conditions, further preventing the enhancement of intrapreneurship (Delić *et al.*, 2016:44). This organisational structure comprises a high number of formally and vertically directed organisational communication levels using top to bottom organisational communication (organisational pyramid) (Delić *et al.*, 2016:44). As a result, there exist limited cross-functional cooperation, inflexibility, a lack of clarity in the outcomes for the organisational units' activities as well as delayed decision making, material and information flows which all work against intrapreneurial initiatives (Hisrich, 1990; Kuratko & Goldsby, 2004; Hayton, 2005).

Lower numbers of hierarchical levels in a more shallow organisational structure are ideal for empowering employees and encouraging teamwork and deeper interactions crucial for intrapreneurship (Haase *et al.*, 2015; Delić *et al.*, 2016:44). A lower number of hierarchical levels further represent decentralisation in organisational decision-making processes, which entails a broader range of control and authority and greater autonomy that enables employees' intrapreneurial behaviour (Delić *et al.*, 2016:44). According to Carrier (1996) and Ireland *et al.* (2006), high levels of decentralisation promote the horizontal, vertical, and lateral interaction of employees, resulting in greater cooperation, creativity, and novel ideas.

The concept of empowerment further promotes employees' proactive behaviour through the autonomy and commitment that employees obtain as they participate in decision-making processes (Edú Valsania *et al.*, 2016; Blanka, 2019). Proactive behaviour facilitates intrapreneurship (Lumpkin & Dess, 1996; Goosen *et al.*, 2002). Empowerment of employees in an organisation's decision-making processes may involve low organisational participation, which entails employees being the key contributors to organisational processes and high horizontal participation, broadly defining employees' jobs. Both types of participation enhance intrapreneurship (Åmo, 2010; Rigtering & Weitzel, 2013).

Within the organisational structure, dimension is the element of organisational boundaries. For intrapreneurial behaviour to flourish in a large organisation, organisational boundaries must not be stringent and restrictive as this allows for

creativity, knowledge mining and communication openness (Karyotakis & Moustakis, 2016:47). In line with this, Kuratko *et al.* (2014:39) explain that organisational boundaries refer to the degree to which an organisation has flexible boundaries that enable intrapreneurial activities because they encourage the flow of information between the organisation and the external environment as well as between organisational departments and divisions. According to Lakhani *et al.* (2013:355), an organisation's boundaries are drawn to prevent reliance on work environments and vital tasks, competence and power eventualities. For instance, boundaries provide guidelines for reporting lines, employee responsibilities, and behaviour according to organisational objectives (Karyotakis & Moustakis, 2016:48).

Organisational boundaries are critical because innovative outcomes are often a result of a structured and purposeful process that involves an organisation's internal and external environments (Lakhani *et al.*, 2013). This entails that for intrapreneurial activities to be productive, they must be conducted in organisational systems in which uncertainty is well managed. Kuratko *et al.* (2014) explain that these manageable levels of uncertainty can be attained by setting boundaries that initiate, direct and enhance coordinated intrapreneurial behaviour across the organisation. Therefore, organisational boundaries determine the effective use of innovation-enabling resources.

The effective use of innovation-enabling resources is realised through an organisation-wide intrapreneurship culture, resulting from developing an intrapreneurial mindset that facilitates organisational change (Hagedorn & Jamieson, 2014). Intrapreneurs possess broad, innovative mindsets that enable them to collaborate and develop ideas across organisational boundaries through a culture of trial and error and the exploitation of opportunities for experimenting and continuous refinement (Hagedorn and Jamieson, 2014). As part of the organisational culture, the development of a conducive internal climate is vital for the promotion of employees' intrapreneurial behaviour, which is a complex process that demands support for idea generation and realisation through the provision of financial, participative and decentralisation mechanisms (Bysted & Jespersen, 2014).

Therefore, culture is a robust underlying sub-theme in promoting intrapreneurial behaviour. Entrepreneurially oriented work environments create physical proximity and bring about various elements of cooperation and a reduced hierarchy and bureaucracy, which results in knowledge sharing and joint idea generation (Park *et al.*, 2014; Rigtering & Weitzel, 2013).

3.2.1.2.3 Rewards and Reinforcement

Rewards fall under some of the most influential factors that motivate employees to develop their entrepreneurial competencies, thereby contributing to organisational performance (Turner & Pennington, 2015:447-463). They are categorised into two types: intrinsic and extrinsic rewards (Baskaran *et al.*, 2018; Badoiu, 2020; Mahaney & Lederer, 2006). Intrinsic rewards are those that result from the job and include passion, autonomy and accomplishment. On the other hand, extrinsic rewards include those rewards outside the job experience, such as income and security (Mazzei *et al.*, 2017; Mahaney & Lederer, 2006). Therefore, rewards may be monetary or non-monetary rewards such as training and career development opportunities (Mustafa *et al.*, 2018; Mahaney & Lederer, 2006). Based on the expectancy theory, employees are highly motivated to perform well following the system reward performance (Baskaran *et al.*, 2018).

Rewards determine significant performance at work (Manam, 2016) as they are believed to be linked to motivation. According to Malik *et al.* (2015), extrinsic rewards such as bonuses, awards, and promotions are seen to promote innovation. As such, rewards and reinforcement involve the design and implementation of systems that promote entrepreneurial behaviour, leading to the execution of challenging work and, consequently, to notable achievements (Kuratko *et al.*, 2014a:40). Kuratko *et al.* (2014a:40) continue to explain that to encourage intrapreneurial activities, a reward system should be designed in line with clear goals, responses, outcomes and feedback, emphasising the responsibility of employees as well as performance-based incentives.

Employees are more likely to engage in innovative behaviour when they expect such behaviour to improve their performance. De Spiegelaere *et al.* (2013) stated that

installing performance-related incentive systems would increase the employees' attention to the rewards, whether in terms of intrinsic or extrinsic rewards. Empirical findings from previous research (Ramamoorthy *et al.*, 2005; Eisenberger & Rhoades, 2001:728) showed that rewards stimulate creativity and the innovativeness of the employees. This is supported by expectancy theory, which explains that people are motivated to perform better when the job promises worthy rewards (Malik *et al.*, 2015).

Further, a reward system should encourage risk-taking, proactiveness and innovation as it tends to substantially affect employees' tendencies to behave in intrapreneurial manners (Fry, 1987; La Nafie *et al.*, 2014). A reward system should also expose significant achievements and promote challenging work by increasing employee responsibilities to encourage innovative behaviour (Hornsby *et al.*, 1993; Kuratko *et al.*, 2005a). This is even more effective when reward systems are adequate, appropriate and competitive and when resources are made available. Therefore, rewards and reinforcements consist of principal dimensions of intrapreneurial behaviour (Kuratko *et al.*, 2014a:39).

Reward systems further bring about employee or job satisfaction, which feeds creativity and knowledge creation in an organisation, leading to more intrapreneurial initiatives and improved performance (Antoncic & Antoncic, 2011; Davis, 2009; Bystead, 2013; Baruah & Ward, 2014). Falola *et al.* (2018:10-11) add that other benefits, such as training, should be part of the reward systems to spur employees' intrapreneurship spirits and avoid losing employees with distinctive competencies.

Falola *et al.* (2018:10-11) further explain that competitive reward systems are critical in getting employees to behave as intrapreneurs, especially when the rewards are also fair. Fairness influences employees' perceptions and degree of trust in the reward system in ways that build their engagement, involvement, and commitment to innovation or the development of new business initiatives/opportunities. It also increases their willingness to take up risks that relate to intrapreneurial activities. Consequently, reward systems can increase or decrease intrapreneurial activities (Madu & Urban, 2014a).

3.2.1.2.4 Work discretion

According to Kuratko *et al.* (2014a:39), work discretion refers to the degree to which one views the organisation as tolerating failure, providing decision-making latitude and freedom from excessive oversight and delegating authority and responsibility to lower-level managers and workers. Giving employees significant decision-making latitude is seen explicitly as an essential means of encouraging their entrepreneurial behaviour (De Jong *et al.*, 2015; Kuratko *et al.*, 2005b). This type of autonomy is further considered vital for employees in higher managerial positions (Hornsby *et al.*, 2009). It encourages definite features of entrepreneurial behaviour such as proactivity (De Jong *et al.*, 2015) and involvement in boot-legging behaviour (Globocnik & Salomo, 2015).

Kuratko *et al.* (2014a:37) also consider work discretion as an essential dimension of intrapreneurial behaviour in that it enables employees to choose and organise their work freely. As such, an organisation that is bureaucratic and has a culture that does not tolerate failures or appreciates innovation outside its interests will tend to bind its intrapreneurs with solid control and restrictions (Ward & Baruah, 2014). This discourages intrapreneurial behaviour, whose key activities can only flourish in an internal environment that offers work discretion through the right to decide on preferred actions within defined limits (Stea *et al.*, 2015).

Sia and Appu (2015) add that when employees are independent on the job, their performance becomes more creative. This is because autonomy empowers employees to experiment with distinctive methods and approaches to develop novel work methods, resulting in individual innovative behaviour (De Spiegelaere *et al.*, 2014). Further, when an organisation and its management team tolerate failure that results from entrepreneurial endeavours, employees' intrapreneurial behaviour is enhanced (Mohammad & Hossein, 2013; Kuratko *et al.*, 2014a).

Discretion towards work further gives employees the freedom to make requisite decisions about their work, consequently making them more effective (Yaşlıoğlu *et al.*, 2017). Employees are granted significant autonomy in the planning, organising and performing of work and the timings of work schedules (Baskaran, 2017). Work

discretion also entails that supervision is reasonable, entrusting more authority and responsibility to lower-level managers and workers (Badoiu *et al.*, 2020). This leads employees to identify opportunities for intrapreneurial behaviour as they are left to determine how to carry out work and experiment (Badoiu *et al.*, 2020). Work discretion thus activates proactiveness among employees as such job autonomy is more prevalent in the context of organisations that are faced with weak performance management, and the impact of proactiveness tends to be seen in the form of job performance (Glaser *et al.*, 2016:1339-1360) and increased effectiveness (Rapp *et al.*, 2015).

Work discretion also increases the self-efficacy of employees (Globocnik & Salomo, 2015) through the job autonomy that motivates and enables employees to identify opportunities as well as to proactively work as problem solvers who have a positive impact on the results of their organisations (Rapp *et al.*, 2015). Therefore, work discretion enhances organisations' intrapreneurial orientation (Banumathi & Samudhararajakumar, 2015:5).

Intrapreneurial orientation includes activities such as active information searching through brainstorming and critical thinking, opportunity perception, idea generation, persuasion of management, internal coalition building, resource acquisition, personal initiative, out-of-the-box thinking, voicing, championing, planning, organising, taking charge, designing of new products/services or new combinations of resources, finding a way and a certain level of risk-taking (Bosma *et al.*, 2013:8; Falola *et al.*, 2018:10-11). The success of these intrapreneurial activities depends on employees being granted autonomy in their work processes or the discretion to engage in experimentation (Kuratko *et al.*, 2014a:39).

However, some adverse viewpoints concerning work discretion suggest that it tends to hurt efficiency because of the challenges in effectively and accurately monitoring performance related to high job autonomy tasks (Bystead, 2013). Work discretion tends to be very fluid, so decisions made on business acumen may be highly influenced by an exaggerated sense of self-confidence and a significant deficiency of critical capabilities (Orchard *et al.*, 2018:5-6). Therefore, although work discretion plays a role in the perceived intrapreneurial environment, it does not do so in an

unbounded manner (Orchard *et al.*, 2018:5-6). For work discretion to extensively promote an intrapreneurial environment, employees must use work discretion to be accountable, dedicated, committed, confident, challenged, experimental, explorative problem-solvers and project owners (Bagheri, 2017; Fontana & Musa, 2017; Leitch & Volery, 2017). Through these characteristics, work discretion can promote identifying intrapreneurial opportunities (Orchard *et al.*, 2018:5-6).

3.2.1.2.5 Resource availability

Intrapreneurial activities are resource-intensive, and their success depends on the availability and commitment of resources (Hughes *et al.*, 2019). The high availability of the right resources results in higher levels of intrapreneurial behaviour (Rigtering & Weitzel, 2013). The willingness and ability of an organisation to stimulate intrapreneurial behaviour are guided by the desire to seek out and respond to market signals, trends, and changes with novel innovations (Hughes *et al.*, 2019:943-965). Resources are vital if the organisation is to augment this market mandate. The basis for the importance of resources, both intangible, such as time and knowledge, and tangible ones, such as financial resources, is the linkage between intrapreneurial behaviour and an organisation's performance (Neessen *et al.*, 2018; Engelen *et al.*, 2014).

Various scholars identify time availability as critical for enhancing intrapreneurial activities in organisations (Baruah & Ward, 2014; Hashimoto & Nassif, 2014:385; Kuratko *et al.*, 2014a:40). Time availability is characteristic of an internal work environment in which workload schedules allow for extra and unstructured or free time for individual employees and groups to pursue innovations. According to Puech and Durand (2017), the quality of free time provided is of greater significance than the actual amount of time, especially during the exploration phase, in which intrapreneurs seek to clarify what activities to undertake. In this way, jobs are structured to support intrapreneurial initiatives and attain short- and long-term organisational goals (Kuratko *et al.*, 2014a:39).

Resource availability may also include the possible supply of extra resources to enable employees to incubate their ideas (Orchard *et al.*, 2018:5-6). This is viewed

as a significant factor that includes using tangible resources of financial investment in R&D resourcing to cement intrapreneurial activities (Hughes *et al.*, 2019). The sufficient provision of financial resources also significantly influences the linkage between intrapreneurial behaviour and an organisation's capabilities for innovation or new product development initiatives (Hughes *et al.*, 2019; Slater *et al.*, 2014).

Further, an organisation's learning capabilities may determine performance outcomes resulting from intrapreneurial behaviour (Covin & Lumpkin, 2011). However, for intrapreneurial initiatives to significantly improve organisational performance, knowledge is needed to guide the commercialisation and launch of the outputs. Therefore, knowledge deficits are the leading cause of the failure to achieve this (Slater *et al.*, 2014; Snihur & Wiklund, 2019). Therefore, organisations need to acquire, assimilate, and use knowledge about markets to successfully exploit intrapreneurial initiatives and select and retain the ability to innovate and profit from the innovations.

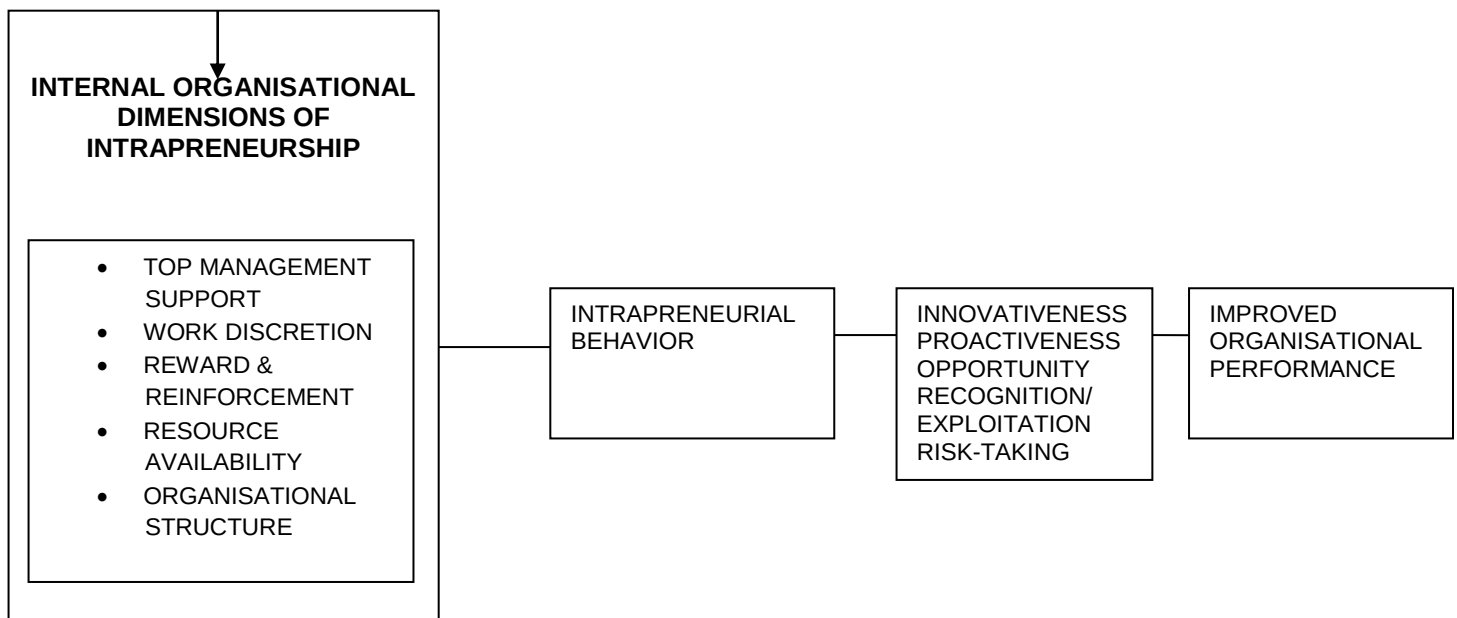
However, all these other resources that influence intrapreneurial behaviour have a less positive impact if the required time for intrapreneurial activities is not provided (Orchard *et al.*, 2018:5-6). The time that is provided includes time to allow for errors of judgment to happen or time for an experimental idea to actualise, time for investigation and time for problem-solving, all of which are accepted tenets of intrapreneurship (Desouza, 2011). An important factor is an organisational tolerance that time spent will not always succeed (Orchard *et al.*, 2018:5-6; Neessen *et al.*, 2018:560).

Time availability is vital for imagination and inventiveness in business strategies, employees' creativity, and their perception of their intrapreneurial environment. Entrepreneurial organisations have to strictly consider the time that needs to be allocated for innovative experimentation. Organisations that allow employees to search for new ideas, modify them, or establish ideas while working encourage intrapreneurial behaviour among their employees (Porcar & Soriano, 2018:114). This leads to more employee involvement in an organisation's day-to-day activities, thereby boosting the employees' creative thoughts and critical thinking (Irawanto, 2015). Once employees become more involved in organisational activities, especially

when they have been adequately trained, they tend to work beyond regular job schedules (Bockerman *et al.*, 2012).

Making time available for employees to be involved in intrapreneurial initiatives enhances their performance and, consequently, the organisation. Organisations need to develop policies, processes and procedures that ensure time availability to motivate employees to take risks to implement their innovative ideas (Baruah & Ward, 2014). Based on the information discussed in the preceding pages, a conceptual framework is presented in Figure 3.1 below.

Figure 3.1: Dimensions of the internal organisational environment that facilitate intrapreneurial behaviour and its outcomes



Source: Ahmad *et al.* (2012:6) - Adopted and Modified

3.2.2 External environmental conditions that affect intrapreneurship

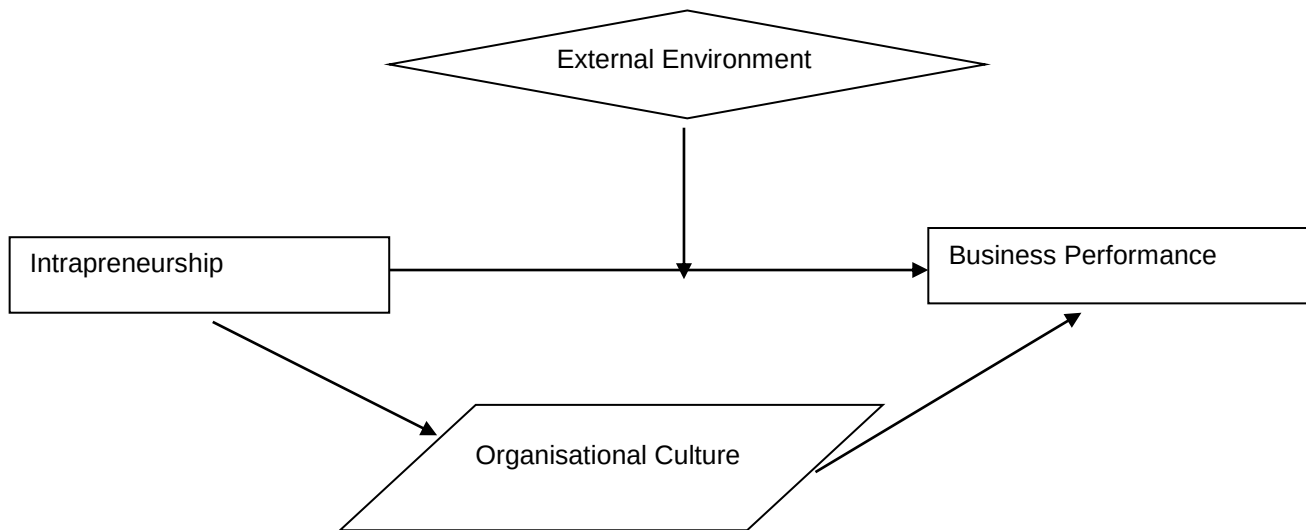
External environmental and internal environmental factors significantly contribute to nurturing intrapreneurship in developed countries (Behram & Ozdemirci, 2014). These refer to the business environment, which comprises forces, factors, or institutions that affect business activities and performance (Nasiripour *et al.*, 2012; Ting *et al.*, 2012). Managers and their organisations control the internal environment,

while the external environment is not. Further, the internal environment is crucial in business planning and decision-making processes; however, the external environment carries greater importance because the external environment is the source of opportunities that organisations exploit and the resources needed to pursue the opportunities (Otache & Mahmood, 2015:527).

The availability of opportunities and resources in the external environment determines an organisation's success or failure (Otache & Mahmood, 2015:527). Therefore, this means that there must be congruence among the main internal and external environmental factors if optimum organisational performance is to be achieved (Otache & Mahmood, 2015:525). The internal and external environmental factors need to be suitably aligned to achieve business objectives effectively and efficiently (Otache & Mahmood, 2015:525).

Therefore, intrapreneurship's influence on business performance also greatly depends on the external environment, just as on the organisational culture (Otache & Mahmood, 2015:525). As illustrated in Figure 3.2 on the following page, the external environmental conditions are seen as moderators of intrapreneurship's influence on business performance, while organisational culture is said to be a mediator. This means that intrapreneurship's influence on business performance depends on external environmental factors, while intrapreneurship influences business performance using a supportive organisational culture (Otache & Mahmood, 2015:525).

Figure 3.2: The influence of the external environment and organisational culture on intrapreneurship and business performance



Source: Otache and Mahmood (2015:529) - Adopted and Modified

The external environmental conditions are specifically considered essential factors that influence intrapreneurial initiatives within an organisation, yet organisational leaders have minimum control or none towards these environmental conditions (Kasturi *et al.*, 2019:56-57; Otache & Mahmood, 2015:525). Therefore, the external environment comprises forces outside the organisation that have an uncontrollable impact on business activities and performance through diverse dimensions that are ideal for developing and implementing intrapreneurial initiatives (Bradley *et al.*, 2011). Hostility and technologically advanced environments are some of the dimensions of the external environment (Behram & Ozdemirci, 2014).

According to Kuratko *et al.*, (2014a:38), hostile environments are marked by high organisational failure rates, intensive competition among organisations in the same or related industry, and competition based on price. On the other hand, technologically advanced environments display factors that include meaningful R&D investments, recurrent product and/or process technology innovations, and dependence on high-ranking technical personnel as the primary source of competitive advantage (Baruah & Ward, 2014). According to Ireland *et al.* (2009), top-level managers in organisations should demonstrate a strategic posture toward entrepreneurial activities in order for their organisations to compete successfully in

these environments. Baruah and Ward (2014) emphasise the importance for intrapreneurial organisations to understand the effects of the various external environmental factors.

External environment conditions are further characterised by other complex and volatile environmental factors that can potentially affect organisational operations (Behram & Ozdemirci, 2014). These environmental complexities comprise diverse and complex information needed by organisations to survive in an environment (Otache & Mahmood, 2015:527). The environmental factors are classified as political, economic and social (Kasturi *et al.*, 2019). Social values and norms extensively affect the innovative approaches that different organisations adopt, and they tend to influence different political, social and technological changes, which are also vital for the growth and success of intrapreneurial initiatives (Baruah & Ward, 2014). Intrapreneurs, therefore, need to be constantly engaged with current and future conditions of the market by acquiring knowledge on the different cultural aspects of the target market and customer base, ensuring that their innovations are mainly aimed at offering more excellent customer value and satisfaction in order to gain a superior competitive advantage (Baruah & Ward, 2014).

Organisational leaders need to be flexible and adaptable to cope with these external environmental factors (Kasturi *et al.*, 2019:56-57). Further, factors such as dynamism, munificence, organisational growth and technological opportunities have been identified as being among the four positive external environmental factors that are seen to influence intrapreneurial initiatives in an organisation (Behram & Ozdemirci, 2014).

Dynamism refers to all the unforeseeable changes that result from a change in political, economic, social and technological factors (Kasturi *et al.*, 2019:56-57). Dynamism, therefore, represents the unpredictability of the environment due to frequent changes (Otache & Mahmood, 2015:527). The increased level of dynamism tends to promote intrapreneurial activities in organisations as they have to be entrepreneurial in their business processes to deal with the dynamic environment (Farrukh *et al.*, 2019). Dynamism, therefore, provides increased opportunities that

entrepreneurial organisations can exploit. This, therefore, entails that stable environments in organisations provide fewer opportunities for employees to engage in proactive and risk-taking activities. On the other hand, environmental munificence refers to the availability of opportunities in the environment and the availability of the resources needed to pursue the identified opportunities (Rosenbusch *et al.*, 2011). This significantly influences an organisation's intrapreneurial activities and consequent improvements in performance (Otache & Mahmood, 2015:527).

According to Kasturi *et al.* (2019:56-57), technological changes also significantly influence the organisations that assume an intrapreneurial pose and increase intrapreneurial initiatives. The increasing technological turbulence and competition tend to force organisations of all sizes to become creative and innovative as they adopt intrapreneurial activities (Behram & Ozdemirci, 2014).

Further, Behram and Ozdemirci (2014) explain that organisational growth influences intrapreneurial activities in an organisation. The growth provides intrapreneurial opportunities that drive the organisation into escalated intrapreneurial activities, including new ventures, new product/service innovations or new markets (Kasturi *et al.*, 2019). The development and growth demand that the organisation generates innovative ideas. However, a reduction in the growth of an organisation can also promote intrapreneurship (Kasturi *et al.*, 2019:56-57).

Another vital dimension of the external environment is the industry life-cycle stages representing the industry's state as emerging, growing or maturing (Otache & Mahmood, 2015:527). According to Wasowska *et al.* (2018), the stages at the beginning of the industry life cycle, which are the phases of industry development and growth, are the most attractive intrapreneurial activities. The growth leads to maturity and efficiency (Cucculelli & Peruzzi, 2020). Organisations need to renew themselves as the industry develops; otherwise, they risk exiting the market if they fail to adapt their intrapreneurial behaviour to the changing industry life-cycle stages (Cucculelli & Peruzzi, 2020).

3.3 SUMMARY

Understanding the conditions that promote intrapreneurship is paramount as organisations today operate in environments characterised by dynamism and uncertainty. Organisations have to constantly identify new opportunities, develop product-market innovations, and become strategically flexible in response to environmental pressures. Intrapreneurship's success depends on a clear understanding of the individual employee's entrepreneurial cognitions, the organisational contexts in which employees operate and the external environmental conditions in which organisations operate. Therefore, the nature of the individual employee and the nature of the organisation pertains to top management support, organisational structure, reward and reinforcement, work discretion, resource availability and culture, as well as the external environment that comprises competition, dynamism, hostility, the industry life cycle and technological ubiquity must collectively be understood to enhance an organisation's intrapreneurial behaviour.

CHAPTER FOUR: LITERATURE REVIEW ON THE ENTREPRENEURIAL UNIVERSITY

4.1 INTRODUCTION

There has been increasing interest in the role of university and tertiary education institutions as drivers for social change, economic growth and regional development (Peer & Penker, 2016). This is a result of the unprecedented challenges arising from the knowledge economy, globalisation, financial and environmental crises, all of which are causing universities to redesign and extend their missions (Trencher *et al.*, 2014; El Hadidi & Kirby, 2016; Rubens *et al.*, 2017).

Universities are expected to prioritise their relevance and responsiveness to stakeholder needs by enhancing national and regional economic growth and improving financial performance for themselves and their faculties (Etzkowitz & Leydesdorff, 2000). Further, today, universities are expected to be more entrepreneurial in their organisational perspective and in the services they offer (Miller *et al.*, 2018). Being providing the labour market, universities are also expected to transform into global, technological, innovative and competitive entities (Fernandez-Nogueira *et al.*, 2018).

Universities are to achieve this through the production, conference and commercial exploitation of practical research findings locally, nationally and internationally (Goethner & Wyrwich, 2019). The faith in the potential of these higher education institutions (HEIs) is based on the fact that they are the main supply of the skills and knowledge needed for innovation and economic growth (Kruss *et al.*, 2015). However, there remains a need for these institutions to adapt to promote entrepreneurial thinking, activating the formation of business activities and capitalising on societal ideas (Taucean *et al.*, 2018). On this basis, universities today are viewed as organisations that integrate collegial professional values and management approaches to achieve the desired change (Seeber *et al.*, 2015).

Pressure is therefore increasing on universities to alter their role and move their focus from mainly teaching and conducting research to the added mission of contributing to society (Abreu *et al.*, 2016; Urdari *et al.*, 2017). Through this engagement with society, universities are becoming a driving force for social, economic and cultural development in their regions of operation through knowledge and technology transfers to industry and to the wider society (De Jong *et al.*, 2014; Secundo *et al.*, 2017a; Agasisti *et al.*, 2019). Universities are specifically expected to enhance entrepreneurial skills, innovation and social welfare through scientific communication (Etzkowitz, 2003a). In engaging with society, universities are also expected to develop human capital (Etzkowitz, 2003a; Di Berardino & Corsi, 2018).

The tertiary educational institutions now have to undertake activities categorised as research involving innovation and technology transfer, teaching, comprising lifelong learning, and university participation in social and cultural affairs (Mora *et al.*, 2015:29-40). These activities are carried out amidst the transformation of the traditional university mission of research and teaching (Guerrero *et al.*, 2017). The university's mission now includes establishing connections between the university and its environment to foster local development actively (Dalmarco *et al.*, 2018). In doing this, tertiary education institutions are forced to introduce strategic management (Callagher *et al.*, 2015; Benneworth *et al.*, 2016; Aragonés-Beltrán *et al.*, 2017; De La Torre *et al.*, 2017; Mariani *et al.*, 2018).

Universities are, therefore, strategically offering entrepreneurial education, promoting entrepreneurship as well as economic and social soundness (Ahmed *et al.*, 2017:4-19; Budyldina, 2018:). The desired outcome of this provision of training and support is for universities to directly impact individuals' views on self-efficacy and their intention to establish new businesses (Bergmann *et al.*, 2016:53-76; Saeed *et al.*, 2015). This is seen as a holistic approach, termed the "entrepreneurial push strategy", which refers to all entrepreneurship courses and the number of initiatives a university performs in order to promote students' entrepreneurship intention (Wegner *et al.*, 2019).

The entrepreneurial push strategy is evidently being applied in different developed and developing countries that are convinced that entrepreneurship education in

higher education can inculcate a sense of innovation that drives the growth of new entrepreneurs (Farrukh *et al.*, 2019; Jena, 2020; Kuratko *et al.*, 2021). This is possible because many studies outline entrepreneurial intention as a result of entrepreneurship education (Fernández-Pérez *et al.*, 2019; Jena, 2020; Kim & Park, 2019; Li & Wu, 2019:35; Liguori *et al.*, 2020; Sang & Lin, 2019; Santos & Liguori, 2019; Støren, 2014).

It can therefore be seen that entrepreneurship education is among the most innovative and influential forces that enhance the well-being of any country's competitive economy (Jena, 2020:4). This is because entrepreneurship education has been proven to improve students' attitudes towards entrepreneurship and has influenced their career decisions or employment options (Wei *et al.*, 2019:1-10; Newbery *et al.*, 2018; Kubberød & Pettersen, 2017; Fayolle *et al.*, 2013). Entrepreneurship education enhances entrepreneurs' performance by improving their entrepreneurial spirit, attitudes, profitability, and survival (Ho, 2018). Consequently, these benefits result in rapid economic growth (Kassean *et al.*, 2015; Warnecke, 2013).

In view of all this, tertiary education today is faced with developments that call for a university model that is suitable for the creation of an entrepreneurial mindset among students through genuine entrepreneurship education (Volkodavova *et al.*, 2019, Jena, 2020:4). The entrepreneurial university model is one such model for logically responding to the challenges that come with these developments through the fostering of out-reach initiatives built on technology transfer and knowledge-based start-ups (Audretsch, 2014; Volkodavova *et al.*, 2019).

4.2 THE ENTREPRENEURIAL UNIVERSITY

The entrepreneurial university (EU) has received increasing attention from researchers and policymakers (Compagnucci & Spigarelli, 2020). This concept is defined as a higher education institution that protects knowledge, its transfer and the commercialisation of innovative business activities between universities and various stakeholders, including the government, based on financial and organisational economic standards (Kalenyuk & Dyachenko, 2016). Therefore, The entrepreneurial

university has expanded traditional university missions of teaching and research to create knowledge by emphasising third mission activities.

The use of this entrepreneurial university model has been evident in the last few decades as universities have increasingly played a significant role in innovation and economic development (Volkodavova *et al.*, 2019). This is most evident in science and technology especially as the world's societies continue to move toward knowledge-based economies (Cai & Etzkowitz, 2020). These universities have actively engaged the business sector and stakeholders, thereby generating social and economic benefits for the business sector from university research (Etzkowitz, 2012).

Entrepreneurial universities are, therefore, becoming pivotal institutions that stimulate economic growth, innovation capabilities and regional competitiveness (Guerrero *et al.*, 2016) and improve entrepreneurship capital (Audretsch, 2014). Entrepreneurial universities activate and promote entrepreneurship among diverse organisational stakeholders (Klofsten *et al.*, 2019). Various research studies on entrepreneurial universities have consistently emphasised that these universities play a critical role in supporting entrepreneurship (Duruflé *et al.*, 2018; Audretsch *et al.*, 2016; Klofsten, 2000; Nurmi & Paasio, 2007; Hannon, 2013.; O'Reilly *et al.*, 2019; Matlay, 2008; Cunningham & Menter, 2021; Graf & Menter, 2021; Wagner *et al.*, 2021).

Many universities have adopted the entrepreneurial culture as a new means of generating imperative funds, partnerships and facilities from diverse sources (Mariani *et al.*, 2018). These universities have profited from the knowledge in the entrepreneurial environment as they closely interact with the business sector (Etzkowitz, 2013a). This collaboration leads to connections with the business world for knowledge sharing and for students to learn experientially (Fernandez-Nogueira *et al.*, 2018). As emphasised by Sam and Van der Sijde (2014), universities need to respond to the needs of a knowledge-based economy to equip students with the requisite skills to become competitive, both locally and globally.

It is recommendable that tertiary educational institutions today take up a key role in the knowledge-based society as they are gaining increased relevance in technology transfer, firm formation and regional renewal (Cai & Etzkowitz, 2020). This role has been clearly influenced by the entrepreneurial university model, a fundamental concept in the triple helix model developed by Etzkowitz and Leydesdorff (1995).

4.2.1 The origin of the entrepreneurial university concept

The term entrepreneurial universities was coined in the 1980s (Etzkowitz, 1983). However, the underlying idea of a close relationship between academia and markets began in the nineteenth century (Wadhwani *et al.*, 2017). The Triple Helix model of innovation developed by Etzkowitz and Leydesdorff (1995), based on the concept of a triangle introduced by Julius in 1967 (Abd Razak & White, 2015), operationalised the entrepreneurial university concept. This model emphasises the role of the entrepreneurial university in promoting entrepreneurship and regional economic growth through its collaborations with the industry and government (Cai & Etzkowitz, 2020).

4.2.1.1 The triple helix model

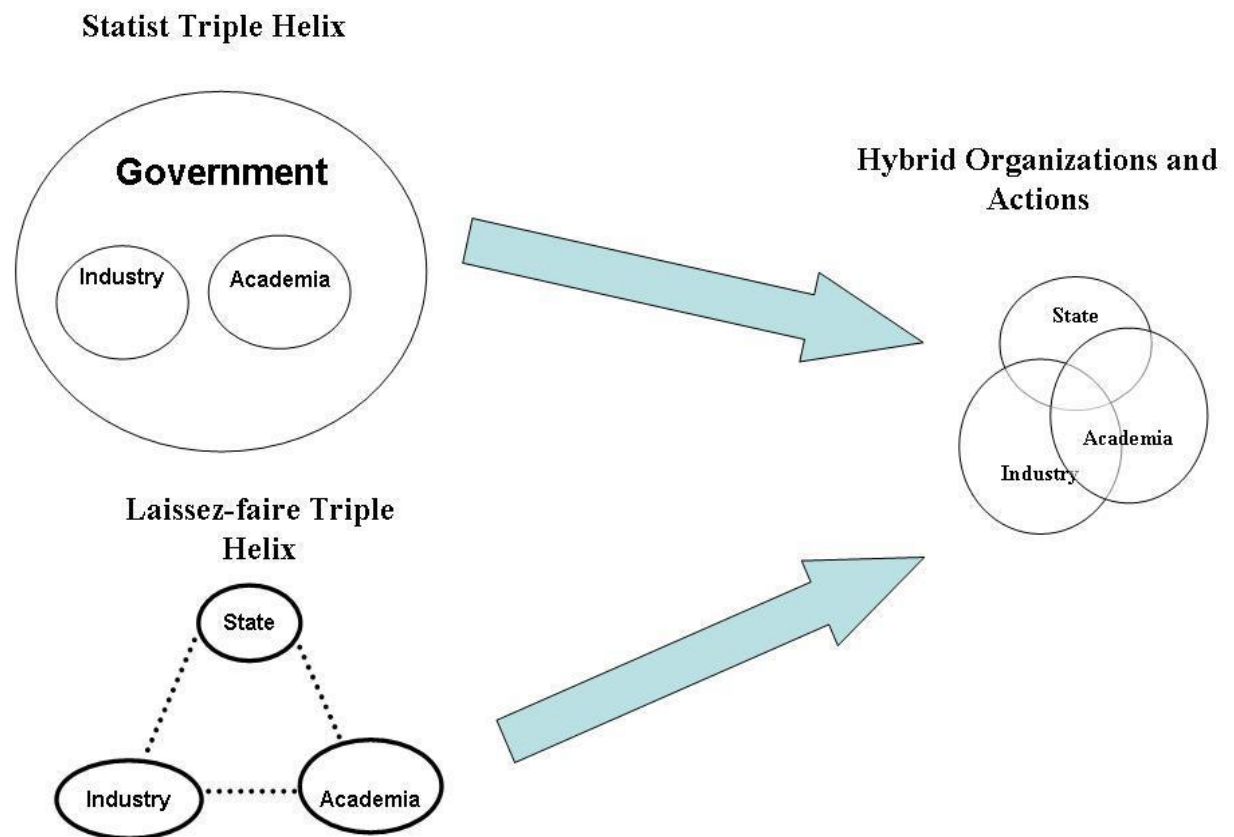
The Triple Helix (THM) model uniquely contributes to innovation studies by focusing on the university's magnified role in adapting to a knowledge-based society (Cai & Etzkowitz, 2020). This focus differs from preceding innovation approaches, focusing on industry-government or government-industry relationships (Cai & Etzkowitz, 2020). These previous innovation approaches saw the industry sector as the main component in innovation analysis (Foray, 2015). The THM model, therefore, moved attention to the university as the key element in innovation, unlike its subordinate role in the industrial society. This heightened role of the university is based on its significance to company formation, technology transfer and regional regeneration (Cai & Etzkowitz, 2020).

The THM model, seen as a revolutionary model as presented in figure 4.1, awards the university a principal position in the knowledge-based society in its presentation of the various types and levels of synergy-based interactions between the government,

university and industry, being the key actors in innovation (Abd Razak & White, 2015; Cai & Etzkowitz, 2020). The model supports previous approaches on this as all admit the significance of the university, industry and government interactions, which are deemed vital for promoting innovation and entrepreneurship (Cai & Etzkowitz, 2020).

The THM model presents three distinct positions: statist, laissez-faire and hybrid or balanced, which refer to varied results for enhancing innovation (Cai & Etzkowitz, 2020). The statist position or model presents a situation in which the government regulates the activities of both academia and industry. The government is also responsible for initiating projects and making resources available for new initiatives (Cai & Etzkowitz, 2020). The laissez-faire model, on the other hand, presents the industry, academia, and government as being distinct and autonomous. These actors are seen to interact moderately across solid boundaries. Finally, the hybrid or balanced model depicts a more malleable overlapping structure, with each actor assuming the role of another (Etzkowitz, 2002:2; Cai & Etzkowitz, 2020).

Figure 4.1: The revolutionary Triple Helix Model



Source: Etzkowitz (2003b:302)

The hybrid or balanced Triple Helix position is seen as essential for the growth of innovation strategies and the attainment of common long-term strategic goals in the 21st century (Abd Razak & White, 2015). This is because this position provides a clear understanding of innovation. After all, the best conditions for innovation are believed to be established at the points where the spheres converge (Ranga & Etzkowitz, 2013). At these points, the boundary walls are altered into boundary spaces and new configurations for interaction are created, deriving from the distinct spheres (Champenois & Etzkowitz, 2018).

The university, government and industry are therefore seen as taking part in dynamic interactions in which these three helices (actors) take up or exchange each other's roles where one or the other is unable to act (Etzkowitz & Dzisah, 2008). The Triple Helix model, therefore, depicts the roles performed by the entrepreneurial university,

industry and government (Etzkowitz & Dzisah, 2008), emphasising that the strategic interactions among these institutional spheres are vital for the enhancement of innovation and the development of the knowledge economy (Dalmarco *et al.*, 2018).

Normally, the university's role is to organise knowledge generation through research and knowledge transfer through education (Etzkowitz & Dzisah, 2008; Lombardi *et al.*, 2019). The industry's role is in economic production or wealth generation, and that of the government is in facilitating, regulating or normative control and co-investing (Etzkowitz & Dzisah, 2008; Lombardi *et al.*, 2019). Although these institutions continue to perform these main roles and to possess distinct identities, they are increasingly swapping roles, thereby obscuring their separation of function (Etzkowitz & Dzisah, 2008).

Universities are assuming the industry's role by commercialising research findings and creating new business models (Etzkowitz, 2016; Schmitz *et al.*, 2017). Conversely, governments have taken up the role of public venture capitalists to enhance innovation and economic development (Schmitz *et al.* 2017). On the other hand, the industries improve their employees by learning through strategic collaborations with universities and governments and by setting up in-house corporate universities (Dalmarco *et al.*, 2018).

The increased strategic interaction between the three helices has transformed universities internally as they generate new economic development missions, and governments revise the intellectual property ownership rules by giving these rights to universities rather than individuals (Dalmarco *et al.*, 2018). Universities have also been ascribed the role of inducer of the interaction with industry and government (Doin & Rosa, 2019). They are further considered catalysts for regional and national economic development in developed and developing economies (Culkin, 2016:4-6; Guerrero *et al.*, 2014). This is because they are natural incubators for potential entrepreneurs as they have the potential to provide conducive atmospheres for the exploration and exploitation of new ideas (Culkin, 2016:4-6; Guerrero *et al.*, 2014; Trequattrini *et al.*, 2018; Urbano & Guerrero, 2013).

However, the application of the Triple Helix model is best suited to industries with a high capacity to absorb, to a regional context or to local companies that can commercialise complex research output from universities (Budyldina, 2018).

4.2.2 Further conceptualisation of the entrepreneurial university concept

Clark (1998a:3-4) further conceptualised the entrepreneurial university concept as referring to institutional change by and within European and British universities. Clack (1998a:3-4) built his model on Etzkowitz's vision of the qualitative nature of universities and applied the concept through five different components that indicate how universities transform into the entrepreneurial nature, namely: i) a strengthened steering core, which refers to speed, flexibility and focused responses to the increasingly changing requirements ii) an expanded developmental periphery through the programming and establishment of outreach initiatives such as contract research and applied research centres iii) a diversified funding base established by seeking various sources of income in the form of additional services and donations iv) a stimulated academic heartland that is focused on excellence by recruiting and retaining the most talented staff cohort with high-impact research and v) an integrated entrepreneurial culture demonstrated through strong commitment to proactiveness, rivalry and market orientation (Dalmarco *et al.*, 2018; Volkodavova *et al.*, 2019).

It can be seen that apart from outlining profit-oriented activities as integral to the development of an entrepreneurial university, Clark (1998) also emphasised the value of flexible strategic and managerial practices, independent decision-making processes and a unified entrepreneurial culture in universities (Shattock, 2010).

The Triple Helix theory continues to be complemented by more recent conceptualisation that provides frameworks, such as the Quadruple Helix model by Carayannis and Campbell (2009), the Quintuple Helix models by Carayannis, Barth and Campbell (2012) and the addition of the concepts of governance and regulation to the model by Todeva (2013) (Doin & Rosa, 2019). Despite all these newer propositions, the entrepreneurial university phenomenon and its systematic relations

with the industry and government are primarily oriented in the Triple Helix theory (Doin & Rosa, 2019).

4.3 IMPLICATIONS FOR UNIVERSITIES

Basing on this body of knowlege, academics have engaged in activities aimed at turning research output into technological development, establishing new businesses, as well as encouraging change in social and governmental practices (Wadhwani *et al.*, 2017). In the last two decades, these activities have become deep-rooted in the minds of policymakers (Rubens *et al.*, 2017:354-372), and as such, universities have had to adapt to this changing context by becoming more entrepreneurial through the promotion of intrapreneurial initiatives (Farrukh *et al.*, 2019:273-294). Intrapreneurial practices are believed to be the means by which higher education institutions can cultivate closer connections with markets (Dalmarco *et al.*, 2018; Doin & Rosa, 2019).

Through these connections, entrepreneurial universities have been seen to bring about 'waves' of development that affect organisational structures and lead to advancements in various regions and countries (Ivanova & Leydesdorff, 2014). According to Etzkowitz *et al.* (2000:313), the entrepreneurial activities undertaken in universities improve regional or national economic performance and enhance a university's financial status and that of its faculties.

Therefore, The entrepreneurial university concept calls for higher education institutions to be actively engaged in intrapreneurial practices if they are to succeed in connecting with markets (de Moraes *et al.*, 2020). However, many universities have not actively made changes in their organisational structures and governance, which has inhibited the extent to which they can act entrepreneurially effectively (Dovey & Rembach, 2015). This is because universities face many challenges in operationalising the entrepreneurial university concept and developing university competencies in entrepreneurial activities, as this requires more than just stating

Universities find themselves strategically overloaded as they endeavour to integrate the many missions that they have to embark on, such as excellent research, quality

education and the facilitation of knowledge transfer (Benneworth *et al.*, 2017). However, the entrepreneurial university concept calls for higher education institutions to embark on entrepreneurial innovations and initiatives for economic development in the knowledge economy to have the anticipated widespread effects on the facets of entrepreneurship emerging from the academic spheres (Volkodavova *et al.*, 2019). One of the effects can be derived from the universities' transformation, which can reveal new ways of stimulating job creation among university graduates to foster sustainable economic growth and employment (Oyugi, 2021). These effects can be determined by measuring a university's entrepreneurial orientation to predict the spinout of patents and licenses (Tatarski *et al.*, 2020).

Todorovic (2005) developed a scale called the ENTRE-U scale that is increasingly being used in the measurement of the entrepreneurial orientation of universities and their faculties and departments. The model includes four dimensions, namely: unconventionality - related to risk-taking; cooperation with industry - how a university collaborates with the industry; university policies - the culture and organisation of the university and mobilisation of research - distribution of a university's research (Todorovic, 2005; Tatarski *et al.*, 2020).

This body of knowledge provides factors that organisational top management must consider when crafting their entrepreneurial strategic vision and organisational architectures to promote intrapreneurial behaviour (Guiri *et al.*, 2019). As such, as universities endeavour to become entrepreneurial, there is a need for a corporate strategy that guides the intentions of these institutions towards entrepreneurship (Guiri *et al.*, 2019).

There is a further need for internal policies that supply knowledge and reinforcement for entrepreneurial efforts and an atmosphere that lessens the inherent risks in these processes (Cunningham *et al.*, 2019). According to Markuerkiaga *et al.* (2014), these are the internal factors (organisational structure and support) and the strategic factors (mission, vision, and reward systems) which enhance entrepreneurial activities within an organisation. Therefore, These factors play a key role in influencing a university's disposition toward actualising the entrepreneurial university concept and fostering an entrepreneurial culture (de Moraes *et al.*, 2020).

This entrepreneurial university concept brings about an evolution of the university's role through the inclusion of a third mission in the strategic orientation, in addition to the traditional university's first mission of teaching and the second mission of research (Perkmann *et al.*, 2013; Feola *et al.*, 2020). The entrepreneurial university is therefore seen as a model of the third mission, which systematises a group of activities that combine academic and business requisites through the widening of the inputs to academic knowledge and its application to socio-economic issues (Etzkowitz, 2003a; Etzkowitz *et al.*, 2008; Trencher *et al.*, 2014; Foss & Gibson, 2015; Compagnucci & Spigarelli, 2020).

4.3.1 The third mission

The third mission is defined as the creation, use, implementation and exploitation of university knowledge, assets and competencies with external stakeholders as well as the general society (Calcagnini *et al.*, 2016; Secundo *et al.*, 2017b; Meoli *et al.*, 2018). Therefore, this third mission concept is a group of activities whose purpose is to connect the university to its surrounding environment (Pinheiro *et al.*, 2015). These activities depend on research and a new management model for the delivery of university endeavours (Unger & Polt, 2017). Because of this fact, the third mission is a complex and dynamic phenomenon viewed from different perspectives.

One perspective is that it consists of various recurring concepts, including the entrepreneurial university, knowledge transfer, technology transfer and the Triple Helix Model (THM) collaborations (Trencher *et al.*, 2014). Another perspective is that the third mission refers to a wide range of activities that tertiary educational institutions perform by transferring knowledge to society and industry. The activities include the purposeful promotion of entrepreneurial skills, innovation, social welfare, economic and technological development, as well as the development of human capital (Etzkowitz *et al.*, 2000; Guerrero *et al.*, 2015).

The third mission is also seen to include the development of science and society by means of different types of communication and social engagement (Etzkowitz, 2003a; Di Berardino & Corsi, 2018). These activities are often categorised as

research activities, those relating to technology transfer and innovation; teaching activities, those relating to lifelong learning or continuing education; and university engagement, those relating to the university's participation in social and cultural matters (Mora *et al.*, 2015).

According to Compagnucci and Spigarelli (2020), the third mission comprises three dimensions, namely:

- A non-profit or social approach in which academia provides services such as offering labour, expertise and educational outreaches to society at little or no cost.
- An entrepreneur focus is attained as universities commit funds to the development of services for society, industry, other institutions and alumni through consultancy work, patent registration, commercialisation of intellectual property and collaborative research.
- An innovative approximation involving the services that research units offer to society through venture capital, business networking, patent exploitation through the formation of companies, consultancies for governments, research conferences, and development and innovation partnerships with other industries and entrepreneurs.

The third mission has received increased attention among policymakers due to the continuing discourse between universities, industry, government and society (Giuri *et al.*, 2019). As such, universities, through the third mission, are responding to the increasing expectations for their contribution to finding solutions to socio-economic problems. Therefore, universities are to foster socio-economic development by transferring their research findings to the economic system (Feola *et al.*, 2020) and promoting entrepreneurial thinking, actions and institutions (Audretsch, 2014).

The guiding principle of the third mission is to increase the integration between academia and productive systems to turn universities into more economically engaged institutions (Rasmussen *et al.*, 2014). Academia is to promote technology transfer resulting from their capacity to produce patents, licenses, research joint

ventures, and technology parks, as well as the creation of academic spin-off companies with high innovative capabilities and socioeconomic impacts (Ferreira *et al.*, 2017; Fuster *et al.*, 2019; Petruzzelli & Murgia 2020; Feldman *et al.* 2019).

This new role for universities demands a radical change in the internal environment and activities conducted by academic institutions (Etzkowitz *et al.*, 2019). The third mission initiatives, therefore, extensively transform the academic ethos (Aragóns-Beltrán *et al.*, 2017; de la Torre *et al.*, 2018) mainly because in being entrepreneurial, universities have had to expand the traditional university missions of teaching and research through the placing of emphasis on third mission activities of commercialising newly created knowledge through entrepreneurial activities. This transformation means that entrepreneurial universities must assume an entrepreneurial culture that is reflected in their structures and governance (Guerrero *et al.*, 2014). This refers to a need for an entrepreneurial university architecture that can meet the needs of university-based entrepreneurs through the stages of entrepreneurship. This architecture must also be responsive to the changes in the external environment (Cunningham *et al.*, 2022).

A growing number of universities have adopted this perspective by establishing initiatives to foster ecosystems that promote entrepreneurial activities among students and academics (Galán-Muros *et al.*, 2017; Guerrero *et al.*, 2016). Faculty members are considered potential intrapreneurs or agents who create platforms that direct social change, making behavioural shifts possible by altering the fundamental conditions surrounding entrepreneurial incentives (Etzkowitz, 2003b; Cunningham *et al.*, 2019). It is from this that universities assume the title of entrepreneurial universities, which are mainly seen as the main contributors to competitiveness, economic growth, social and cultural development as well as wealth creation in today's world (de la Torre *et al.*, 2017; Cai & Etzkowitz, 2020).

Through the third mission, universities can actively engage in knowledge transfer (KT) initiatives, which are significant sources of innovation and drivers for regional economic development (Audretsch, 2014). Thus, Universities collaborate with economic actors in the industry to establish and strengthen partnerships (Kotosz *et al.*, 2016). The partnerships are built around the commercialising of scientific

research by universities in a process of reciprocal local community engagement, regional development and collective support (Jäger & Kopper, 2014; Ramachandra & Mansor, 2014; Vargiu, 2014; Kohtamäki, 2015).

The third mission, therefore, involves the development of specialised human capital, technology transfer from universities to the industry, creation of patents and spin-offs, licensing, the provision of education to audiences in general who may not be students, as well as the furnishing of public debates and cultural activities (Audretsch, 2014; Trencher *et al.*, 2014; Yuan *et al.*, 2016; O'Reilly *et al.*, 2019; Markuerkiaga *et al.*, 2016; Rosli & Rossi, 2016). All these initiatives by universities are seen as deliberate efforts (Cai & Hall, 2015; Giusepponi & Tavoletti, 2018; Backs *et al.*, 2019) aimed at handling issues that are pertinent to society and fostering innovation as well as social change (Vargiu, 2014; Pinheiro *et al.*, 2017; Mariani *et al.*, 2018).

In view of these developments, extensive research has been conducted on strategies for positioning universities as entrepreneurial hubs (Siegel & Wright, 2015) built on the concept of academic entrepreneurship with a focus that goes beyond research commercialisation (Wadhvani *et al.*, 2017). These strategic approaches relate to the tenets of corporate entrepreneurship or intrapreneurship (Cunningham *et al.*, 2017; Cunningham *et al.*, 2019; Guerrero *et al.*, 2015).

The third mission is believed to be built on the entrepreneurial ecosystems that are entrenched in higher education institutions (Miller & Ács, 2017) and their distinct linkage to corporate strategy (Cunningham *et al.*, 2017). Based on this, Kalar and Antonic (2015) suggest that the entrepreneurial university and its distinct corporate entrepreneurship strategy need to promote a culture of innovation that motivates individuals to seek new channels to disseminate knowledge.

Further, at the core of entrepreneurial universities is the establishment of entrepreneurship-friendly cultures, policies, and practices (Huyghe & Knockaert, 2015). This point of view emphasises intrapreneurship driving elements, namely internal elements (organisational structure, support systems) and strategic factors

(mission, vision, and reward systems), both of which have an impact on the capabilities of higher education institutions (Markuerkiaga *et al.*, 2014).

4.3.2 The entrepreneurial university's architecture and the changing roles of academics

Universities have had to abandon their 'ivory towers' in which the focus was predominantly on teaching and research by responding to external economic and social drivers as well as policy demands to become more entrepreneurial (Kapetaniou & Lee, 2017). The entrepreneurial university concept has, therefore, influenced the strategic planning of many of the world's universities (Dalmarco *et al.*, 2018:99-111), transforming their academic role through the extension of their research, teaching and knowledge dissemination portfolio to include innovation networks through entrepreneurship (Qiao & Yang, 2015; Passaro & Thomas, 2018; Schillo, 2018).

The entrepreneurial university comprises three general pillars: education, research and socio-economic development (Dalmarco *et al.*, 2018). Therefore, many universities strive to become knowledge centres that collaborate with different forms of productive systems and research organisations. This aims to improve the commercialisation of research results and create new business models through higher levels of research and development (Qiao & Yang, 2015).

Universities are, therefore, increasingly assuming a pivotal role in new types of market relations as they transform knowledge into actual innovative products (Volkodavova *et al.*, 2019). Consequently, it is expected that entrepreneurial activities are to be part of all university activities, such as teaching, research and the effective functioning of the university. This is necessary if the entrepreneurial activities, which encourage innovation and a constant search and creation of new knowledge, are to generate the much-needed change in the mission as well as the operational models of the university (Volkodavova *et al.*, 2019).

According to Etzkowitz (2004), this development of entrepreneurial activities in universities is the second academic revolution which has led to faster innovative

results for economic development. This is believed to have the potential to improve current technological patterns among local industries and encourage social developments at local and regional levels (Guerrero *et al.*, 2015).

Cantillon (1953:771) also expressed this notion that entrepreneurial activities are creative and innovative initiatives in higher education institutions that have the vital role of directing and enhancing the educational potential of society, resulting in socio-economic impacts at all levels of the economy. This is a result of the strategic thinking and strong leadership that exists in the university's management departments and structures (Volkodavova *et al.*, 2019:1-9).

As such, universities can respond quickly to the constantly changing demands of the external environment by adopting new tasks, activities and values (Volkodavova *et al.*, 2019). This makes universities look forward as they re-evaluate their core activities and research capabilities to engage in various knowledge transfer and business engagements that meet the needs of the industry (Fitzgerald & Cunningham, 2016; Miller *et al.*, 2016).

4.3.3 Knowledge transfer

Universities are expected to promote knowledge transfer by using their skills to recognise and seize business opportunities and by altering their potential to satisfy the requirements of the innovation system (O'Reilly *et al.*, 2019). All this is achieved by setting up knowledge transfer offices (KTOs), which are management mechanisms and structures that control most of the third mission initiatives (Etzkowitz, 2003a). KTOs thus outline the activities and allocate resources needed to attain third mission targets (Compagnucci & Spigarelli, 2020).

In view of this role, knowledge transfer offices portray the institutionalisation of the third mission (Aragonés-Beltrán *et al.*, 2017). KTOs manage activities that include creating spin-offs, developing patents, obtaining licences to protect intellectual property, research collaborations and consultancies between university units and the industry (Civera & Meoli, 2018). KTOs also promote entrepreneurship education and culture among students and staff (Backs *et al.*, 2019).

There is, however, inadequate knowledge of models for managing KTOs (Brescia *et al.*, 2016; Backs *et al.*, 2019). More research is needed to enhance the understanding of the strategic direction of universities in knowledge transfer activities (Chau *et al.*, 2017; Giuri *et al.*, 2019).

4.3.4 Academic entrepreneurship and entrepreneurial academics

Universities carry out entrepreneurial activities in two main ways determined by the different entrepreneurial activities performed by academics in various disciplines (Abreu & Grinevich, 2013).

A university's entrepreneurial activities can be through the work of an academic entrepreneur. According to Alexander *et al.* (2015) and Miller *et al.* (2018), this term refers to an academic faculty member who conducts technology commercialisation through the use of formal engagement methods that exploit specific opportunities in the market. The academic intrapreneur generates external value through activities that include licensing, patenting, knowledge and technology transfers to the industry, and fostering student start-ups (Hughes *et al.*, 2016). The academic intrapreneur also creates internal value through the acquisition of funds, establishment of new research centres, influence of policies that address societal challenges, promotion of their university's reputation, and implementation of innovative pedagogical initiatives that exceed the range of continuous course development (Engzell *et al.*, 2024). This way, a university becomes a knowledge hub that commercialises knowledge and research findings (Roessner *et al.*, 2013). The formal knowledge transfer activities here involve academics coming up with spin-out companies, patents, licences and joint ventures (Alexander *et al.*, 2015; Bozeman *et al.*, 2013; Perkmann *et al.*, 2013; Wright, 2014; Miller *et al.*, 2016).

Universities can also carry out entrepreneurial activities through an entrepreneurial academic who is an academic faculty member with an entrepreneurial mindset expressed through less formal engagement and collaborative opportunities with commercial partners to enhance their research and teaching objectives (Miller *et al.*, 2018). This is viewed as entrepreneurial education, focusing on the university's teaching mission and developing entrepreneurial capabilities among students and

faculty members (Altmann & Ebersberger, 2013; Galán-Muros *et al.*, 2017; Guerrero *et al.*, 2016).

The expected outcome is that universities become increasingly economically engaged through informal technology and knowledge transfer activities that mainly involve the generation of highly innovative spin-offs, consultancies, contract research, joint/collaborative research, shared facilities, secondments, training and continued professional development, student placements and student projects (Abreu & Grinevich, 2013; Ferreira *et al.*, 2017). All these result in notable economic and social value for both academics and their external partners (Abreu & Grinevich, 2013).

Therefore, these expected outcomes are mainly attained by the academic, who is the main actor in determining the success of a university's business engagement activities and the development of its entrepreneurial potential (Guerrero *et al.*, 2015). As such, the academic's roles in scholarly research, publications, teaching and administration have recently been extended to include the winning of research funding and the performance of entrepreneurial activities that impact society (Guerrero *et al.*, 2015). Entrepreneurial universities are, therefore, to demonstrate a desire to increasingly replace state funding for R&D with investment from industrial enterprises (Kirby, 2006).

The policy further indicates that besides teaching and administration, the academic roles fall into three categories: pure basic research, applied research and technology commercialisation (OECD, 2015). This is built on the knowledge that faculty members have a scholarly understanding of new technology's scientific features and application aspects (Miller *et al.*, 2018). Therefore, their direct participation in entrepreneurship is vital for developing fundamental innovations and commercialised technology (Criaco *et al.*, 2014). This, however, poses a challenge in the recruitment and development of an academic staff's confidence in their entrepreneurial skills (Miller *et al.*, 2018).

4.3.5 Motivations of academics to act entrepreneurially

The factors that motivate academics to participate in third mission or entrepreneurial activities are not widely researched (Perkmann et al., 2013; Huyghe and Knockaert, 2014; Pugh, 2017). However, it is of great necessity to look at these motivations in order to acquire enlightenment on the drivers and the types of initiatives academics embark on.

This insight is vital for policymakers' design of interactions between different stakeholders in technology transfer through the application of research outside the university (Fayolle and Redford, 2014). As such, various scholars have indicated an increase in focus on the provision of opportunities for academic entrepreneurship through the development of spin-offs, alumni start-ups, patent applications processes and digital platforms to complement entrepreneurial competencies as well as to build founder motivations (Elia *et al.*, 2017; Barbieri *et al.*, 2018; Rippa & Secundo, 2019).

These efforts aim to motivate students, researchers and professors to establish academic spin-offs among other entrepreneurial outputs (Elia *et al.*, 2020). The understanding of these motivations has the potential to ensure the success and survival of these entrepreneurial outputs, especially since collaboration with industry is at the discretion of the academics and yet this decision is pivotal to universities' economic development and third mission targets (Hayter, 2011; Bigliardi *et al.*, 2020). The motivations of the academic entrepreneur are further critical because of his/her ability to function as an inventor, seeking new outcomes through his/her research efforts, and as an entrepreneur, seeking new profit streams through commercialising of research output (Schumpeter, 1947; Bigliardi *et al.*, 2020).

Various theoretical approaches based on the identity perspective provide insight into the motivations of the academic entrepreneur's behaviour and the consequent engagement in the commercialisation initiatives (Gruber & MacMillan, 2017). The identity perspective suggests that individuals conduct themselves in a manner that they deem befitting for themselves in a particular situation and that human beings

possess a basic need to self-define and establish their domain in society (Powell & Baker, 2014; Powell & Baker, 2017; Gruber & MacMillan, 2017).

Based on this knowledge, academics' motivations to engage in commercialisation initiatives tend to be presented in different categories determined by the nature of the motivations. The widely accepted categories are financial or pecuniary motivations and non-financial or non-pecuniary motivations (D'Este & Perkmann, 2011).

4.3.5.1 Financial (pecuniary) motivations

According to Bigliardi *et al.* (2020), people generally become entrepreneurs as a result of opportunities for increased income, and as such, academics may engage in commercialisation initiatives to generate increased profits and personal payoffs that boost their comparably low remuneration (D'Este & Perkmann, 2011; Novotny, 2014).

However, universities tend to have inappropriate incentives that demotivate the staff from engaging in both social and economic activities. As such, the full potential of the third mission is not attained (Benneworth *et al.*, 2015; Veugelers, 2016; De La Torre *et al.*, 2018). Therefore, there is a need for improved financial and non-financial incentives for university staff (Compagnucci & Spigarelli, 2020).

4.3.5.2 Non-financial (non-pecuniary) motivations

On the other hand, scholars have also suggested that academics are not always motivated to act entrepreneurially by financial and growth factors (Hayter, 2011; D'Este & Perkmann, 2011, Rizzo, 2015). Academics may be motivated by the need to provide public service and to create job opportunities (Bigliardi *et al.*, 2020). They may also be motivated by the need for professional development and learning, which is achieved through establishing networks that facilitate access to information on challenges faced in the industry as well as industry research (Bigliardi *et al.*, 2020). All of these have to do with the individual beliefs and personal values of the academic staff in relation to the appreciation obtained from society and the field of science (Compagnucci & Spigarelli, 2020).

However, many university staff need to mature to the level of fully understanding and appreciating the accrued benefits from the distribution of scientific and non-scientific output to society (Bonaccorsi *et al.*, 2014; De La Torre *et al.*, 2018; Sá *et al.*, 2018). Further, universities must have substantial conditions that involve assessing and supporting the third mission activities if academics are to be motivated (Sá *et al.*, 2018:784-796). The conditions will provide opportunities for the academic staff to apply their research findings and to diffuse new technologies, which will draw further feedback from the industry, presenting new opportunities to obtain information, skills and technologies (Huszar *et al.*, 2014; Hayter, 2015; Bigliardi *et al.*, 2020).

This will improve the quality of an academic entrepreneur's teaching and research, thereby enhancing a traditional university's activities (Hayter, 2015). Further, Abreu *et al.* (2016) explain that there is a link between the university's conditions and the extent to which academics engage in third-mission activities.

In spite of the importance of the identity perspective concerning the motivations for academics to act entrepreneurially, the provision of support or resources by the parent university is also of great importance (Bigliardi *et al.*, 2020).

4.3.6 Organisational factors for enhancing the entrepreneurial university

Errasti *et al.* (2018) provide a model of maturity that determines the level of academic entrepreneurship among faculties and universities. The model presents thirteen factors, namely, the external environment factors of the legal and administrative context and the business and organisational context; the internal environment factors that include funding for entrepreneurship; faculty staff training in entrepreneurship; involvement of industry professionals in curriculum development and delivery; mission and strategy; policies and procedures; the management team's support; organisational design; training and research in entrepreneurship; extra-curricular training; active methodologies and internationalisation (Fernandez-Nogueira *et al.*, 2018).

Bezanilla *et al.* (2020) further placed these factors into five categories that include: the external context (legal and administrative context; business and organisational

context); resources (funding, staff training, inclusion of industry professionals); projects (mission and strategy, policies and procedures); structures (management team, organisational design) and training processes (training and research, extra-curricular training, active methodologies, internationalisation). These factors are understood as follows:

1. Legal and administrative context

This context is also seen as the external environment, including forces and elements that affect the university outside its boundaries. These elements are what make up the institutional, legal and administrative context (Fernandez-Nogueira *et al.*, 2018). They refer to government and public administrations' facilitation of and participation in entrepreneurial activities through legislation, financing, and the provision of public infrastructures (Bezanilla *et al.*, 2020). The government's role is also seen in creating financing procedures for entrepreneurship education, forming university spin-offs and developing entrepreneurial programmes, activities and initiatives (Errasti *et al.*, 2018).

This context also includes collaborative investment initiatives between policymakers and academic institutions to commercialise academic research output (Budyldina, 2018). The government's role here is to develop national legislature and science and technology (S&T) policies that create a favourable environment for the encouragement of entrepreneurial activities in universities (Obaji & Olugu, 2014; Budyldina, 2018). The policies should provide user-friendly guidelines for entrepreneurs. Further, the government policy regulates entrepreneurial activities which form the core of a country's path to industrialisation (Obaji & Olugu, 2014).

In their study, Bezanilla *et al.* (2020) found that the legal and administrative context is closely related to the resources category, specifically to staff training and the project category. This entails that the development of an entrepreneurial university depends on the interaction between the external context, resources and project factors.

2. Business and organisational context

This context involves neighbouring organisations and companies in the same or similar business sector collaborating with the university through formal and informal networks to share research, knowledge and ideas (Errasti *et al.*, 2018; Bezanilla *et al.*, 2020). It further refers to the university's proactive management of the Triple Helix interactions (Stolze & Sailer, 2021).

This context is based on the concept of university, industry and government cooperation through systematic activities that involve the bringing together of facilities for the performance of tasks that the three institutions would not be able to carry out alone (Moradi & Noori, 2020). According to Lin (2017), this collaboration between the university and the industry aims to create a social environment that enables access to technologies and removes border knowledge. The collaboration also fosters the sharing of knowledge and ideas, the increase of financial resources and the use of the universities' innovative potential (Lin, 2017).

In this context, universities participate in technology transfer, establish connections with industry and foster the formation of innovation infrastructure such as research laboratories, science parks and industry clusters (Budyldina, 2018). Government policy-makers foster this collaboration between universities and the industry by providing supportive policies, funding programmes and platforms for increased stakeholder interactions (Stolze & Sailer, 2021). However, for the collaborations to be effective, there is a need for a policy for the professional development of university leaders in areas such as business and relationship management (Tran & Nghia, 2020).

3. Entrepreneurship funding

According to Markuerkiaga *et al.* (2014) and Fernandez-Nogueira *et al.* (2018), entrepreneurship funding is one of the internal environment factors that support entrepreneurship and is vital for the autonomy and development of universities. This funding is mainly for research and teaching in entrepreneurship or as seed money

for the creation of entrepreneurship projects, companies and organisations (Bezanilla *et al.*, 2020).

Universities must adopt sustainable financial strategies that enable them to invest in entrepreneurial activities so as not to depend on insufficient public funding (OECD, 2012). Entrepreneurial Universities must confidently expand their potential through access to a wide range of funding sources, such as services that include sharing space and facilities as well as the generation of revenue from entrepreneurship activities that involve reinvestments or self-funding initiatives (OECD, 2012).

Entrepreneurship funding, therefore, depends on a university's capacity to apply its strategy of promoting entrepreneurial activities through the commitment of funding to secure the needed investments, employees, skills, knowledge, and reward systems (Taucean *et al.*, 2018). However, it is crucial to separate the funds for research and teaching in entrepreneurship from the funds for implementing entrepreneurship projects and establishing companies (Errasti *et al.*, 2018).

4. Training in entrepreneurship for faculty staff

This factor refers to the degree to which the university provides training in entrepreneurship to its staff (Errasti *et al.*, 2018). The training may be in the form of knowledge transfer and in the setting up of spin-off companies to foster entrepreneurship among their students and academic staff (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019).

Staff are the main resource in the university's strategy implementation, offering entrepreneurship education, establishing business start-ups and all other entrepreneurial initiatives (OECD, 2012). Because the entrepreneurial domain is changing rapidly, there is a constant need for employee upskilling and knowledge acquisition. As such, universities must have a formal policy for developing their employees' careers to keep up with the changes and achieve their goals (OECD, 2012).

Entrepreneurship education is, therefore, necessary for the development of human capital, which will lead to local developments (Šmídová *et al.*, 2017), especially when it includes lifelong learning (Bae *et al.*, 2014; de la Torre *et al.*, 2017). Entrepreneurship education can include, among others, the setting up of knowledge transfer offices (KTOs) as well as training on basic research, practical applications, local community engagements and professionalism (Popescu *et al.*, 2015).

5. Inclusion of professionals from businesses and organisations in curriculum development and delivery

The fostering of partnerships between academics and external stakeholders is said to be pivotal to universities' ability to attain their third mission initiatives (Mora *et al.*, 2015; Secundo *et al.*, 2015; Cesaroni & Piccaluga, 2016; Secundo *et al.*, 2016; Taheri & van Geenhuizen, 2016:31-43; Pinheiro *et al.*, 2017). As such, this factor is based on the participation of industry professionals from the same or similar business sector in the design, development and delivery of the curriculum as guest professionals and lecturers (Errasti *et al.*, 2018; Compagnucci & Spigarelli, 2020).

The professionals from organisations can contribute to the university curriculum by advising on the prevailing needs and business practices in the industry to enable students to acquire the relevant skills (De Luca *et al.*, 2014.) Industry professionals can also be involved in the main governing of the faculty (OECD, 2012).

Disterheft *et al.* (2015) explain that the engagement of external business experts or stakeholders in the design and delivery of the curriculum enhances university-business collaborations as well as the transfer of fundamental skills to upcoming entrepreneurs (De Luca *et al.*, 2014; Compagnucci & Spigarelli, 2020). These may be guest lecturers or alumni who possess vital skills and external perspectives that do not exist within academic institutions (OECD, 2012).

6. Mission and strategy

According to Taucean *et al.* (2018), this factor involves the analysis of a university's mission statement and strategies to determine whether there is an adaption to the

need to enhance entrepreneurial thinking and business creation among students and academic staff. It also involves exploiting ideas in society (Taucean *et al.*, 2018).

Concepts such as 'Company/Organisation' or 'Entrepreneurship' must exist in the university's documents on the mission, objectives, vision, values, and strategic plans to strengthen the entrepreneurial stance, and this must not just be a statement (Errasti *et al.*, 2018; Taucean *et al.*, 2018; OECD, 2016). As universities adopt the third mission, they must abandon traditional management practices and replace them with new models that will enhance strategic improvements (Teece, 2018).

Strategic choices must be made in developing entrepreneurial pathways for implementing strategic plans on knowledge transfer, university-business collaborations, entrepreneurship and social responsibility, and monitoring and evaluating desired outcomes for problem-solving (Klofsten *et al.*, 2019). This entails that entrepreneurial universities must operate in environments that are linked by common values or missions rather than extensive control systems (OECD, 2016). The working mission statement must reflect an entrepreneurial vision for the university's future, fostering the kind of re-envisioning that brings about change (Hamington & Ramaley, 2018; Wakkee *et al.*, 2019).

Further, entrepreneurial activities must be entrenched in the strategic plans that enable institutional introspection to foster an entrepreneurial culture and efficacious processes for identifying problems and decision-making (Teece, 2018). It is ideal for the strategy to include specific entrepreneurship objectives that reflect the performance indicators such as fostering entrepreneurial motivation, cognition and attitudes; building entrepreneurial competencies and skills; establishing business start-ups; commercialising research output via technology transfers and business spin-offs; generating income from spin-off initiatives; the boosting of collaborations between the university and local companies as well as regional stakeholders (OECD, 2012; Stolze & Sailer, 2020; Stolze & Sailer, 2021).

The university must also be committed to implementing the entrepreneurial strategy by ensuring that all staff and students understand and share it throughout the institution, as an agreement is vital for advancement (Stolze & Sailer, 2021). This

commitment must be emphasised in internal communication and by adopting a structure that places someone responsible for the entrepreneurial agenda (Stolze & Sailer, 2020; Stolze & Sailer, 2021). This is necessary to foster strong commitment and facilitate the revision of strategies to constantly develop updates (OECD, 2012).

7. Policies and procedures

According to Fernandez-Nogueira *et al.* (2018), a university's policies, practices and procedures must be evaluated to determine their existence and influence on its academic entrepreneurship activities. These include policies and procedures on intellectual property, networking activities for university-business partnerships, creation of spin-offs and knowledge transfer (Fernandez-Nogueira *et al.*, 2018). The policies, practices and procedures must clearly define the third-mission-related roles and responsibilities, which all internal stakeholders must cooperatively agree on to ensure the attainment of goals.

There must be policies on resource allocation for third mission activities and for the staff's collaborations and co-creation with regional ecosystem stakeholders (Stolze & Sailer, 2021). Universities must also have a policy for the provision of a learning environment that will ensure that students graduate with the requisite skills needed by the industry and society (Gokhberg *et al.*, 2014; Fayolle & Gailly, 2015; Jaekel *et al.*, 2015). This policy must also extend to the professional development of the tertiary educational institutions' leaders in order to enhance their business skills and relationship management capabilities (Tran & Nghia, 2020).

There is a need for clearly defined standard practices on periodical participation in external training, mentoring, auditing activities and co-creation processes in order to strategically enhance the third mission (Stolze & Sailer, 2021). As such, these tertiary educational institutions need to incorporate practices of institutional introspection, cultural remodelling and the creation of effective procedures for detecting problems and making decisions (Teece, 2018).

8. Support from the management team

This factor looks into the leadership or management of the university to analyse their understanding and support of the university's entrepreneurial culture and strategy through the decisions they make, their behaviours and actions (Lombardi *et al.*, 2019:3394). According to Stolze and Sailer (2021), there is a need for change-oriented leadership with a clear vision and goals for the advancement of the third mission. There must be proper leadership that evaluates the existence of an entrepreneurial agenda as well as the existence of a budget for entrepreneurial activities; otherwise, the universities will hinder the same development and performance they desire, as is the situation in a number of African tertiary education institutions (Muriisa, 2014:69-92).

The management must be strong in supporting the transformation into a more entrepreneurial structure (Wakkee *et al.*, 2019). Such a structure enhances the coordination and integration of entrepreneurial activities throughout the university's departments or faculties without duplication (Wakkee *et al.*, 2019). Synergies and linkages must, therefore, be created across faculties for the exploitation of internal knowledge and resources that include the sharing of facilities, the setting up of student-staff structures, interdepartmental structures, as well as cross-faculty teaching and research groups (OECD, 2012).

For instance, according to Compagnucci and Spigarelli (2020), the business faculty could offer strategic support by training on business plan writing, financial planning and accounting, launching new products and negotiating with potential investors. Faculties can also be involved in exploring and exploiting entrepreneurial ideas (Compagnucci & Spigarelli, 2020).

Further, management must assign an individual the responsibility for entrepreneurship at the unit or /faculty level and clearly communicate with the staff to influence the organisational climate (Uslu & Arslan, 2018). The person must take part in the university's strategic and long-term planning for the university as well as in the communication of the institutional vision to foster change (Hamington & Ramaley, 2018).

Student entrepreneurship ambassadors must also be appointed, and mechanisms must be set up to facilitate the acquisition of feedback for adjusting strategy and the course of direction in the transformation into an entrepreneurial university (Wakkee *et al.*, 2019). Management must further provide investment capital for the staff and student structures (Garcia *et al.*, 2012).

It can be seen that tertiary education institutions require entrepreneurial leadership, as the development of an entrepreneurial university needs a good measure of experimentation (entrepreneurialism) and less detailed planning (management) (Schoemaker *et al.*, 2018; Stolze & Sailer, 2021). This is a great necessity as the management style adopted by the leaders significantly influences the strategic advancement of the third mission (Garcia *et al.*, 2012). The leaders, therefore, must regard the third mission as having the same importance as teaching and research if they are to remain relevant for the future of governing tertiary educational institutions (Middlehurst, 2013).

9. Organisational design

This factor determines the degree to which a university encourages entrepreneurial behaviour through the procedures in its organisational design that include decentralisation of decision-making, bottom-up communication, flexibility in strategy integration, financial independence and the existing link between teaching and research (Gibb, 2012). It also analyses the extent to which employees are empowered to innovate through support structures that enable lecturers and students to establish new businesses as well as incubators (Errasti *et al.*, 2018).

This factor deals with removing bureaucratic barriers or hierarchies to facilitate faster creation of ideas and decision-making (Errasti *et al.*, 2018). As such, the university must establish new centres and structures that foster the easy set-up of new activities. Further, autonomy and employee ownership of initiatives must also be enhanced (OECD, 2012). These initiatives require implementation through departmental strategies or a common entrepreneurial culture that enhances employee ownership (de la Torre *et al.*, 2018). However, tertiary or higher education institutions tend not to be aware of the value of informing their staff of the

entrepreneurial initiatives to embark on (de la Torre et al., 2018), which works against enhancing an entrepreneurial culture.

In addition, academic staff usually do not understand the industrial society or experience in the business domain (Sá et al., 2018). Further, academics believe that acting entrepreneurial has the potential to negatively affect a university's traditional teaching and research missions (Martin et al., 2019).

10. Training and research in entrepreneurship

Training and research in entrepreneurship is based on offering formal education through academic curricula or programmes and research in entrepreneurship (de la Torre et al., 2018). This is to refine capabilities in individuals' behaviours, knowledge, skills and attitudes (de la Torre et al., 2018). The goal is to foster entrepreneurial mindsets through a unified culture across academia and among academic staff (Sá et al., 2018).

In addition, Taucean et al. (2018) explain that entrepreneurial teaching and learning comprises the identification of innovative methods of teaching as well as means of invigorating entrepreneurial mindsets through exposure to entrepreneurial experiences, skills and capabilities. As such, entrepreneurial behaviours need to be supported in all informal and formal teaching and extracurricular activities to promote an entrepreneurial culture (OECD, 2012:1-54). The formal teaching of entrepreneurship is seen as having the potential to develop capabilities in behaviours, attitudes, knowledge and skills specific to an individual within the research and academic curricula (Errasti et al., 2018).

11. Extra-curricular training

Given entrepreneurship's importance in the economy, universities commit significant levels of effort to develop extra-curricular activities to inspire entrepreneurial intentions in students (Thomas et al., 2014). This is based on the understanding that universities can tap into the potential of reflective learning that exists in extra-curricular activities (Díaz-Iso et al., 2019). Reflective learning enables students).

Growing attention is being ascribed to reflective learning as a pedagogical approach in higher education because it is seen to enhance entrepreneurial-minded learning, especially because the development of entrepreneurial mindsets occurs over time and it demands practice (Kim *et al.*, 2017; Bosman & Fernhaber, 2018:48). This approach to learning is further believed to even enable staff to become more aware of their work context enabling them to take advantage of opportunities, thereby enhancing intrapreneurship.

The extra-curricular activities include initiatives involving external stakeholders to encourage collaborations that benefit students from diverse learning network opportunities and informal learning practices (Secundo *et al.*, 2015). These extra-curricular activities comprise training activities that are not part of the curriculum (Errasti *et al.*, 2018).

The training activities include workshops on building awareness of entrepreneurship, coaching for start-ups, the exploration and identification of opportunities, the execution of innovative projects, the production of business plans and the launching of spin-offs in the form of incubation initiatives, technology transfer and venture capital funds (Errasti *et al.*, 2018). The activities can further include the exchange of knowledge through holiday schools, conferences, clubs, venture camps, boot camps, business simulation and competitions, science parks, focus groups, seminars and forums (Fayolle *et al.*, 2006; Włodarczyk *et al.*, 2015; Knutsson *et al.*, 2017).

12. Active methodologies

This factor is based on the need for entrepreneurship education experts to develop innovative educational resources and to foster an open environment that encourages students to build their confidence in risk-taking and learning from the outcomes (Errasti *et al.*, 2018). The Open environment is characterised by a university's mission to actively collaborate with industry stakeholders to share knowledge and foster experiential learning for students (Etzkowitz, 2013; Fernandez-Nogueira *et al.*, 2018).

Experiential learning results in students developing a pro-entrepreneurial mindset due to the knowledge they acquire on entrepreneurship (Lina *et al.*, 2019). Consequently, students consider entrepreneurship a possible career choice (Lina *et al.*, 2019:9864–9872). The contact with the industry is effected through the set-up of business hub infrastructure, technology transfer centres and student entrepreneurial alliances (Boldureanu *et al.*, 2020:1-33). As such, students must be presented with opportunities to take part in real projects, internships, problem-solving activities, case study evaluations, gamification and service learning with entrepreneurs as active methodologies for the enhancement of entrepreneurship (Errasti *et al.*, 2018).

13. Internationalisation

Internalisation refers to a number of coordinated activities. These include the establishment of joint degrees with universities in other countries, the execution of international research projects, access to a pool of revenue and the international exchange of students, academics and other partners (Errasti *et al.*, 2018). All of these are the main components of an entrepreneurial university (Errasti *et al.*, 2018).

Therefore, internationalisation involves incorporating an international or global perspective into planning and carrying out educational programmes, research and knowledge transfer (Taucean *et al.*, 2018). This is vital to promote change and development through diverse thinking, which offers new insights that alter traditional methods of teaching as well as the accommodation of external stakeholders in managing the entrepreneurial university (Taucean *et al.*, 2018). This is an indication of the fact that many synergies exist between internationalisation and the entrepreneurial university (Larionova, 2012).

Gibb (2012) also emphasised that internationalisation is a vital key to the development of the entrepreneurial university. As such, the leaders of entrepreneurial universities must consider the disposition and interests of entrepreneurial ecosystem stakeholders regarding the future roles of universities as guided by internationalisation, rapid digital changes, partnerships and co-creation activities (Stolze & Sailer, 2020). The leaders must also understand the importance of the international movement of students, lecturers and business partners to

develop the entrepreneurial university (Allinson *et al.*, 2012; Gibb, 2012; Errasti *et al.*, 2018). Further, internationalisation must incorporate new incentives such as income, reputation, research opportunities, collaborations, and better cultural tolerance (Gibb, 2012).

Figure 4.2 below illustrates the factors discussed above.

Figure 4.2: Factors of influence of the entrepreneurial university.



Source: Bezanilla *et al.* (2020:13)

According to Markuerkiaga *et al.* (2014), other factors influencing an entrepreneurial university are based on results. These results can be observed through an entrepreneurial university's performance of nine academic entrepreneurship activities that include industry training courses, academic spin-offs, student company

establishment, patenting and licensing, collaborative/contract research, networking, information dissemination, consulting and industry mobility (Markuerkiaga et al., 2014; Fernandez-Nogueira et al., 2018). Scholars have also presented different pathways to establishing entrepreneurial universities.

4.4 PATHWAYS TO AN ENTREPRENEURIAL UNIVERSITY

Literature offers several pathways for establishing an entrepreneurial university (Compagnucci & Spigarelli, 2020:1-30). One of these pathways is suggested by Clark (1998), who pointed out and elucidated the processes and methods for creating an entrepreneurial university. Through a number of case studies, Clack (1998b:5-16) identified the following five pathways for the development of an entrepreneurial university: (a) a strengthened steering core; (b) an expanded developmental periphery; (c) a diversified funding base; (d) a stimulated academic heartland; and (e) an integrated entrepreneurial culture (Woollard, 2010).

Another pathway is suggested by Vorley and Nelles (2008; 2012) and is referred to as the 'entrepreneurial architecture' (EA) concept. The EA concept presents five categories of internal factors that merge in the design of a university's entrepreneurial agenda. These categories include (a) structures or entrepreneurial infrastructures e.g. Technology Transfer Offices (TTOs), incubators, university-based science parks and business portals; (b) strategies for the organisational goals emphasised in planning documents and formal structures for incentives; (c) systems or communication networks and the layout of alliances between structures and departments; (d) leadership or the qualification and orientation of the main participants in the third mission; and (e) the culture or organisational, departmental and individual points of view and standards within the third mission (Nelles & Vorley, 2010).

Yet another pathway is by Etzkowitz (2013b), who identifies and explains four stages for the establishment of an entrepreneurial university, which can occur in any order or simultaneously. The first stage involves the university's identification of its capability to identify priorities and set a strategic direction. The second stage is the

university's acquisition of the needed financial resources from diverse sources. This leads to the third stage in which the university assumes a dynamic role in commercialising and commodifying the staff's research output. The last stage sees the university engaging with stakeholders so as to foster growth in the regional innovation domain (O'Reilly *et al.*, 2019).

Martin *et al.* (2019) add to the EA concept by explaining that its structures and systems fall under central bodies in the entrepreneurial university ecosystem, such as liaison, knowledge exchange, business engagement or knowledge transfer offices. These central bodies support the application of practical knowledge and present unique viewpoints when applied to different faculties and employees. The application of knowledge is achieved through social capital and the coordination of the five internal factors as well as the inclusion of the entrepreneurial assignment into both teaching and research (Vorley & Nelles, 2008:1-17; 2012; Pinheiro *et al.*, 2015:233-249; Hayter, 2016:633-656).

4.5 THE COMPLEXITIES AND KNOWLEDGE GAPS IN THE ENTREPRENEURIAL UNIVERSITY MODEL

It is noted that the entrepreneurial university model is a complex phenomenon that consists of diverse academic traditions, research values, levels of decision-making and sub-organisational cultures (Guerrero *et al.*, 2016a; Klofsten *et al.*, 2019; Phillips, 2018).

In the attempt to address the complexities, research on this phenomenon has been done in different contexts and countries (Dalmarco *et al.*, 2018; Elia *et al.*, 2017; Riviezzo *et al.*, 2017; Sperrer *et al.*, 2016). Most of the research has been extensively focused on comprehending the shifting role of the university in European regions (Dabić, 2019; Mosey *et al.*, 2017). Attention has also been placed on Etzkowitz's suggestion of the European context as an alternative to the US model (Etzkowitz, 2003c), considering the operational view of entrepreneurial universities such as the knowledge transfer offices (Fernandez-Alles *et al.*, 2018; Muscio, 2016).

Affiliations between companies and universities (D'Este & Perkmann, 2011; Dooley & Kirk, 2007), support for innovation (Etzkowitz, 2003b; Holden & Goldstein, 2010), growing of new spin-off companies (Harrison & Leitch, 2010; O'Shea *et al.*, 2005:994-1009), and incubators and science parks have also received focus in research (Grimaldi & Grandi, 2001; Mian, 2011).

In view of this available research, a number of researchers have developed models in their attempt to explain the complex entrepreneurial university phenomenon (Clark, 2004; Etzkowitz *et al.*, 2019; O'Shea *et al.*, 2005). The models distinguish between external (Clark, 2004; Etzkowitz, 2004; Rothaermel *et al.*, 2007; Guerrero *et al.*, 2016a; Guerrero *et al.*, 2016b) and internal factors (O'Shea *et al.*, 2005; O'Shea *et al.*, 2008; Rothaermel *et al.*, 2007; Sánchez-Barrioluengo & Benneworth, 2019) that influence the development of the entrepreneurial university.

The research has, however, not provided in-depth and exhaustive insights into the dimensions of the entrepreneurial university phenomenon (intrapreneurship) (Farrukh *et al.*, 2019). There remains insufficient knowledge on the micro-foundations of universities' third mission concerning faculty members' engagement (Freel *et al.*, 2019).

Further, although scholars have developed theoretical models that explain the entrepreneurial university phenomenon (Clark, 1998a:3-4; Gibb, 2012; Markuerkiaga *et al.*, 2014.; O'Shea *et al.*, 2007; Salamzadeh *et al.*, 2011), not much has been covered on the elements that lead to the development of an entrepreneurial university (Guerrero & Urbano, 2012). Insufficient research has been done on what exactly influences the roles, motivations and perceptions of entrepreneurship among academics (Göktepe-Hulten & Mahagaonkar, 2010; Clarysse *et al.*, 2011).

There is also a knowledge gap on the ways in which a university can effectively react to the entrepreneurial imperatives. This knowledge is vital for the establishment of a framework derived from theory, which would guide policymakers and foster understanding of the wider consequences of increased socio-economic engagement (Nelles & Vorley, 2010).

There is also very little in-depth research on the effects of the changes in university governance on teaching and research, which are a consequence of the university's involvement in entrepreneurial activities (Muscio *et al.*, 2017). This is of great importance mainly because most academic staff have not widely accepted the standards and establishment of an entrepreneurial culture (Etzkowitz, 2003a; Sá *et al.*, 2018).

There being insufficient empirical studies in many areas on the development of an entrepreneurial university, an opportunity exists to make a significant contribution to this domain in order to reduce the complexities. As such, this study focuses on exploring the elements within the internal and external environment in Botswana's universities that trigger intrapreneurial behaviour, encouraging faculty engagement in promoting an entrepreneurial culture and generating improvements in overall institutional performance.

4.6 THE ENTREPRENEURIAL UNIVERSITY IN BOTSWANA

The government and policymakers in Botswana are demanding the country's tertiary educational institutions promote and encourage entrepreneurship among students with the view that universities are drivers of socio-economic development (Ebewo *et al.*, 2017). According to Lekoko (2011), Botswana's universities must be transformed into entrepreneurial educational centres and activity hubs. This need for transformation is urgent especially because the government has largely invested in education and skills development, allocating over 25 per cent of the country's total annual budget to this sector in the last two decades (NDP 11, 2017).

Despite this large expenditure on education, there continues to be a mismatch between the skills developed by the education system and the needs of Botswana's economy (Makwinja, 2017; NDP 11, 2017). The government has therefore placed a demand on the tertiary education sector to match their training with industry needs by producing skills in quality graduates in areas that are critical to the improvement in the performance of Botswana's economy. The tertiary education sector is also expected to act as a catalyst in the country's transition from a factor-driven economy

to a knowledge-based economy (ETSSP, 2015; Makwinja, 2017; NDP 11, 2017, Vision 2016:7; Vision 2036).

Botswana's economy is undergoing significant transformations. However, these have mainly been in non-tradable services, which do not yield many benefits in employment, income equality and export diversification. The Largest contributor to Botswana's GDP has been the services sector, with public administration and defence contributing the most at about 18%. Other key service sectors are wholesale, retail, and construction. However, the agriculture sector's contribution has reduced significantly over the years (International Finance Corporation, 2022). This shows that the existing diamond sector-led development model has become increasingly pronounced, making the country's GDP dependent on one sector. This has caused the economy to have an inadequate production base to employ the potential workforce (Bank of Botswana, 2021). For this reason, the government is calling for the urgent improvement of the research and innovation capacity in the universities to build an entrepreneurial and prosperous society (Vision 2036, 2016-20).

Therefore, the Botswana context makes for an intriguing analytical case because research on the dimensions of intrapreneurship that lead to entrepreneurial universities in Botswana's tertiary education institutions remains limited. Further, universities in Botswana, like others in many emerging economies, face a wide range of challenges in adapting to the entrepreneurial university model (Tatarski *et al.*, 2020:1-15).

4.7 CHALLENGES IN IMPLEMENTING THE ENTREPRENEURIAL UNIVERSITY

Globalisation, the prevailing economic conditions, increasing competitiveness and social changes, as well as the advancement of a knowledge-based economy, are placing a demand on tertiary education institutions to effect changes that involve new forms of collaborations with industry stakeholders (Czerniachowicz & Wieczorek-szymańska, 2019). These institutions are expected to set up businesses and to build the capacity to establish the entrepreneurial potential among students and

academicians as a way to bring about beneficial developments to universities (Czerniachowicz & Wieczorek-szymańska, 2019). However, universities face many challenges in becoming entrepreneurial (Tatarski *et al.*, 2020).

Although the entrepreneurial university phenomenon is gaining recognition in emerging economies which have placed the promotion of academic entrepreneurship at the top of their political programs, the actual changes happen at very slow rates (Czerniachowicz & Wieczorek-szymańska, 2019; Tatarski *et al.*, 2020). This is because there are still no clear policies or structures for facilitating the effective transfer of academic knowledge, the setting up of incubations for new businesses and also how all these are to contribute to socio-economic development (Czerniachowicz & Wieczorek-szymańska, 2019).

Further, Universities cannot effectively engage in these entrepreneurial activities due to insufficient resources (Tatarski *et al.*, 2020). This is because many developing countries have inadequate resources to foster entrepreneurial orientation in their universities (Foss & Gibson, 2015).

On the other hand, the third mission has meant the managerial reorganisation of university resources to create capabilities that enable the generation of transferable knowledge, especially in creating new organisations with which their value can be exploited. However, the incorporation of this third mission represents major challenges for university management due to the need to strike a balance between teaching, research, and the marketing of its results (Etkowitz, 2016b; Tatarski *et al.*, 2020). The third mission, therefore, tends to clash with traditional academic activities and can even cause identity crises among academics (de la Torre *et al.*, 2017).

Other challenges that complicate academic intrapreneurial initiatives include trust deficits and financial constraints that exist in the entrepreneurial ecosystem (Abreu & Grinevich, 2013; Klofsten *et al.*, 2019). Academic intrapreneurs, therefore, struggle with diverse challenges when working outside their traditional roles and logic (Kuratko *et al.*, 2015; Llopis *et al.*, 2022). And so, in spite of the increasing demand for academic intrapreneurship (Guerrero *et al.*, 2021), universities tend to either metaphorically incorporate intrapreneurship into their academic processes and

structures or are hindered from doing so by the existing institutional logic (Heinze & Weber, 2016; Kraatz & Block, 2008).

Another main challenge emanates from the need to have appropriate formal organisational structures that address the university-based entrepreneurs' actual needs through the distinct stages of entrepreneurship, namely latent, emergent, launch, and growth (Caiazza *et al.*, 2020). Therefore, the challenge in implementing the entrepreneurial university model lies in ensuring that the entrepreneurial organisational architecture is aligned with the changing "strategy-environment" context (Parakhina *et al.*, 2017).

Given the effect the third mission has on the structural management of tertiary educational institutions, there is a need to pay more attention to identifying and analysing the strategies universities apply in implementing third mission initiatives (Giuri *et al.*, 2019). This is vital because having a "one-size-fits-all" perspective on the implementation of the third mission in different universities is not effective and sustainable as universities in different countries do not have homogeneous capacities (Kitagawa *et al.*, 2016; Secundo *et al.*, 2018). There is a need to critically analyse how universities have embraced and integrated the third mission into their current principal activities (Benneworth *et al.*, 2016). Further, the need remains to clearly explain the role and contribution of the university to society (Benneworth *et al.*, 2016).

The adoption of the entrepreneurial university model further involves risks and challenges for the management of higher education institutions. These result from the fact that the process calls for faculty members to make exchanges between the amounts of time devoted to improving teaching, conducting research and performing the required activities to comply with the third mission (Siegel & Wright, 2015; Tatarski *et al.*, 2020). According to Tatarski *et al.* (2020), it is burdensome for employees to merge their principal jobs with the accompanying administration, and as a result, they tend to be resistant, thereby hindering the process of transforming their universities into entrepreneurial entities (Kalar & Antoncic, 2015).

Available literature also shows that most academic employees have not generally accepted the ideals and growth of an entrepreneurial culture within their universities (Etzkowitz, 2003b:293-337; Sá et al., 2018:784-796). However, although academics view university-industry partnerships as having negative effects on their intellectual freedom, several studies have proved that these collaborations bring about new opportunities for access to resources that include information, skills, technologies and finance (D'Este & Perkmann, 2011; Huszar et al., 2014; Hayter, 2015)

Yet another challenge arises from the fact that entrepreneurship in existing organisations requires the promotion of an intrapreneurial mindset and intrapreneurship culture that expedites organisational change marked with trial and error through experimentation and continuous refinement (Hagedorn & Jamieson, 2014). But then, many tertiary educational institutions do not have the cultural ability to support this kind of radical innovation (Blanka, 2018)

Finally, all these challenges can be seen through the difficulties faced in maintaining research skills, lifelong learning, and building a community that can sustain and expand vital knowledge alongside social principles and ethics (Aldawod & Day, 2017).

4.8 SUMMARY

Available literature indicates that as turbulence increases in the business operating environment, tertiary educational institutions face the challenge of acting more entrepreneurially. Various stakeholders, including the government, society and the industry, are placing a demand on universities to extend their mission for them to achieve a greater impact on economic development. This somewhat new designation for universities involves improving policies that foster entrepreneurship through academic activities in which staff and students create business spin-offs, transfer new knowledge from research output and develop initiatives that address social needs. All these activities are achieved through collaborations with government and industry. These partnerships lead to generating and exploiting information and technology used to promote an innovative system.

This third mission for tertiary educational institutions, which adds to its teaching and research missions, further contributes to regional development through relationship-building initiatives that strengthen economic networks. As such, the entrepreneurial university concept is so revolutionary that many developing countries, including Botswana, consider it a very advanced model for improving the performance of the tertiary education sector. However, it is important to acknowledge that there is a need to establish a form to implement this concept to increase its instrumental capabilities in advancing innovative economic development. The following chapter covers the research methodology of the study.

CHAPTER FIVE: RESEARCH METHODOLOGY

5.1 INTRODUCTION

The preceding chapter provided a theoretical exposition of the literature on the entrepreneurial university to clearly understand the elements or practices of an organisation's internal environment that support intrapreneurial behaviour. This furthered the understanding of how intrapreneurship is designed to improve organisational performance in tertiary education institutions, particularly in Botswana's tertiary education sector. As such, this study sought to evaluate the existing support for intrapreneurial behaviour in Botswana's large tertiary education institutions and the consequent improvements in organisational performance. The aim was to develop a scientifically sound and reliable strategic framework to guide an implementation process that will meet the need for outputs in internal innovation performance, organisational growth and profitability through the intrapreneurial behaviour of employees in Botswana's tertiary education institutions. This chapter discusses the methodology employed to achieve the study's aim. The discussion covers the following areas:

The literature review objectives of the study were to:

- To provide a general review of intrapreneurship, intrapreneurial behaviour and intrapreneurship in tertiary education.
- To present relevant and up-to-date information on the challenges faced in Botswana's tertiary education sector.
- To examine the association between entrepreneurship, intrapreneurship and organisational performance.
- To review the literature on the dimensions of an organisation's internal and external environment that influence intrapreneurial behaviour.
- To review the literature on the outcomes of the support for intrapreneurial behaviour's elements on organisational performance.
- To examine the literature on the entrepreneurial university globally and in Botswana.

- To review the challenges in supporting intrapreneurial behaviour among academics and in implementing the entrepreneurial university concept.
- To review the research process and design an appropriate research approach for the collection of primary data.

The empirical study objectives were to:

- To obtain insight into the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions.
- To explore the interpretations of the importance of support for intrapreneurial behaviour in Botswana's large tertiary education organisations.
- To identify the internal and external environment factors that influence the support for intrapreneurial behaviour in Botswana's large tertiary education organisations.
- To describe the significant challenges experienced in supporting intrapreneurial behaviour in Botswana's large tertiary education organisations.
- To explore intrapreneurial behaviour's contribution to the improvements in organisational performance.
- To generate recommendations on supporting intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and enhancing performance through intrapreneurial behaviour within Botswana's large tertiary education organisations.

The literature review objectives were addressed by gathering comprehensive secondary data from credible sources that included peer-reviewed journals, reports such as Botswana's Strategic Visions 2016, 2036, the 11th National Development Plan and other related reports, internet searches on entrepreneuring universities as well as books and other published materials on the topic of this research study. The literature reviewed indicates that intrapreneurship is a new domain of entrepreneurship (Ozbozkurt, 2019:1087), seen as a unique composition of entrepreneurial behaviour and creativity within an organisation. Intrapreneurship, therefore, reflects an organisation's entrepreneurial orientation attained through a strategy of getting employees to contribute to innovation, service and product

development as well as to an ultimate competitive advantage for organisations (Guerrero & Peña-Legazkue, 2013). Many universities have adopted this perspective by establishing initiatives to foster ecosystems that promote entrepreneurial activities among students and academics (Galán-Muros & Davey, 2020;; Guerrero *et al.*, 2016a).

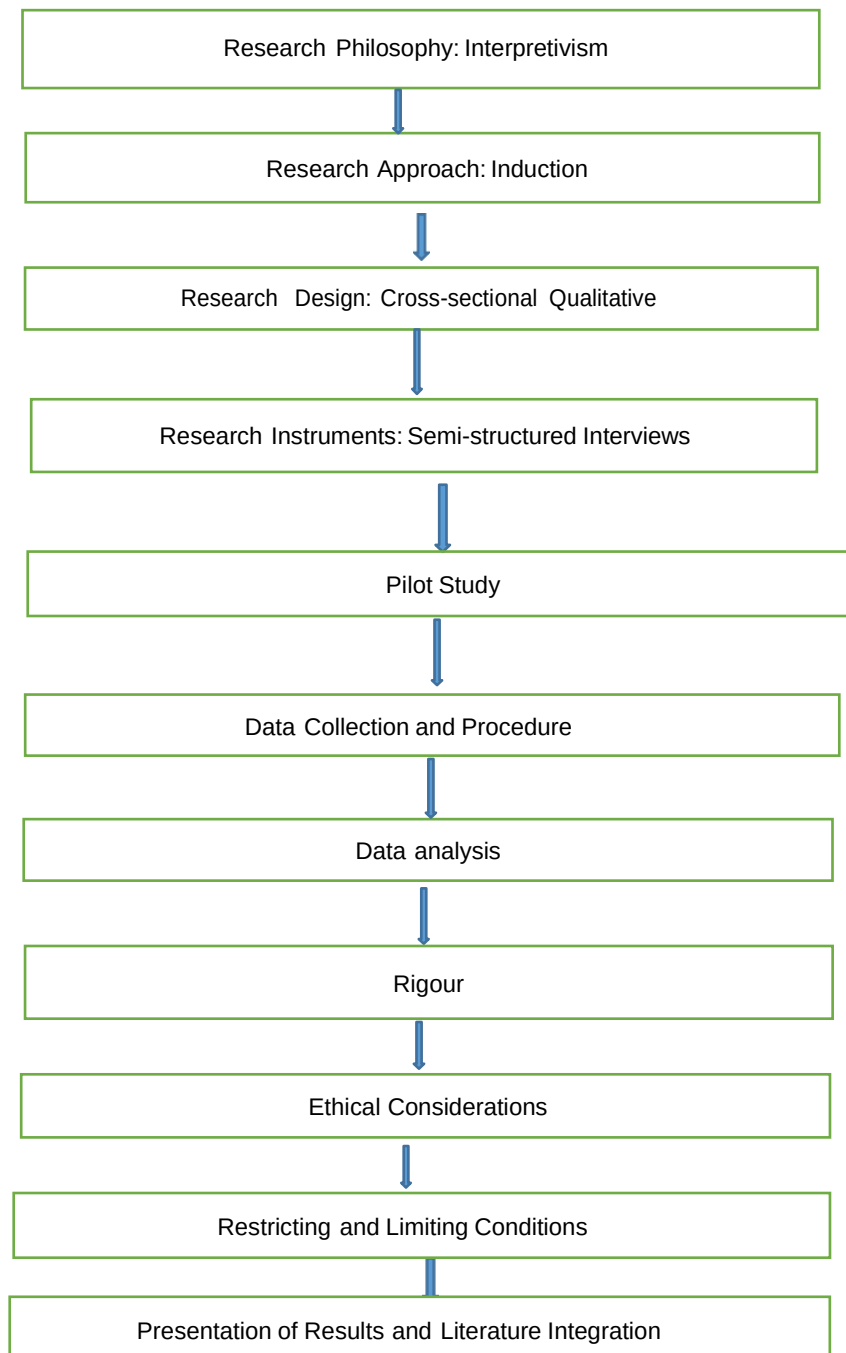
However, despite its potential to enable organisations to face the current challenges of attaining innovation competitiveness through the support of intrapreneurs' motivations and skills, intrapreneurship remains a managerial challenge (Castellion & Markham, 2013; Heidenreich & Spieth, 2013). Further, the entrepreneurial university model is a complex phenomenon that consists of diverse academic traditions, research values, levels of decision-making and sub-organisational cultures (Guerrero *et al.*, 2016b; Klofsten *et al.*, 2019; Phillips, 2018). Given these challenges, the available literature does not provide in-depth and exhaustive insights on the implementation of the dimensions of intrapreneurship in universities (Farrukh *et al.*, 2019) and on the micro-foundations of the entrepreneurial university's third mission concerning faculty members' intrapreneurial engagement (Freel *et al.*, 2019). This makes it significant to carry out empirical research to explore the dimensions supported within Botswana's universities' internal environment to trigger intrapreneurial behaviour among faculty members and the consequential improvements in overall institutional performance.

The empirical objectives were addressed through a credible empirical exploration of the views and experiences of the senior and middle managers in five large universities in Gaborone, Botswana.

The empirical exploration was therefore conducted according to an ingenious qualitative methodology employed by Saunders *et al.* (2016:720). This study adopted the interpretivism philosophy, inductive approach, qualitative research design and semi-structured interviews to collect data. The collected data analysis involved thematic analysis, enabling a cyclical and iterative approach to data analysis with many steps and stages (Creswell & Poth, 2018:320).

Figure 5.1 below presents the methodology that is discussed in the following pages.

Figure 5.1: Research methodology framework



Source: Adapted from Saunders *et al.* (2016:124)

5.2. RESEARCH PHILOSOPHY - INTERPRETIVISM

Interpretivism was selected as the appropriate philosophy for this study as it enables the examination of what reality is and how it is known to be real (Du Plooy-Cilliers *et al.*, 2014:34). As such, the interpretative paradigm ensured that attention was paid to the uncovering and interpreting of meaning through the context in which the intrapreneurial phenomenon exists in the sampled tertiary education organisations (Ritchie *et al.*, 2013:13). According to Creswell (2014:6-8), interpretivism belongs to an approach whose major elements include understanding multiple participant meanings, social and historical construction as well as theory generation. It is a paradigm based on the individual's subjectivity and agency (Hua, 2016:8-12). The implication is, therefore, that individuals construct subjective meanings of their experiences (McNabb, 2015:52). As such, interpretivism is applied through a tradition of ethnography and requires thorough, in-depth observation and description of behaviour (Creswell, 2014:6-8) because a matter and its reality are constructed differently by the various interpretations of individuals in different situations (Creswell & Creswell, 2017).

This interpretivism or constructivism philosophy enabled the reconstruction of the perceptions on the support for intrapreneurial behaviour in Botswana's tertiary institutions and the improvements in organisational performance, thereby leading to new realities on the matter. It enabled the creation of new theories and a strategic framework for intrapreneurship in the tertiary institutions through concrete contextual interpretations of the attitudes, opinions, experiences, struggles and strategies of ten managers and twenty academic staff in the five sampled tertiary education institutions in Gaborone, Botswana. The researcher generated varied and multiple important meanings from the participants' views and subjective meanings.

5.3 RESEARCH APPROACH – INDUCTIVE

The research approach for this study was the inductive approach, which is a process that involves the analysis of specific concepts in a general and flexible manner as data are collected, leading to theory development from the outcome of the data analysis (Creswell, 2014:6-8). The inductive approach, therefore, involves moving

from specific observations about individual occurrences to broader generalisations and theories, allowing for empirical observations to be made on a phenomenon of interest, thereby resulting in the generation of concepts and theories (Locke, 2007). It involves a bottom-up, subjective approach with a definite meaning that uses observation or experience, pattern, tentative hypothesis and theory (Saunders *et al.*, 2019).

This study employed the inductive approach to enable the development of theory or patterns of meaning from the results of the collected data on the existing support for intrapreneurial behaviour and the performance of Botswana's tertiary educational institutions. Through the bottom-up approach, the researcher was able to obtain and use the participants' views, values, judgments, beliefs and reflections to build broader themes and come up with a theory through the interconnecting of the identified themes (Ali & Birley, 1999:104; Creswell & Clark, 2017:23). This was achieved by firstly looking at specific observations and measures, followed by the detection of themes and patterns in the collected data. As a result, the researcher was able to form tentative hypotheses that were explored, leading to general conclusions or theories on the intrapreneurship phenomenon in the sampled tertiary educational institutions (Creswell, 2014:6-8; Ritchie *et al.*, 2013:12). The generated theory is vital for bridging the gap that exists in the academic literature on the entrepreneurial university phenomenon in Botswana.

5.4 RESEARCH DESIGN AND STRATEGY - QUALITATIVE

This study employed the mono-method qualitative methodological choice and the exploratory, descriptive strategy to form a qualitative research design, which is related to the interpretative worldview (Rubin & Babbie, 2015:66). According to Crossman (2020), the mono-method qualitative choice is a social science research approach which involves collecting and interpreting meaning from non-numerical data to understand social life through the study of a targeted population. The Qualitative research design focuses on exploring and understanding the meaning the research participants assign to a social or human problem (Creswell, 2014:4).

This approach enabled the researcher to understand issues of intrapreneurial behaviour in the five sampled universities by exploring them in the specific contexts of the universities and focusing on the meaning that the participants brought to them (Denzin & Lincoln, 2005). Further, the qualitative research design generates data that is not quantifiable through the use of open-ended questions, which helps the researcher produce meaning or reality from the opinions and experiences of participants (Merriam, 2001; 2009). This design also required the researcher to demonstrate intensive listening to what the participants were saying about their natural setting (Creswell, 2014:4) and to employ a thematic analysis of the collected data (Creswell & Clark, 2017:153). Consequently, the researcher was able to accurately describe the intrapreneurial phenomenon in the sampled tertiary education institution, undisturbed by the researcher, because the knowledge obtained was close to the participants' perspectives (Hammersley, 2013:11).

The researcher was able to represent how the participants comprehended reality in terms of the motives and manners of their intrapreneurial actions. Comprehensive knowledge was thus built by presenting the intrapreneurial phenomena in the natural context of the sampled tertiary education institutions (Asenahabi, 2019:81-84). Further, because qualitative research is inductive in nature, it enabled the researcher to value the participants' individuality, culture and social justice, thereby resulting in a content and context-rich breadth of information which is also current (Ciesielska & Jemielniak, 2018:16; Asenahabi, 2019:81-84). Figure 5.2 on the next page presents a summary of the qualitative research approach.

Figure 5.2: Qualitative research approach



Source: Adapted from Mahoney & Vanderpoel (2015: 77-78)

5.5 RESEARCH INSTRUMENT: SEMI-STRUCTURED INTERVIEW

According to Siedman (2013:20-21), the principal way a researcher can examine an educational organisation, institution, or process is through the experience of the individual people who are part of the organisation or who carry out the process. Based on this fact, the data collection was done in the participants' setting using face-to-face semi-structured interviews with the help of a recording device. This data collection technique presented a sufficient means of inquiry as the researcher was able to explore the participants' lived experiences, which were narrated in relation to the theoretical aspects of interest in this study (Edwards & Holland, 2013:3).

Although semi-structured interviews are time-consuming, labour intensive and require that the interviewer is knowledgeable about relevant substantive issues, they were appropriate for this study because they enabled the researcher to ask probing, open-ended questions in order to obtain the participants' independent thoughts (Adams, 2015). Further, the semi-structured interviews enabled the researcher to

conduct one-on-one interviews with managers and staff in the sampled universities. This provided the researcher with maximum latitude to spot and explore useful leads on momentous issues in the not-charted territory of the intrapreneurial behaviour phenomenon in Botswana's tertiary educational sector. Specific themes were sufficiently addressed while at the same time allowing the respondents to provide new meanings to the focus of this study (Adams, 2015).

The interviews were guided by an interview protocol to follow the direction of the conversation according to the respondents' responses to maintain consistency in the areas being researched across all interviews (Siedman, 2013:20-21). The interview protocol comprised questions derived from the literature reviewed in this study. Further, questions were also adopted from two other sources: other researchers' interview guides and new questions developed by the researcher conducting this study (Saunders & Lewis, 2012:142). In order to gain insight into the existing support for intrapreneurial behaviour in Botswana's large tertiary institutions, the interview protocol was divided into eight themes and placed into sections, each with a list of questions (Kvale & Brinkman, 2009:27). The sections are as follows:

Section 1: Demographic information

This section aimed to obtain demographic information from the sampled managers to create a profile of the participants and their respective universities. As such, closed-ended questions were used in this first part of the interviews to acquire background descriptive information, as this study is descriptive in nature.

Section 2: The Entrepreneurial University

This section sought to understand the managers' experiences of the intrapreneurial activities in the university.

Section 3: The Intrapreneurial Academic

This section sought to explore the managers' descriptions of the concept or idea of an "intrapreneurial academic" within the context of their respective universities. This

aimed to establish the value of entrepreneurial knowledge among the academic staff, the specific behaviours, attitudes and characteristics/traits of the high and low-performing intrapreneurial academics within the universities and their work.

Section 4: University support for intrapreneurial behaviour

This section explored the managers' experiences on how their respective universities support intrapreneurial behaviour and the missing or lacking factors that act as hindrances to intrapreneurship in their context. This section also sought to obtain the managers' views on the key factors supporting intrapreneurial behaviour.

Section 5: Environmental factors

This section covered the identification of the environmental factors, both internal and external organisational dimensions that are influential in supporting intrapreneurial behaviour within the context of the managers' respective universities.

Section 6: Impact of the internal and external organisational dimensions/factors on intrapreneurial behaviour

This section sought to explore the managers' experiences on the manner and extent to which the internal and external organisational dimensions or factors have impacted intrapreneurial behaviour within their respective universities.

Section 7: Major challenges faced in the support for intrapreneurial behaviour

This section covered the major challenges the universities experienced in supporting intrapreneurial behaviour. It explored the challenges faced in the intrapreneurial activities within the sampled universities and how they were handled.

Section 8: Intrapreneurial behaviour's contribution to university performance

This section sought the managers' descriptions of the contributions made by intrapreneurial behaviour to their respective universities' performance.

Section 9: Recommendations

This section sought the recommendations on intrapreneurial behaviour that the managers would give to key role-players within their respective university's context.

The questions in these sections were developed in a systematic and disciplined manner. They resulted from a balanced combination of curiosity, creativity and persistent work that enabled the researcher to obtain a holistic context of the intrapreneurial phenomenon in the universities (Neri de Souza *et al.*, 2016).

According to Johnson (2001:106), semi-structured interviewing involves gathering the participants' common-sense perceptions, explanations and understandings of some lived cultural experience to reveal what is usually hidden from ordinary view. As such, the researcher explored the complex, multi-faceted intrapreneurship phenomenon as it exists in the universities. This structure of the interview further provided the flexibility to make necessary adjustments to cover the research topic in ways that were most suited to the interviewees, allowing their responses to be fully explored (Legard *et al.*, 2003:141).

5.5.1 Interview schedule

An interview schedule was used in this study as a guide and to keep the researcher reminded of the scope of issues for discussion during the interviews (Doody & Noonan, 2013). The issues covered in the interview schedule comprised isolated concepts and themes from existing literature on the intrapreneurial phenomenon, generally and specifically regarding entrepreneurial universities. From these concepts and themes, the interview questions were carefully worded, focusing on the study's research question and aims (Dowling *et al.*, 2016). The interview schedule enabled the researcher to plan how best to phrase the questions to ensure open and free-flowing discussions with the research participants. As such, the researcher flexibly used the interview schedule as a guide to ensure that all the interviews covered the same themes (Doody & Noonan, 2013; Qu & Dumay, 2011:246). The researcher was, therefore, able to keep the needed consistency (Krauss *et al.*, 2009).

The details presented in the interview schedule (see Annexure C) include:

- The purpose of the study
- Brief details of the study
- The researcher's details and contacts
- The order of the questions
- The questions

5.6 PILOT STUDY

A pilot study enhances research quality, reliability and validity (Gudmundsdottir & Brock-Utne, 2010). It is, therefore, viewed as a crucial part of a research design (Kim, 2010). As such, the researcher had to conduct a pilot interview with two managers at Limkokwing University in Gaborone as part of the preparations for the full-scale study (Polit *et al.*, 2001:467; Van Teijlingen & Hundley, 2002:33-36). This helped the researcher to gain some practice in interviewing. A pilot study focuses on identifying the questions or other procedures that do not generate appropriate responses or rich data (Gudmundsdottir & Brock-Utne, 2010; Kim, 2010). It is a tool for pre-testing a research instrument (Baker 1994:182-183). The pilot study enabled the researcher to evaluate the interview questions and resolve potential practical issues in the implementation of the research procedures. Flaws or limitations in the interview design were identified, and the researcher was able to make necessary modifications before embarking on the study. This helped to strengthen the interview protocol (Castilelo-Montoya, 2016). Further, the piloting was a means of ensuring trustworthiness and utility (Poggenpoel & Myburgh, 2003) of the semi-structured interviews that were used to seek the insights of the managers who have experienced or are experiencing the intrapreneurial phenomenon in the sampled universities.

5.7 DATA COLLECTION AND IMPLEMENTATION PROCESS

Data collection is a process of gathering information that answers a study's research questions and is focused on ensuring accuracy and honesty are maintained (Aguinis, 2021). In order to ensure rich data analysis and the building of credible answers to

the research questions, the study population and the selection of a sample have to be conducted systematically (Aguinis, 2021). The data collection procedures that were followed in this study are discussed below.

5.7.1 Study population and sample

A population comprises the individuals, dyads, groups, organisations or entities that a researcher is interested in to seek understanding and to whom or which the study's findings may be generalised (Casteel & Bridier, 2021). This research study's principal group or population was all tertiary education institutions in Botswana. The total population size of these tertiary education institutions is 39, with 16 private institutions and 23 public institutions (HRDC, 2015:41). The HRDC report on tertiary education is the latest report available, with a list of the tertiary education institutions depicted in Table 5.1 below.

Table 5.1: Tertiary education institutions in Botswana

ACRONYM	FULL NAME
ABMUC	ABM University College
ABC	Assembly Bible College
BIUC	Ba Isago University College
BC	Boitekanelo College
BTI	Boitekanelo Training Institute
BBTI	Bosa Bosele Training Institute
BU	Botho University
ISB	Imperial School of Business
FMS	Flying Mission School
GAE	Gaborone Academy of Education
GIPS	Gaborone Institute of Professional Studies
GUCL	Gaborone Universal College of Law

KCTE	Kgolagano College of Theological Education
LUCT	Limkokwing University of Creative Technology
MANCOSA	Management College of Southern Africa
NEC	New Era College of Arts & Technology
FCE	Francistown College of Education
MCE	Molepolole College of Education
SCE	Serowe College of Education
TKCE	Tlokweng College of Education
TCE	Tonota College of Education
BLSN	Bamalete Lutheran School of Nursing
IHSF	Francistown Institute of Health Science
IHSG	Gaborone Institute of Health Sciences
IHSL	Lobatse Institute of Health Sciences
IHSM	Molepolole Institute of Health Sciences
IHSS	Serowe Institute of Health Sciences
KSDASN	Kanye Seventh Day Adventist School of Nursing
FCTVE	Francistown College of Technical Vocational Education
GTC	Gaborone Technical College
BCET	Botswana College of Engineering and Technology
BWTI	Botswana Wildlife Training Institute
IDM	Institute Development Management
DCSC	Defence Command Staff College
BIUST	Botswana International University of Science and Technology
UB	University of Botswana
BAC	Botswana Accountancy College

BUAN	Botswana University of Agriculture and Natural Resources
BOCODOL	Botswana College of Distance and Open Learning

Source: Adapted and modified from HRDC Report (2015:41).

The target population for this study was five universities that were selected from the population, and these are The University of Botswana (UB), The Botswana College of Distance and Open Learning (BOCODOL), The Botswana Accountancy College (BAC), Limkokwing University of Creative Technology (LUCT) and Baisago University College (BIUC). These universities were sampled as part of the target population which met the study criteria. These universities are the largest among Botswana's tertiary education institutions, and they are all located in Gaborone, making them accessible to the researcher. The interview participants in these universities comprised those in management, both senior managers and middle managers.

5.7.2. SAMPLING

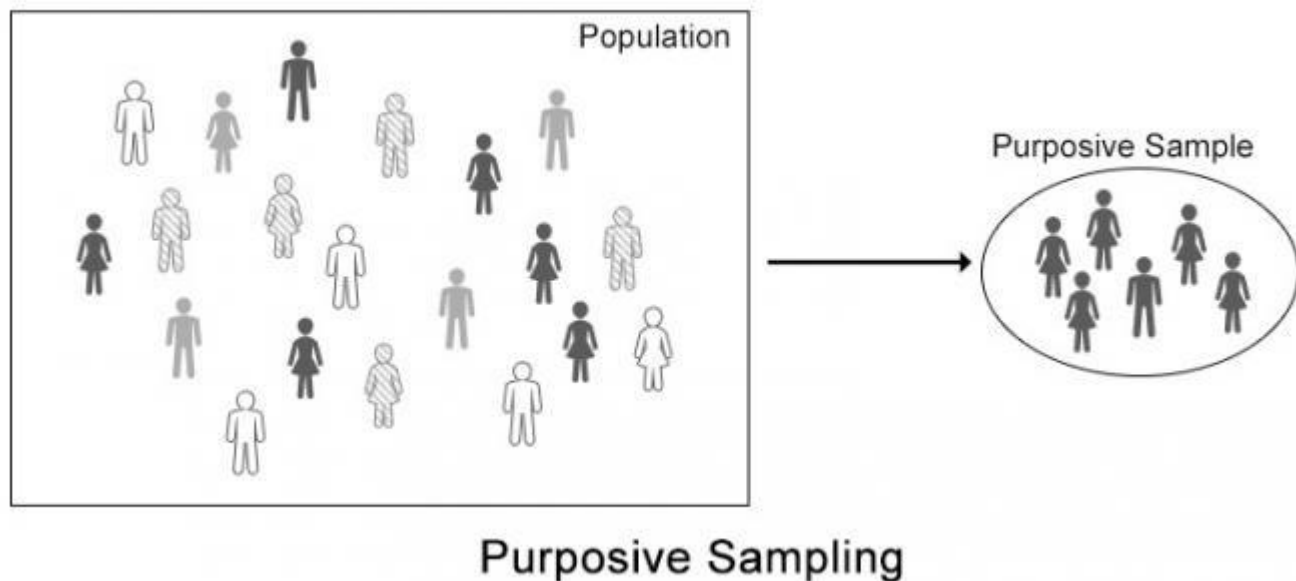
It was impossible to include all the tertiary education institutions listed above in the study due to the limited time and resources. As such, the researcher had to carefully evaluate the cases for more insightful results, thereby reducing the number to the five universities that made the sample (Taherdoost, 2016; Shaheen *et al.*, 2019). The researcher judged that the five sampled large universities were relevant to the study's objectives, providing information-rich sources that would provide in-depth analysis (Shaheen *et al.*, 2019). This position was based on Gentles *et al.* (2015), who broadly defined sampling in qualitative research as "the selection of specific data sources from which data are collected to address the research objectives".

Purposive sampling was used to draw the sample. This non-probability sampling method involves a number of strategic choices on where, when and from whom data is collected (Creswell, 2014:4-8). It is done per a study's objectives and research questions, indicating a form of purpose (Creswell, 2014:4-8). As such, purposive sampling enables the selection of information-rich cases who are interviewees with

the knowledge and verbal eloquence for in-depth study (Patton, 2015:264 -265). By adopting purposive sampling, the researcher anticipated that the selected participants would possess a richness and relevance of information that would answer the study's research questions (Yin, 2011:311). The information-rich cases enabled the researcher to extensively explore the nature of the intrapreneurial phenomenon as it exists in their tertiary education institutions, thereby yielding insights and an in-depth understanding of the phenomenon (Patton, 2015:264-265; Shaheen *et al.*, 2016).

As presented in Figure 5.3, the first step in implementing purposive sampling was to conduct observational visits to the sampled universities before selecting participants. Purposeful sampling demands access to a key informant who enables connection to other sample members (Shaheen *et al.*, 2019). The visits, therefore, assisted in identifying and selecting a sample that was suitable to the study's purpose and objectives. The researcher considered categories such as functional role, experience and understanding of the university's ideology in relation to intrapreneurship as the starting points for narrowing down the selection of participants (Patton, 1990). Therefore, this initial stage involved selecting participants with broad and general knowledge of the intrapreneurial phenomena. As the study progressed, descriptions were expanded, and three participants were initially sought from each university. Maximum variation and homogeneous sampling were employed at this stage to identify individuals who presented diverse attitudes and perspectives on the intrapreneurship phenomena in the sampled tertiary education institutions. This was important for the development of theory that would reflect much of the relevant behaviour (Aurini *et al.*, 2016:56). And finally, the two cases selected from each university verified the findings to enable understanding of the breadth of the intrapreneurial phenomena in academia (Shaheen *et al.*, 2019).

Figure 5.3: Purposive sampling



Source: Dudovskiy (2016)

The research was conducted in Gaborone due to the limited timeframe and available resources. Gaborone is Botswana's biggest city, and the majority of the large tertiary education institutions are located in this city.

5.7.3 Data gathering procedure

The interviews were conducted at each of the five sampled universities until data saturation was attained. Data saturation is attained when issues in the data collected begin to be repeated such that further data collection becomes redundant (O'Reilly & Parker, 2013; Nelson, 2017).

Appointments for interviews were arranged, and an interview schedule was drawn and adhered to for each university. Further, confidentiality matters were clearly explained, and consent forms were issued. Only participants who agreed to complete the consent forms were interviewed. Each interview lasted between 60 to 90 minutes. Most of the interviews were conducted online due to the COVID-19 social Distancing regulations, while a few were held in the managers' offices at each of the respective universities, depending on privacy. The interviews were conducted

in a friendly and open atmosphere to provide the interviewees with the freedom to express their lived intrapreneurial experiences in their respective universities.

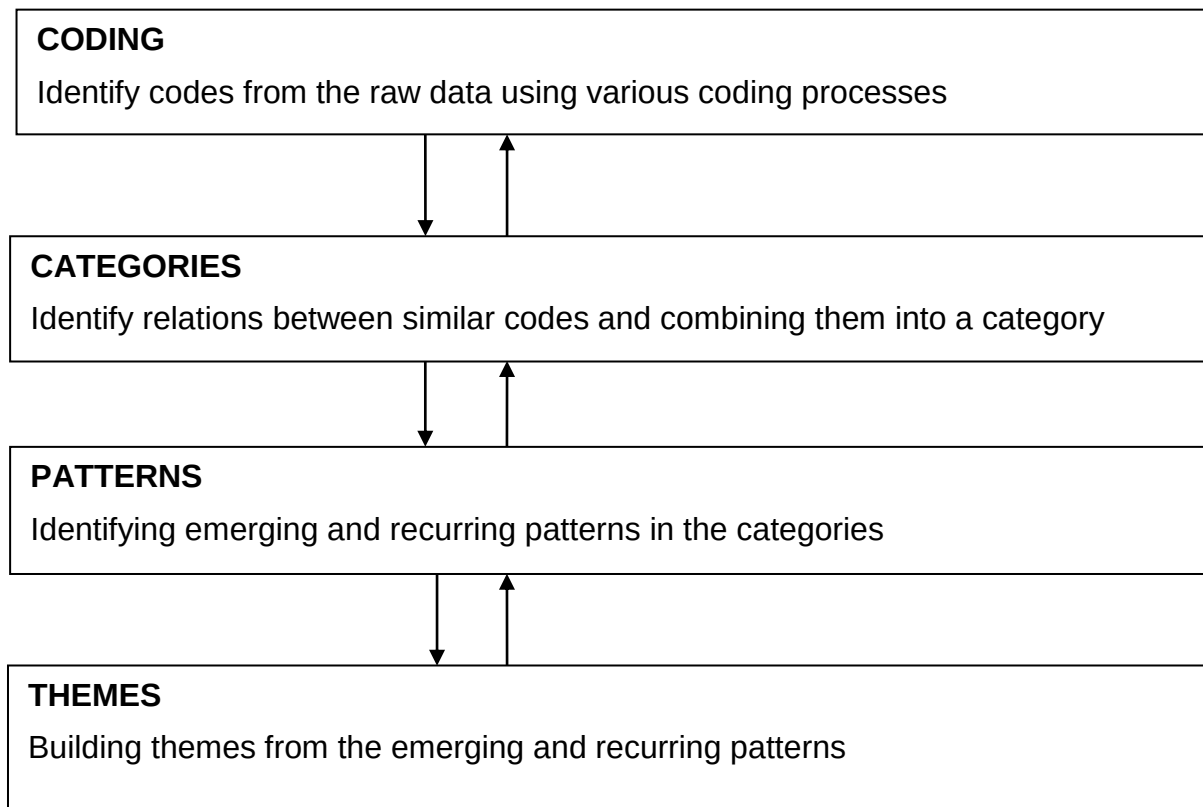
The interviews were electronically audio recorded to avoid depending purely on the researcher's memory and notes. The recordings enabled the researcher to focus on the conversation and to take notes that were not directly related to the content of the interview, such as the environment, surrounding circumstances, facial expressions and general body language that enhanced the coding and interpretation phase (Ciesielsk & Jemielniak, 2018). The arrangement of the questions, on the other hand, generated considerable and multi-dimensional data (Galletta, 2013:24). This generated a rich flow of data.

The semi-structured interview was segmented to enable the respondents to be more engaged with the interview segments, each being more progressively structured. The broad and general interview questions enabled the participants to construct the meaning of the intrapreneurship phenomenon in their respective universities while the researcher was able to probe to obtain comprehensive information on the participants' feelings, perceptions and opinions. The process involved emerging questions and procedures during the research study for the researcher to attain a high response rate (Galletta, 2013:24).

5.8 DATA PROCESSING AND ANALYSIS

The data analysis was generally built from codes to themes as the researcher made interpretations of the meaning of the data. This approach enabled the researcher to be inductive in style, focusing on individual meanings and matching them against opposing meanings in order to derive an insight into patterns and themes (Yin, 2013:12). The building of explanations brought out findings on the importance of the complexity of the situation facing Botswana's tertiary education institutions with regards to supporting intrapreneurial behaviour. Figure 5.4 on the following page illustrates the basic elements of this study's qualitative data analysis process.

Figure 5.4: Basic elements of qualitative data analysis



Source: Researcher's design

Further, the analysis of the collected data involved transcribing the interviews using a transcription software called Otranscribe, which enabled a cyclical and iterative approach to the data analysis. Table 5.2 below presents the detailed steps followed in the processing and analysis of the collected interview data.

Table 5.2: Detailed steps followed in the processing and analysis of the interview data

STEPS	DETAILS OF THE STEPS
Organising of the data	The researcher started the analysis process by going back to look at the interview protocol in order to make note of the questions and themes/topics that the interviewees were meant to answer.

	• There after, the researcher listened to the recorded interviews and transcribed them to paper verbatim using Otranscribe, a transcription software. • The researcher transcribed the ten interviews from recorded data into textual data by manually typing them into electronic form in Microsoft Word. • Each interview was stored under its own file name. The total number of typed interview pages came to 190. (See a sample of the transcribed interviews in the Annexure D). • In the transcription, the researcher also included all the rich points (new or unexpected directions) that the participants raised as well as the ideas on the field notes. • The researcher then read and re-read the written transcripts to obtain a general idea of what the participants shared and what the results looked like. This enabled the researcher to employ reflexive thinking as she immersed herself in the details, building a good sense of the data. The researcher also made notes or memos in the margins of the transcriptions.
Finding and organising ideas and concepts	• The researcher made a list of the words, ideas and phrases the participants frequently used. • The researcher also noted the meanings/implications alongside the words, ideas and phrases as clarified by the interviewees. This was done to also identify the participants' attitudes toward the intrapreneurial phenomenon in their universities through how they expressed themselves.

Generating the codes and categories	• After re-reading the transcripts, the researcher organised the responses, using the words, ideas and phrases frequently used by the participants (informant-centric terms) into a list of codes and categories. • Holding the research questions in mind, the researcher examined the participants' responses to all the interview questions to identify the differences and similarities among them and to perform the second cycle of identifying codes and categories. • The researcher compiled higher-level codes and categories from the initial code and category list in order to reduce the number of codes and categories. This was achieved by drawing on some of the existing theories and concepts on the intrapreneurship phenomenon (researcher-centric). • The results of the coding were confirmed with the study promoter. • While coding, the researcher built an analytical memo that contained reflections on the codes, the intrapreneurship phenomenon in the sampled universities, the participants and their interrelations. • The codes in all the transcripts were then analysed using the manual analysis approach of qualitative data. • The manual analysis process involved the use of sticky notes and colour-coding for the codes under the different themes. This enabled the creation of matrixes and the coding "bible" using Excel spreadsheets from which concepts,

	patterns and themes were generated. • The researcher was also able to identify categories and sub-categories that expressed the relationships between the codes. • The researcher was thus able to condense the data and develop final overarching concepts, patterns and themes. • Excel 2016® was used to compile and track the themes. • The compilation was shared with the promoter for peer-reviewing and discussion purposes. • The contributions from the promoter were used to review and refine the identified categories and sub-categories.
Describing and Identifying over-arching themes in the data	• The researcher arranged the different categories and sub-categories into the main over-arching themes that emerged from the codes and established the relationships between the themes. • The researcher was able to establish lines of arguments to express the overarching themes and patterns. • The relationship between the codes was determined, which facilitated the finding of patterns and relationships between the codes and the data extracts as well as the whole data set. • The researcher then refined, defined and named the themes.
Representation of findings	• Network diagrams, using cut-outs of hand-written codes, categories, sub-categories and themes, were manually designed, photographed and systematised to present the

	themes, categories, sub-categories and codes from the participants' important responses. • The writing of the study's report was based on the network diagrams.
Interpretation of data	• This is the terminal phase of qualitative inquiry, which involves the writing of the report. • This phase involved the assessment, analysis, interpretation and discussion of the empirical evidence that was collected. • Thick descriptions of the participants' different points of view were presented in sufficient detail and depth. • Pertinent words and comments of the participants were quoted verbatim to reveal the meanings as expressed in the participants' own words rather than the researcher's words. • Clear conclusions and recommendations were drawn.

Source: Adopted and modified from Nyakudwa (2020:151).

To ensure accuracy, the transcription comprised all interview statements in their original wording, together with pauses, hesitations, laughter and any other non-verbal cues. This was followed by the coding and the identification of ideas. Coding enabled a focus on empirical evidence using an anthropologic frame of mind. This enabled the researcher to identify new phenomena within well-known and seemingly trivial behaviours and descriptions from the respondents (Bazeley & Jackson, 2013:2-4). Through coding, the researcher could name individual fragments of the collected data and assign observations to specific categories as well as theoretical analysis of the created codes. Coding reflects the narratives obtained from the respondents, bringing out specific categories in the collected data that formed the basis for the generation of theory (Ciesielsk & Jemielniak, 2018:183-184).

Through coding, the researcher was further able to conduct constant comparisons of the different aspects of the collected data. This enabled the researcher to generate interesting codes that resulted in the formulation of compelling and captivating theories. The meaning of the codes was determined by the context of the comparisons, which involved juxtaposing statements that fell under similar topics and, in this way, condensing the data (Miles *et al.*, 2014:12). Codes and categories, as well as their specific meanings, were therefore an outcome of comparing of statements. The developed set of codes was used to organise and interpret the empirical material as well as to identify the most important categories that were used to formulate a theory on intrapreneurship in Botswana's large tertiary education institutions (Ciesielsk & Jemielniak, 2018:191-192).

Non-interview data was also included in the data analysis. This data included policy, processes and procedure documents on areas of intrapreneurship in each sampled university. This data was used to triangulate and support the coding. The data from the interviews and from the documents, therefore, made the final analysis and the results obtained were used to draw conclusions (Miles *et al.*, 2014:13).

The researcher ensured that the process was systematically organised for the results of the study to be aligned with the context of the data. Every step in the process was verified, edited and archived for audit and verification purposes. Although the researcher had control over the interview process, flexibility was allowed to obtain rich, detailed data (Barrett & Twycross, 2018:63-64).

5.9 RIGUOR

This study paid due diligence to the requirements for demonstrating rigour. According to Roller and Lavrakas (2015), the goal of the qualitative design research process is to minimise research bias and researcher-created variability in order to bring about results that are a reasonably accurate account of reality. This is what leads to the trustworthiness of qualitative research. Trustworthiness is considered the criterion for evaluating qualitative studies in terms of rigour (Maher *et al.*, 2018). According to Gunawan (2015:10), a research study report is trustworthy when its readers judge it as such. Further, the trustworthiness of qualitative research is

derived from the scope and data gathering. Scope refers to how well the study finally represents the population being studied (Roller & Lavrakas, 2015). To attain the trustworthiness, under scope, the researcher had to define the target population, choose a sample design and decide on the sample size to be used.

Trustworthiness is divided into four tests or criteria that qualitative research passes through, namely, credibility (internal validity), dependability (reliability), transferability (external validity) and confirmability (objectivity) (Wahyuni, 2012:77; Gunawan, 2015:10).

5.9.1 Credibility

According to Lincoln and Guba (1985:317), credibility is attained by ensuring that participants in a research study are accurately identified and described to establish the truthfulness and accuracy of the research findings. Credibility, therefore, has to do with how the study findings coincide with reality (Merriam, 1998). To achieve credibility in this study, strategies such as triangulation, saturation, self-description/self-reflexivity, iterative questioning, member checking, prolonged engagement, rapport building, peer debriefing, thick descriptions and inclusive coding were used (Sandelowski, 2015; Kammerlander *et al.*, 2015; Thomas, 2017; Forero *et al.*, 2018:2-3).

Methodological triangulation was used in the form of two varied data collection procedures, which confirmed the findings (Bekhet & Zauszniewski, 2012:40-43). Data was collected using semi-structured interviews with managers and academic staff in the five sampled universities. The documents on policies, processes and procedures pertaining to intrapreneurship in these universities were also analysed. Further, all themes were coded iteratively instead of only reducing them to align with predetermined criteria and reflexivity (Forero *et al.*, 2018:2-3).

Accurate and accepted data collection procedures were followed to ensure credibility (Fusch & Ness, 2015:1408; Roller & Lavrakas, 2015; Amankwaa, 2016). Further, the researcher developed strategies for gaining access and cooperation from the sample for prolonged engagement and rapport building. These strategies were used in

ethically justifiable ways (Iphofen & Tolich, 2018). Further, the researcher conducted a personal evaluation as well as an evaluation of the participants as sources of biases and inconsistency as part of self-description/self-reflectivity. Peer debriefing involves a number of activities, such as the researcher discussing the research methodology, data analysis and interpretations continuously throughout the research process with peers who are skilled qualitative researchers and with the study supervisor. Further, the study's preliminary and final research findings were presented at conferences and to other interested groups (Amankwaa, 2016; Connelly, 2016; Levitt *et al.*, 2018).

5.9.2 Dependability

Dependability, on the other hand, refers to the sturdiness of the collected data over time such that the study could be replicated under different conditions, yet the findings remain consistent (Wahyuni, 2012). Dependability was attained through member checking and inquiry audits. Member checking involves checking the study's findings and conclusions by the study's participants. On the other hand, the inquiry audit involved the review and examination of the research process and data analysis by independent people to ensure the consistency and replicability of the findings (Gunawan, 2015:10-11).

5.9.3 Transferability

According to Burchett *et al.* (2013:418), transferability refers to a situation in which a study's findings in one setting are applicable in another setting. Transferability entails the possibility for extrapolation, and it depends on the understanding that findings can be applied to other settings, contexts, populations or phenomena (Vaismoradi *et al.*, 2016:100). Strategies that were used to enhance transferability include data saturation, purposeful sampling, audit trail and thick descriptions. The researcher considered data saturation, which happens when new themes can no longer be derived. Data saturation is evident when the data collected is rich in quality and quantity (Fusch & Ness, 2015:1408). Purposive sampling was also used to enable the researcher to attain data saturation. The audit trail was done through a detailed description of sources, data collection techniques, data analysis, interpretations

made, decisions taken and possible influences. The thick descriptions provided rich and sufficient details about settings, sample characteristics, data collection and analysis methods (Forero *et al.*, 2018:2-3).

5.9.4 Confirmability

Finally, confirmability refers to the objectivity or the degree of neutrality in the research study's findings, that is, the possibility for conformity between two or more autonomous people about the data's accuracy, relevance or meaning (Polit & Beck, 2012). Triangulation, self-description/self-reflexivity and audit trail are the strategies that enhanced the confirmability of this study (Gunawan, 2015:10-11). The researcher kept a journal of reflective thoughts, observations and related literature reviewed during the research process. The journal also helped in reducing the researcher's biasness. The researcher further wrote clearly during each interview, and the collected data was noted accurately to avoid bias. To achieve this, the research protocol was followed (Forero *et al.*, 2018:2-3).

5.9.5 Data adequacy

Data adequacy in qualitative research is achieved by gathering data from a few participants whose perceptions, experiences and settings are studied intensely to understand how they experience the world and why they act the way they do (Baker & Edwards, 2012). In answering these questions, this study collected rich and detailed data, enabling the researcher to interpret the meaning and context of the intrapreneurship phenomenon in the sampled universities. Qualitative research requires data richness as a marker of data adequacy (Popay *et al.*, 1998).

The sample size for this study was ten, which enabled the carrying out of a thorough, deep qualitative analysis and the attainment of theoretical saturation (Sandelowski, 1995). This was made possible by selecting study participants who possessed a richness and relevance of information on the support for intrapreneurial behaviour in the sampled universities. As such, the researcher made broad claims about the intrapreneurship phenomenon as it exists in the selected tertiary institutions.

5.9.6. Adequacy of interpretation

Trustworthiness was further achieved in this study by adequately interpreting the data. The data interpretation included the field research notes at the time of the interviewing and the text transcribed from the audiotapes. The researcher iteratively read the field notes and the transcripts to highlight the categories, concepts and patterns as well as the relationships among them (Maxwell, 1996:78-81). The researcher got deeply engrossed in the data throughout this process to acquire an in-depth understanding of the data and provide thick descriptions in the interpretation (Koch, 1994.). Further, the participants' views were accurately represented by ensuring the interpretations were based on the raw data (Tobin & Begley, 2004). Member checking was also done to test the research participants' interpretations (Lincoln & Guba, 1985).

5.10 ETHICAL CONSIDERATIONS

The researcher made a number of ethical considerations in this study, as these are mandatory in designing a research study (Neuman, 2014:145). These included attaining acceptable levels of integrity and quality by providing all the details on the nature of the research, such as any potential risks and benefits to uphold the human dignity of the participants (Du-Plooy Cilliers *et al.*, 2014:262). The researcher prepared contingencies to maximise the benefits, reduce the study's risks and manage incidents. The study was conducted independently and impartially to ensure integrity and quality. The selection of participants was done in an equitable manner, and informed consent was acquired from them to ensure voluntary participation (Neuman, 2014). The participants' confidentiality and anonymity were upheld, and they were made aware of their right to ask questions. Pseudo-names were assigned to the participants. Further, participants were informed that they could withdraw from the study at any time (Huang *et al.*, 2016). For the study to be conducted, the North-West University Ethics Committee obtained a research clearance certificate.

The researcher made the study findings available to all the sampled universities as a framework for supporting intrapreneurial behaviour in these tertiary education

institutions. Further, the collected data was stored, utilised and disposed of according to the North-West University legal requirements.

5.13 PRESENTATION OF THE RESULTS

The presentation of the results in the final report involved a detailed description of what the researcher discovered on the support of intrapreneurial behaviour and the consequent organisational performance in the sampled tertiary education institutions. The researcher classified the information by discussing the emerging themes and provided an interpretation of the findings with reference to the theoretical perspectives in the reviewed literature. Through the use of the descriptive narrative style, the context and events of the intrapreneurial phenomenon in tertiary education institutions were clearly and fully conveyed. The participants' knowledge and experience in their institutions were also clearly and fully presented through the use of direct quotes of their words and views, presented in their own voices. The researcher interpreted the observed events to make them meaningful in the context and then extensively reported them by drawing on varied perspectives (Leininger, 1994:95-115; Drisko, 2005:589-593).

5.14 SUMMARY

This chapter discusses the methodology employed to achieve the study's aim presented in the literature review and empirical study objectives. The discussion in this chapter, therefore, covers the following areas as employed in the study's methodology: the interpretivism research philosophy, the inductive research approach, the qualitative research design and strategy, the semi-structured research instrument, the pilot study, the data collection and implementation process; data processing and analysis; rigour; ethical considerations, limitations of the study; contributions of the study and the presentation of results. The following chapter will cover the data analysis, presentation and discussion of the research findings with literature integration.

CHAPTER SIX: DISCUSSION AND INTERPRETATIONS OF THE FINDINGS

6.1 INTRODUCTION

Qualitative research aims at gaining an in-depth understanding of social phenomena in their natural surroundings (Ugwu & Eze, 2023). It depends on the first-hand experiences of people as meaning-making agents in their everyday lives and addresses the why rather than what of social phenomena (Christ, 2014). Qualitative research helps to more extensively understand people's beliefs, experiences, attitudes, behaviour and interactions (Anas, 2022). As outlined in Chapter 1, the primary objective of this study is to propose a framework to support intrapreneurial behaviour for improved performance in Botswana's large tertiary education institutions. The framework will be proposed based on exploring the nature of the support for intrapreneurial behaviour and the organisational performance outcome among these institutions. The secondary objectives will thus be met by analysing the data collected in the empirical study.

Chapters 2, 3 and 4 addressed the literature review objectives of the study by providing an overview of the literature. Chapter 5 presented the study's research methodology, conceptual framework, research design and the philosophical assumptions supporting this study. The research methods and the rigour adopted to achieve the objectives of this study are also presented in Chapter 5. This is Chapter 6, in which the actual research process was conducted and, as such, presents the lived experiences of the research participants "in their voices". It answers the study's research questions from the perspectives of these respondents.

This chapter discusses the key findings of the empirical data collection. The data collection comprised qualitative interviews with ten academic managers in the five sampled tertiary education institutions in Gaborone, Botswana, using a semi-structured interview guide. The key findings are presented in four parts. The first part presents the interview process, the second part presents the participants' demographic data, and the third part covers the structure and overview of themes, providing the themes and their respective codes. The fourth part comprehensively

presents the nine themes of the study based on the lived experiences of the interviewees. Additionally, the empirical data is elaborated through direct quotes from the interviewees. However, pseudonyms will be used to keep the participants' identities anonymous.

The discussion and interpretation of the findings addresses the following qualitative empirical study objectives:

- Obtain insight into the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions.
- Explore the interpretations of the importance of support for intrapreneurial behaviour in Botswana's large tertiary education organisations.
- Explore how the internal and external environment dimensions that influence intrapreneurial behaviour are promoted in Botswana's large tertiary education organisations.
- Explore intrapreneurial behaviour's contribution to the improvements in organisational performance.

These secondary objectives are enabling the achievement of the study's primary objective.

6.2 INTERVIEW PROCESS FOR MANAGERS

This section presents the interview process for the ten academic managers interviewed across the five sampled universities in Gaborone, Botswana. The managers are comprised of those in both middle and lower levels of management. These were assigned to participate in the interviews by the university's senior-level management after granting the research permits at each respective university.

The ten managers were sequentially code-named Participant #1 to Participant #10 in the interviews. The code names ensure that the identity of the interviewees is kept anonymous, in line with the study's ethical considerations. As such, the discussion of the findings is in the order of these code names.

The Interviews were held between 24 May 2022 and 28 October 2022. The availability of the participants made the data collection process longer than expected, as access to the academic managers was difficult due to their busy work schedules. However, once the appointments were secured, some interviews were done online using Google Meet and WhatsApp calls, while others were done in person in private settings such as offices and lecture rooms. The individuals who opted for online interviews were either extremely busy or had to abide by the Covid regulations in their respective universities. Every interview was held between the interviewer and one interviewee at a time. Administering the interviews in this manner was ideal as it allowed the participants to express their lived intrapreneurial experiences in their respective universities.

All participants willingly permitted the interviewer to electronically record the interviews after being requested in writing and verbally. This enabled the interviewer to take notes and focus on the conversation, particularly the nonverbal communication. The participants were also informed of their right to terminate the interview at any time. Fortunately, all the interviews were conducted without any termination.

Further, an open and friendly atmosphere was maintained throughout all the interviews, which enhanced the participants' engagement. Most of them expressed how the interview was more like a "lovely chat", so much so that they did not see time pass. They appreciated that the interview style was relaxing and that it got them to seriously reflect on the Academic Intrapreneur and the Entrepreneurial University concepts, which they had not considered as possible research topics. All inquired about the research's future and on availing the research findings to them either through a document or a workshop that can be organised in the universities. This interviewing procedure aligns with the study's data collection method and philosophical position of promoting a semi-structured, therefore, a more flexible approach.

The interviews were scheduled to last between 60 and 90 minutes. Some interviews were held within this time duration. However, others exceeded the maximum allocated time because the atmosphere in which the interviews were conducted

encouraged the interviewees to extensively discuss issues that affect the support of intrapreneurial behaviour in their respective universities. The interview process enabled the researcher to gain a wide range of rich data and knowledge on the research topic and to administer the interview structure more efficiently. The experience provided a lot of personal and professional growth.

Manual qualitative analysis was used for the transcribing, coding and analysis of the collected data, as stated in Chapter 5. The manual qualitative analysis gave the researcher full control of the whole analysis process and a comprehensive understanding of the data. This was achieved by repeatedly reading the transcribed data for the researcher to become more familiar with the data. This also enabled the identification of the codes and patterns in the data. Nine themes were identified, which will be discussed in this chapter.

6.3 THE RESEARCH PARTICIPANTS' DEMOGRAPHICS

It is vitally important to understand the managers' demographics because their lived experiences form the basis of this study. The gender composition consisted of four women and six men. According to Table 6.1 on the next page, 80% of the participants are married, 10% are single, and the other 10% are divorced. Sixty per cent are male, while 40% are female. Thirty per cent of the participants are in their 30s, 10% are in their 40s, 40% are in their 50s, 10% are in their 60s, and another 10% are in their 70s. Most of the participants, at 60%, are above 50 years old, while those below 50, in their 30s and 40s, are in the minority at 40%. In addition, 80% of the participants have a PhD qualification, while 20% have a Master's degree. The education level of the participants is therefore high. It also suffices to note that all the male participants are married and possess a PhD qualification. With regards to the length of work experience in an entrepreneurial university, 10% have no experience, 30% have below ten years of experience (three years, six years and eight years), 40% have between 10 and 20 years of experience (10 years, 15 years, 15 years and 17 years) and the other 20% have above 20 years of experience (25 years and 26 years).

Table 6.1: Interviewee demographics

Participant	Marital status	Gender	Age	Education	Length of work experience
Participant #1	Married	Male	55 years	PhD	25 years
Participant #2	Married	Male	39 years	PhD	15 years
Participant #3	Married	Male	54 years	PhD	0
Participant #4	Married	Male	70 years	PhD	26 years
Participant #5	Married	Female	58 years	PhD	17 years
Participant #6	Single	Female	35 years	Master's	8 years
Participant #7	Married	Female	31 years	Master's	6 years
Participant #8	Married	Male	58 years	PhD	10 years
Participant #9	Divorced	Female	60 years	PhD	3 years
Participant #10	Married	Male	42 years	PhD	15 years

Source: Compiled by the researcher

The demographic table did not indicate how these details influence the intrapreneurial behaviour of the participants; however, since the discussion of the findings is according to the code names of the participants, a relationship between each participant's demographic data and their interpretations of the importance of support for intrapreneurial behaviour in their universities can be readily established by combining the information they provided through their lived experiences under each theme.

The participants were also asked to provide information on their universities' backgrounds and details. Table 6.2 on the next page shows that 20% of the participants said their university was founded in 1996, 30% in 1997, 30% in 2002, 10% in 2009 and another 10% in 2017. This provided a diversity that enriched the collected data. All the sampled universities are located in Gaborone, Botswana, due to their being among the largest universities in Botswana and their proximity to the researcher. Further, 10% of the participants said that their university has not been entrepreneurial, while 20% said that they did not know the number of years that their university has been entrepreneurial. Thirty per cent said that their university has been entrepreneurial for five years, 10% said for 13 years, 20% said for 15 years, and another 10% said for 23 years. With regards to the number of employees in the universities, 10% expressed uncertainty, 10% had no idea, 30% said that their

university had more than 200 employees, 10% said plus or minus 231 employees, 20% said more than 250 employees, 10% said more than 300 employees and 10% said that their university has plus or minus 450 employees. These figures on the number of employees help to reflect on the financial performance of these universities and the outcomes of their intrapreneurial initiatives.

Table 6.2: Participants' university background and details

Participant	Year university was founded	Location of University	Years of the university being entrepreneurial	Number of employees in the university
Participant #1	1997	Gaborone, Botswana	15 years	300+
Participant #2	1997	Gaborone, Botswana	15 years	200+
Participant #3	1997	Gaborone, Botswana	0	+/-450
Participant #4	2009	Gaborone, Botswana	13 years	Not sure
Participant #5	2017	Gaborone, Botswana	5 years	+200
Participant #6	2002	Gaborone, Botswana	No knowledge	+250
Participant #7	2002	Gaborone, Botswana	5 years	+250
Participant #8	1996	Gaborone, Botswana	23 years	No idea
Participant #9	1996	Gaborone, Botswana	No knowledge	+200
Participant #10	2002	Gaborone, Botswana	5 years	+/-231

Source: Compiled by the researcher

6.4 STRUCTURE AND OVERVIEW OF THEMES

After transcribing the interview recordings, the collected data was reviewed, and 18 themes were initially extracted from between and within transcripts. After reviewing the empirical objectives and the interview questions, the themes were combined and reduced to nine critical themes. At this point, it was discovered that some of the

themes' findings would have to be presented in different parts in view of the nature of the responses to the main questions and their follow-up probes in the interview guide. Each theme was assigned a different colour:

- Theme 1: Entrepreneurial University - red
- Theme 2: Intrapreneurial academic - light green
- Theme 3: Support by the university/enablers – green
- Theme 4: Hindrances to intrapreneurship - dark red
- Theme 5: Influence of the environment/enablers - light blue
- Theme 6: Impact of the environment - orange
- Theme 7: Challenges in the support for intrapreneurial behaviour - gold, accent 4
- Theme 8: Contributions by intrapreneurial behaviour on university performance - purple
- Theme 9: Recommendations - pink

The transcribed data was further analysed, and 855 codes were identified, as shown in Table 6.3 below. The codes were grouped under the nine main themes. The entrepreneurial university theme had the highest codes, indicating that the participants, who in this case are the managers, hold many views or perceptions about the entrepreneurial university concept. They also extensively shared how entrepreneurial university aspects manifest in their respective universities as they expressed their experiences. The lowest codes were on the hindrances to intrapreneurship and the impact of the environmental factors, both internal and external, on intrapreneurial behaviour in tertiary educational institutions.

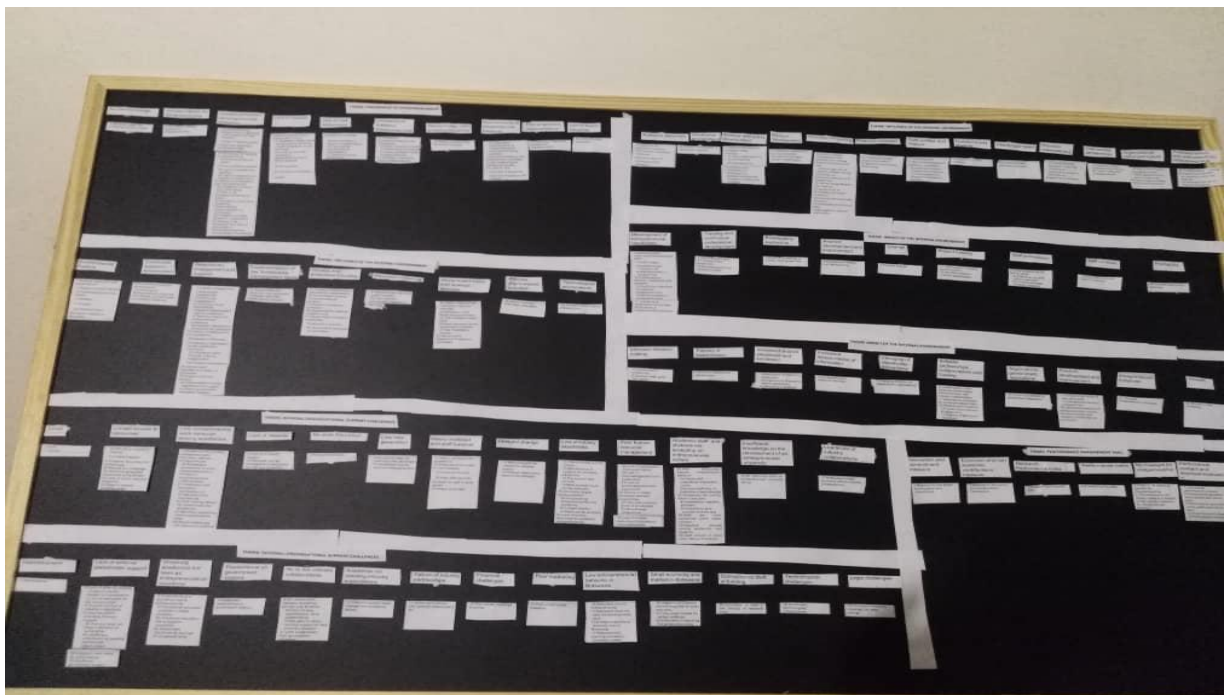
Table 6.3: Total codes per participant for different themes

Participants	Entrepreneurial university	Intrapreneurial academic	Support by university	Hindrances to intrapreneurship	Influence of environment	Impact of environment	Challenges	Contributions	Recommendations	Total
#1	15	6	9	1	8	4	6	6	8	63
#2	17	15	10	9	5	3	2	12	10	83
#3	7	4	10	7	11	4	13	15	11	82
#4	8	13	8	1	5	6	3	8	9	61
#5	11	13	8	3	8	3	6	4	10	66
#6	12	16	5	1	3	5	7	9	9	67
#7	10	10	10	7	14	4	16	16	6	93
#8	15	17	16	1	10	6	10	10	12	97
#9	16	15	7	11	7	2	16	9	22	105
#10	17	26	16	3	16	7	12	17	24	138
Total	128	135	99	44	87	44	91	106	121	855

Source: Compiled by the researcher

The themes and their respective codes were typed and printed out. They were then cut into small individual pieces of paper and pasted on blackboards that were put to lean against the wall. This was done to outline all nine themes and their various codes, as shown in Figure 6.1 below. The themes were subdivided in line with the interview questions, while the codes were analysed and regrouped into different sub-themes on the blackboards. After this, different network diagrams were developed to depict the linkages between the main themes, categories, sub-themes and codes. All the 855 codes were put on the wall, and they were further examined to determine their best fit in the sub-themes. In the process, it was discovered that participants were duplicating some codes. When developing the network diagrams, the number of frequencies for the duplicated codes was indicated as dots on each code paper.

Figure 6.1: Photographic image of themes and codes on blackboard



Source: Compiled by the researcher

The rest of this chapter discusses the empirical findings, in themes, through the views and perceptions of the low-level and middle-level managers in the sampled tertiary educational institutions who participated in the study. The literature will be integrated into this discussion on the empirical findings to answer the study's eight research questions. The eight research questions this study seeks to answer are as follows:

1. As someone in a managerial position, what are your views and/or perceptions about the entrepreneurial university?

Probe 1: Considering these perceptions shared, how and to what extent do these relate to this university? (Can you please share some examples).

Probe 2: How do these aspects manifest within this university?

2. Reflecting on the academic as an employee. How would you, as a manager, describe the concept or idea of an “intrapreneurial academic” within the context of this university?

Probe 1: How would you describe the behavioural traits of a high-performing intrapreneurial academic?

Probe 2: How would you describe the behavioural traits of a low-performing intrapreneurial academic?

3. In your experience, how does the university support intrapreneurial behaviour?

Probe 1: Which factors would you highlight as key in supporting intrapreneurial behaviour?

Probe 2: Which factors would you identify as lacking or missing within your current context?

4. What environmental factors (internal and external organisational dimensions) can you identify as influential in supporting intrapreneurial behaviour within the context of this university?

5. Considering the factors mentioned (internal and external organisational dimensions), in your experience, can you please describe how and to what extent these factors impact the intrapreneurial behaviour within this university?

6. What do you consider to be the major (internal and external organisational support) challenges experienced by the university in the support for intrapreneurial behaviour?

7. Considering everything we have discussed thus far, can you please describe the contributions made by intrapreneurial behaviour to the university's performance?

8. If given the opportunity and platform, what recommendations on intrapreneurial behaviour will you give to key role-players within the university context?

Table 6.4 below presents the relationship between the research questions and the themes discussed in this chapter. The nine critical themes, namely, entrepreneurial university, intrapreneurial academic, support by the university or enablers, hindrances to intrapreneurship, the influence of the environment or enablers, the impact of the environment, challenges in the support for intrapreneurial behaviour, contributions by intrapreneurial behaviour on university performance and recommendations all directly address the empirical objectives and the research questions. The extensive probing that generated different themes (i.e. support by the university, key support factors and hindrances to intrapreneurship) under research question three was prudent for generating rich data for this question. As such, nine themes were drawn from the eight research questions.

Table 6.4: The relationship between the research questions and themes

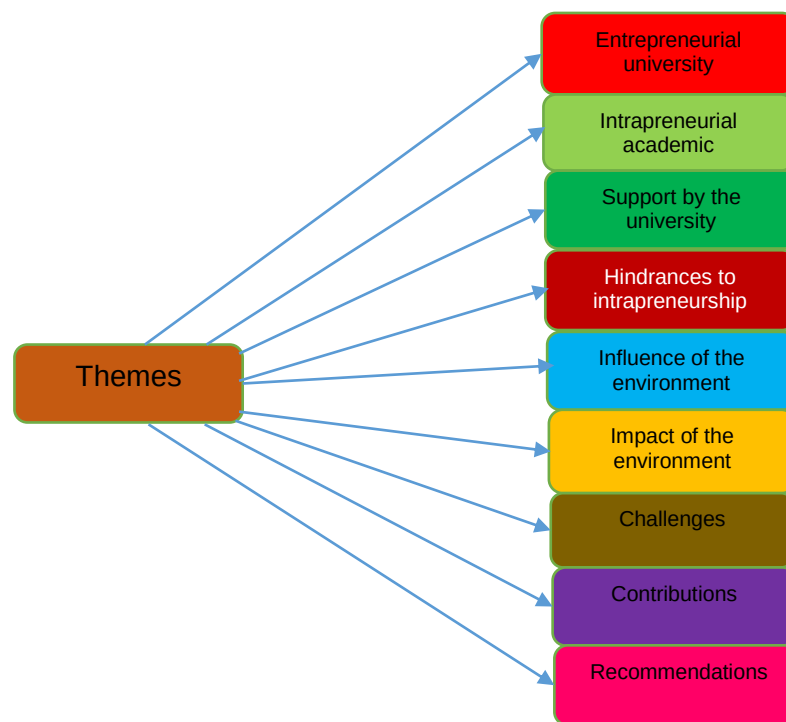
Research questions	Themes
As someone in a managerial position, what are your views and/or perceptions about the entrepreneurial university? Probe 1: Considering these perceptions shared, how and to what extent do these relate to this university? (Can you please share some examples). Probe 2: How do these aspects manifest within this university?	Entrepreneurial university
Reflecting on the academic as an employee. How would you, as a manager, describe the concept or idea of an “intrapreneurial academic” within the context of this university? Probe 1: How would you describe the behavioural traits of a high-performing intrapreneurial academic? Probe 2: How would you describe the behavioural traits of a low-performing intrapreneurial academic?	Intrapreneurial academic
In your experience, how does the university support intrapreneurial behaviour? Probe 1: Which factors would you highlight as key in supporting intrapreneurial behaviour? Probe 2: Which factors would you identify as lacking or missing within your current context?	Support by the university/Enablers, key support factors and Hindrances to intrapreneurship

What environmental factors (internal and external organisational dimensions) can you identify as influential in supporting intrapreneurial behaviour within the context of this university?	Influence of the environment/ Enablers
Considering the factors (internal and external organisational dimensions) mentioned in your experience, can you please describe how and to what extent these factors impact the intrapreneurial behaviour within this university?	Impact of the environment
What do you consider to be the major (internal and external organisational support) challenges experienced by the university in the support for intrapreneurial behaviour?	Challenges in the support for intrapreneurial behaviour
Considering everything we have discussed this far; can you please describe the contributions made by intrapreneurial behaviour to the university's performance? Probe 1: What factors do you include for determining high or low performance? Probe 2: Is there a specific measure used by the university, and if so, can you give some examples?	Contributions by intrapreneurial behaviour on University performance
If given the opportunity and platform, what recommendations on intrapreneurial behaviour will you give to key role-players within the university context?	Recommendations

Source: Compiled by the researcher

Figure 6.2 on the following page represents the nine critical themes of this empirical study.

Figure 6.2: Themes of the empirical study



Source: Compiled by the researcher

6.5 THEME ONE: ENTREPRENEURIAL UNIVERSITY

One of this study's empirical objectives was to obtain insight into the nature of the intrapreneurial behaviour in Botswana's large tertiary education institutions. This theme addresses this objective from different angles for an in-depth insight. The views and perceptions that the research participants hold of the entrepreneurial university concept and how these perceptions relate to their respective universities will provide insight into the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions. Further insight into the nature of the intrapreneurial behaviour will be obtained from the evidence on how the entrepreneurial university aspects manifest within these institutions.

According to Volkodavova *et al.* (2019), this entrepreneurial university model has been evident in the last few decades as universities have increasingly played a significant role in innovation and economic development. In his contribution to the conceptualisation of this entrepreneurial university concept, Clark (1998a:3-4) identified five different components that indicate how universities transform into the

entrepreneurial nature, and one of these is a stimulated academic heartland that is focused on excellence by recruiting and retaining the most talented staff cohort with high-impact research. With this knowledge, the findings on this theme, as provided by the participants, will provide the needed insight.

The research findings for this theme are therefore presented in two parts.

6.5.1 Theme 1- part 1: research participants' views and perceptions

This first part of the theme's findings reveals the views and perceptions of the managers on the entrepreneurial university concept. A total of 43 codes were identified, which were later categorised into four sub-themes as presented below:

- Entrepreneurial push strategy
 - Entrepreneurial education with 12 codes, mentioned 15 times
 - Entrepreneurial initiatives with four codes, mentioned 17 times
- Entrepreneurial university architecture with five codes, mentioned five times
- Benefits of the Entrepreneurial University
 - Benefits to the university with 11 codes, mentioned 11 times
 - Benefits to the economy with two codes, mentioned two times
 - Benefits to the individual mentioned once
- Employment creation with three codes, mentioned four times

The results show that managers perceive an entrepreneurial university as one that provides entrepreneurial education and courses for both students and staff and engages in entrepreneurial initiatives. This perception is supported by Ahmed *et al.* (2017) and Budyldina (2018), who explain that universities strategically offer entrepreneurial education, promoting entrepreneurship and economic and social soundness. In this study, the participants mentioned similar aspects as being at the core of an entrepreneurial university. This can be seen through the diversity of codes and their high frequency on the benefits of an entrepreneurial university sub-theme.

The individual sub-themes are discussed in detail in the subsequent pages alongside extracts of quotations from the interviewees. Table 6.5 on the next page provides quotes from some of the participants for different sub-themes and codes. This will be followed by Figure 6.3, a matrix indicating the participants who provided a specific code. Figures 6.4 and 6.5 will then present the photographic image and systematised network diagrams, respectively, which show the linkage between the central theme and its sub-themes and codes.

Table 6.5: Views and perceptions on entrepreneurial university

Theme	Sub-themes	Codes and Quotations from participants
Entrepreneurial university	Entrepreneurial education and courses for staff and students	Training people to be entrepreneurial: Participant #1: <i>“So the purpose of that is to create some kind of self-reliance and to train people to be able to start their own businesses.”</i> Participant #2: <i>“...by ensuring that there is an entrepreneurship module that runs across the university.”</i> Participant #3: <i>“Yes, we actually teach some modules, you know, that are on the entrepreneurial mindset. We teach students entrepreneurship in all our programmes at undergrad. And even at the Master's level, we are actually considering a programme called entrepreneurship.”</i> Entrepreneurship embedded in the curriculum: Participant #5: <i>“The concept of entrepreneurship is embedded in our curriculum.”</i> Balance between academia and entrepreneurship: Participant #8: <i>“I think what is important, though, in my view perhaps the balance between, you know, academics and entrepreneurship. Perhaps some universities may want to be purely entrepreneurial, but I think that element of academics will always be key even in an entrepreneurial university...”</i> Institutional incubations: Participant #1: <i>“That is why many of the institutions have incubations, start-up initiatives and employability initiatives.”</i> Participant #3: <i>“We also have an incubator.”</i>
	Entrepreneurial initiatives	Institutional start-ups: Participant #8: <i>“...small start-up businesses. It happens, you know, each and every year a number of engagements like, you know, a business-related or an entrepreneurship-related start-up competition.”</i> Internship for industry experience: Participant #1: <i>“They have an internship to relate towards the industry, to make people have practical experience in the industry.”</i>

	Entrepreneurial university architecture	Authentic entrepreneurial nature: Participant #9: <i>"An entrepreneurial university must really be entrepreneurial... dwell on the skills, the competencies that they want to develop in the students, there should be hands-on experience."</i> Higher educational establishment: Participant #10: <i>"My simple understanding of the entrepreneurial university is that it is a higher education establishment."</i> Processes, transfers and safeguards knowledge: Participant #10: <i>"Tries to safeguard knowledge and transfer and process it."</i> Innovates ideas into business initiatives: Participant #10: <i>"Innovate those ideas that they have gathered in order to come up with business initiatives. The university seeks to gather knowledge and to further that knowledge in order to develop innovative initiatives."</i>
	Benefits of entrepreneurial university	Benefits to the university, economy and individual: Participant #2: <i>"Something that would benefit the university, the individual and the economy at large. So it is quite an important concept because it promotes innovation..."</i> Very good concept to adopt: Participant #6: <i>"I think it is a very good concept for a university to adopt because when a university is entrepreneurial, it becomes competitive. It puts it on a competitive edge compared to other universities, and the prospects may be able to recognise it better. When it is entrepreneurial, it becomes practical, more practical."</i> Generates tactful ideas: Participant #7: <i>"It gives me a chance to come up with tactful ideas in my institution. I believe that it is imperative. We are the university's researchers, so we are the ones that are in the market, we are the ones that are on the ground, so we are able to see areas in which we can utilise, or we can make money from, we can enterprise from."</i>
	Employment creation	Institutional employability initiatives: Participant #1: <i>"The view about an entrepreneurial university is that most emerging economies want to create jobs, want people to create jobs for themselves and to reduce unemployment."</i> Creation of jobs to reduce unemployment: Participant #8: <i>"...addressing the challenges of unemployment through job creation."</i> Job creation through innovative approaches: Participant #8: <i>"Obviously with the emphasis on making sure that</i>

		<i>most of the engagements do result in, you know, job creation, if I may say, through innovative approaches.”</i>

Source: Compiled by the researcher

Figure 6.3 on the following page presents the matrix indicating the participants who provided a specific code.

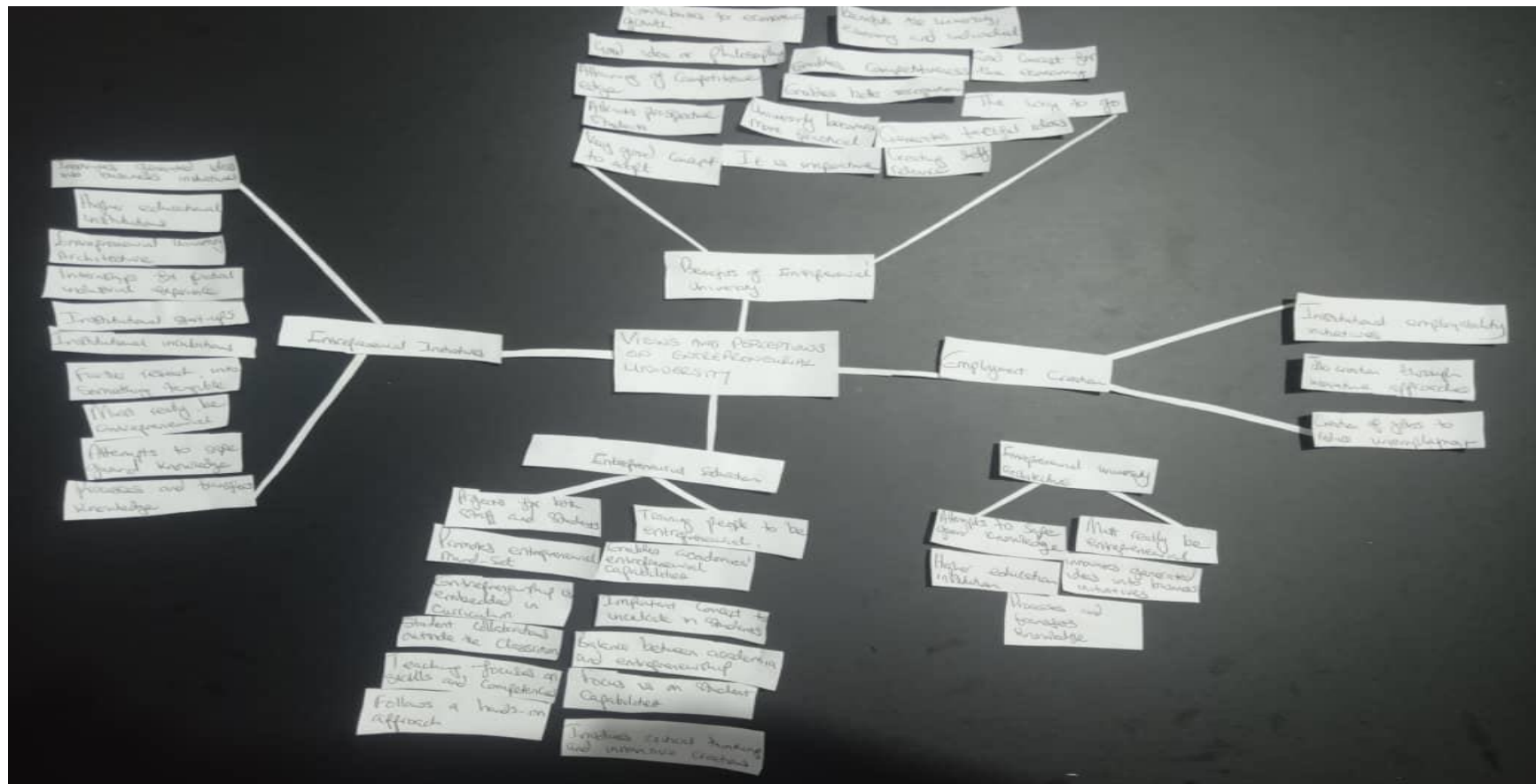
Figure 6.3: Matrix for views and perceptions on entrepreneurial university

Theme 1: Entrepreneurial university - Part 1		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Entrepreneurial education	Training people to be entrepreneurial	x							x		
	Promotes entrepreneurial mind-set		x								
	Enables academics' entrepreneurial capabilities	x		x				x			
	Entrepreneurship is embedded in curriculum					x					
	Important concept to inculcate in graduates				x						
	Student collaborations outside the classroom									x	
	Balance between academia and entrepreneurship								x		
	Teaching focuses on skills and competencies									x	
	Focus is on student capabilities									x	
	Follows a hands-on approach									x	
	Involves critical thinking and innovative creations									x	
	Projects for both staff and students					x					
	Internships for practical industrial experience	x							x		
Entrepreneurial initiatives	Institutional start-ups	x				x			x	x	x
	Institutional incubations	x				x			x	x	x
	Further research into something tangible		x				x	x		x	x
	Must really be entrepreneurial									x	
Entrepreneurial university architecture	Higher educational institution										x
	Attempts to safeguard knowledge										x
	Processes and transfers knowledge										x
	Innovates generated ideas into business initiatives										x
Benefits of the intrapreneurial university	Very good concept to adopt						x				
	It is imperative							x			
	Attracts prospective students						x				
	University becomes more practical						x				
	Creating self-reliance	x									
	Attaining of competitive edge						x				
	Enables better recognition						x				
	Generates tactful ideas							x			
	Enables competitiveness						x				
	Good idea or philosophy			x							
	The way to go				x						
	Contributes to economic growth								x		
	Good concept for the economy		x								
	Benefits the university, economy and individual		x								
	Institutional employability initiatives	x									
Employment creation	Job creation through innovative approaches								x		
	Creation of jobs to reduce unemployment	x							x		

Source: Compiled by the researcher

Figure 6.4 below presents a photographic image of the network diagram on the participants' views and perceptions on the entrepreneurial university concept.

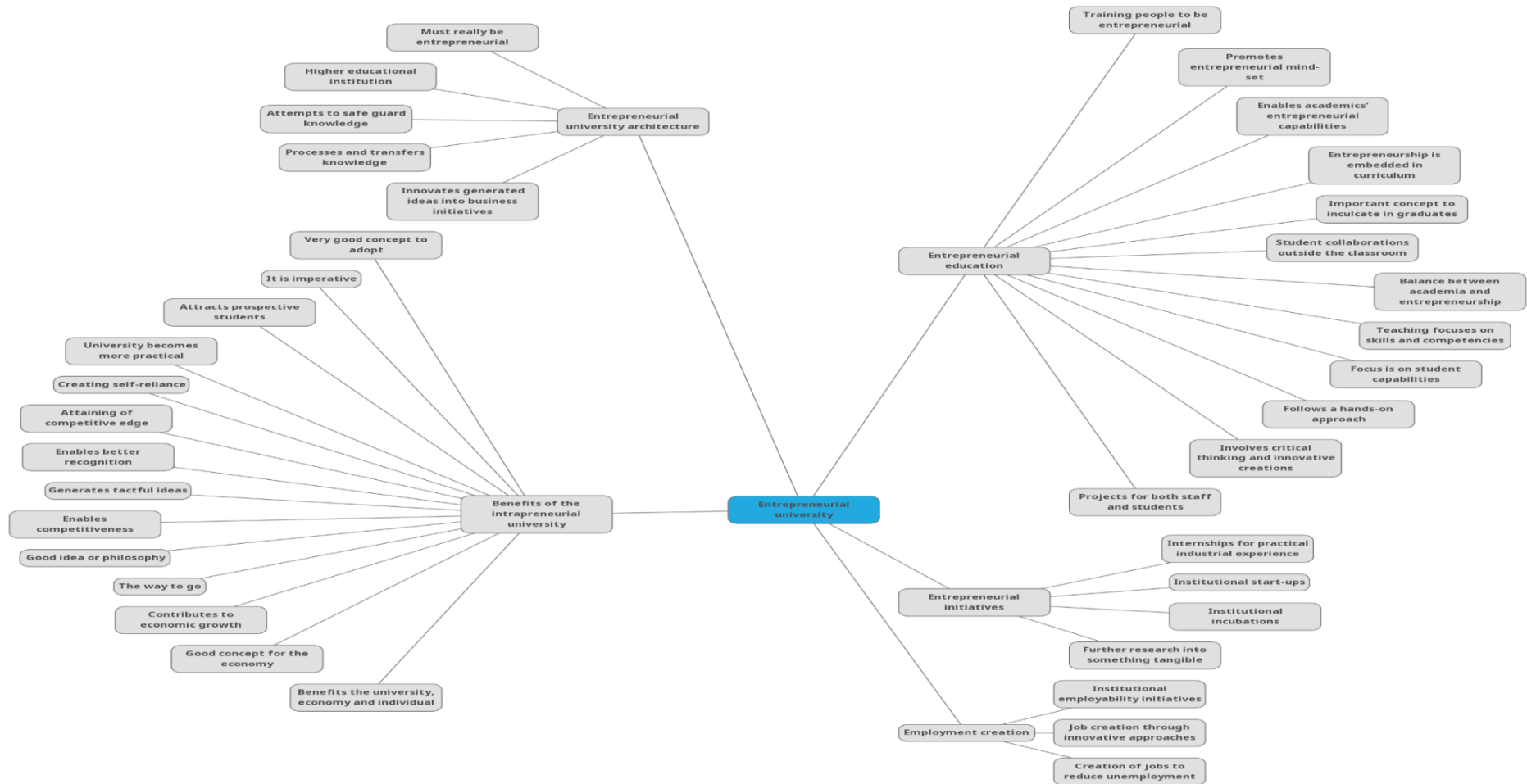
Figure 6.4: Photographic image of the network diagram for theme 1: part 1



Source: Compiled by the researcher

Figure 6.5 below presents the systematised network diagram of the participants' views and perceptions of the entrepreneurial university concept.

Figure 6.5: Systemised network diagram for theme 1- part 1



6.5.1.1 Entrepreneurial push strategy

The first category under part 1 of the entrepreneurial university theme is the entrepreneurial push strategy, presented through two sub-themes: entrepreneurial education and entrepreneurial initiatives. These sub-themes were drawn from Wegner *et al.* (2019), who define the entrepreneurial push strategy as a holistic approach that refers to all entrepreneurship courses and the number of initiatives a university performs to promote students' entrepreneurship intention.

6.5.1.1.1 Entrepreneurial education

The entrepreneurial education sub-theme is presented with 12 codes, mentioned 15 times. This indicates that the participant's perceptions of the entrepreneurial university are predominately that such a university mainly offers entrepreneurial education or courses. Entrepreneurial education focuses on the university's teaching mission and developing entrepreneurial capabilities among students and faculty members (Galán-Muros *et al.*, 2017; Guerrero *et al.*, 2016). The findings on this sub-theme agree with this explanation of entrepreneurial education.

The participants' perspectives are informed by their lived experiences in their respective universities, as indicated in the various phrases of codes generated. These are training people to be entrepreneurial, promoting an entrepreneurial mindset, enabling academics' entrepreneurial capabilities, entrepreneurship is embedded in the curriculum, an important concept to inculcate in graduates, student collaborations outside the classroom, balance between academia and entrepreneurship, teaching focuses on skills and competencies, focus is on student capabilities, follows a hands-on approach, involves critical thinking and innovative creations, and projects for both staff and students.

Participants #1 and #8 perceive an entrepreneurial university as an institution that trains people to be entrepreneurial. *"So the purpose of that is to create some kind of self-reliance and to train people to be able to start their own businesses."* (Participant #1). Participant #8 added his perception of entrepreneurial universities as those involved in *"Giving opportunities and exposure to graduates to be able to, you know,*

not only contribute through working locally within their own country but, you know, an international platform for entrepreneurship.” He shared his lived experience by saying, “At the moment, we are an academic institution, no question about that, that is actually working towards driving, you know, entrepreneurship achievement, you know, within our students or our graduates.”

The purpose of entrepreneurial education is to promote an entrepreneurial mindset, as pointed out by Participant #2, *“So it is quite an important concept because it promotes innovation and this idea of putting the entrepreneurship mindset in staff, students and even in management.”* For this to be achieved, Participant #9 explained that the teaching of entrepreneurship must focus on skills and competencies. She said: *“When they teach, they should forget about all the other theoretical concepts we are teaching and dwell on the skills and competencies that they want to develop in the students.* She went on to elaborate that entrepreneurial education must follow a hands-on approach: *“An entrepreneurial university, to me, needs to seem to be doing, there should be hands-on experience...all the time”* and that focus should be on student’s capabilities: *“If a student is good in plumbing, you know, they should forget about other subjects that the student has to do, concentrate on that and ensure that the student gets the best skills, the best knowledge, the best competencies out of what they have been at and just channel them through that path.”*

Participant #9 passionately shared her views and perceptions on entrepreneurial education by going on to say the teaching of entrepreneurship should involve critical thinking and innovative creations: *“But if we could, as entrepreneurial universities, give students time to think, to be critical, to create, to be innovative.”* She also said that students must collaborate outside the classroom: *“We should see children mingling around, holding projects, trying a lot of things outside, not even confined to the classroom, outside in the open where there are areas that are set up for all those skills to manifest.”* Participant #5 provided a similar view by stating that entrepreneurial education should involve projects for both staff and students. She said: *“For me, an entrepreneurial university means that the university can have projects for both the staff and students.”*

Therefore, Botswana's large tertiary education institutions are viewed as entrepreneurial based on offering entrepreneurship training to enhance people's entrepreneurial skills. Further insight into the entrepreneurial education offered in these universities can be obtained from the statement that entrepreneurship is embedded in the curriculum. Participant #5 explained: *"The university must deliberately make efforts to say how are we going to ensure that the concept of entrepreneurship is embedded in our curriculum and how are we ensuring that it really works?"* Therefore, the insight obtained here is that the degree to which a university in Botswana incorporates entrepreneurship into its curriculum gives it the status of an entrepreneurial university.

This approach makes entrepreneurship an important concept that the universities aim to inculcate in graduates, as shared by Participant #4: *"My view is that it is an important thing to inculcate in our graduates."* In the same vein but concerning academics, Participant #3 said that the offering of entrepreneurial education is important because it enables academics' entrepreneurial abilities: *"When we are teaching students you know about entrepreneurship, we want to see something that is real that you have produced yourself as an academic or as a lecturer or instructor."* Lastly, participant #8 saw the offering of entrepreneurial education in the universities as important in balancing academia and entrepreneurship: *"I think what is important though, in my view, perhaps the balance between, you know, academics and entrepreneurship. Perhaps some universities may want to be purely entrepreneurial, but academics will always be key even in an entrepreneurial university..."*

These views and perceptions shared by the participants can be related to the Government of Botswana's visions, policies and strategies. The government is working to improve the capacity of research and innovation to build an entrepreneurial and prosperous society in Botswana. This is a role that the government expects tertiary educational institutions to assume urgently. These institutions are to enhance their competitiveness, productivity and efficiency to unleash Botswana's entrepreneurial spirit through education and training (Vision 2036, 2016:1-20). Therefore, tertiary education institutions are expected to address the critical need to develop Botswana's human capital by making it more effective and relevant to the needs of Botswana and the global economy (HRDC, 2015:25-

26). Botswana's NDP 11 (2016) also highlights a clear need for tertiary education institutions to produce a globally competitive human resource based on identifying demands in the labour market.

From this finding, the universities in Botswana are working to make themselves relevant and responsive to the government's vision. This strategic direction is aligned with Etzkowitz and Leydesdorff (2000), who explain that universities are expected to prioritise their relevance and responsiveness to stakeholder needs through the enhancing of national and regional economic growth as well as through improved financial performance for themselves and their faculties. As further emphasised by Sam and Van der Sijde (2014), it can be seen that the universities in Botswana recognise the need to respond to the needs of Botswana's knowledge-based economy to equip students with the requisite skills to become competitive, both locally and globally.

6.5.1.1.2 Entrepreneurial initiatives

The second sub-theme under the entrepreneurial push strategy category is entrepreneurial initiatives in an entrepreneurial university presented with four codes, mentioned 17 times. This indicates that the participants hold similar perceptions of the entrepreneurial initiatives being undertaken in their respective universities. This sub-theme also provides insight into the participants' views and perceptions of the entrepreneurial university regarding the nature of initiatives within the universities. These codes are internships for practical industrial experience, institutional startups, incubations and furthering research into something tangible.

According to Etzkowitz (2013a), universities have profited from the knowledge in the entrepreneurial environment as they closely interact with the business sector. This collaboration leads to connections with the business world for knowledge sharing and for students to learn experientially (Fernandez-Nogueira *et al.*, 2018). The finding in this sub-theme substantiates this body of knowledge. The participants' views of entrepreneurial initiatives include actively implementing internships and business start-ups for students to obtain practical industrial experience.

Participant #1 explained: *“They have internships to relate towards the industry, to make people have practical experience in the industry.”* Participant #8 spoke of the set-up of institutional start-ups: *“You know, small start-up businesses. It happens, you know, every year, your strategic objectives to a very large extent, they do now also talk to, you know, job creation through encouraging graduates and enabling them, supporting them, you know, to be entrepreneurial through, you know, focusing on also getting the business start-ups”* and Participant #9 said: *“There is this Tourism and Hotel Management Department where kids are taught about tourism issues. They are taught about how to take care of clients in, I think, hotels or entertainment areas.”*

The universities also establish incubations, as indicated by participant #1: *“That is why many of the institutions have incubations, start-up initiatives and employability initiatives”*, while others have plans to do so: *“We are now at the stage where we are trying to establish the innovation centre and the incubation centre”* (Participant #1). These universities also make deliberate efforts to further research into something tangible, as explained by Participant #2: *“Tries to further research into something tangible, something that would benefit the university, the individual and the economy at large.”* Participant #6 added, *“We have our students coming up with projects and research areas.”* Participant #10 explained that the university *“tries to safeguard knowledge and transfer and process it, innovate those ideas that they have gathered to come up with business initiatives.”*

This insight into the entrepreneurial initiatives that exist in the universities coincides with Wadhvani et al.'s (2017) finding that academics have engaged in activities aimed at turning research output into technological development, establishing new businesses, as well as encouraging change in social and governmental practices. The universities assume the industry's role by commercialising research findings and creating new business models (Etzkowitz, 2016; Schmitz et al., 2017). The finding adds to Farrukh et al.'s (2019) explanation that universities have had to adapt to the changing context by becoming more entrepreneurial and promoting intrapreneurial initiatives. These intrapreneurial practices are believed to be how higher education institutions can cultivate closer connections with markets (Dalmarco et al., 2018; Doin & Rosa, 2019).

6.5.1.2 Entrepreneurial university architecture

The entrepreneurial university architecture refers to an appropriate and formal organisational structure that meets the exact needs of university-based entrepreneurs throughout the distinctive stages of entrepreneurship, namely latent, emergent, launch, and growth (Caiazza *et al.*, 2020). This organisational structure also needs to address the changes in the external environment (Cunningham *et al.*, 2022:). This was one of the sub-themes reflected in the findings on the entrepreneurial university theme, with five codes that were mentioned five times. These code phrases are: higher educational institution, attempts to safeguard knowledge, processes and transfers knowledge, innovates generated ideas into business initiatives and lastly, must really be entrepreneurial.

Most of these code phrases were provided by Participant #10, who spoke passionately about his views and perceptions on the entrepreneurial university architecture. He explained: *“In simple terms, my simple understanding of the entrepreneurial university is that it is a higher education establishment that tries to safeguard knowledge and transfer and process it, innovate those ideas that they have gathered to come up with business initiatives that will benefit the university stakeholders, the government and even other stakeholders in the economy.”* This response coincides with the definition of an entrepreneurial university provided by Kalenyuk and Dyachenko (2016) as a higher education institution that protects knowledge, its transfer and the commercialisation of innovative business activities between universities and various stakeholders, including the government, based on financial and organisational economic standards.

Participant #9 added on the need for an entrepreneurial university architecture in the universities by saying: *“For me, an entrepreneurial university must really be entrepreneurial.”* Her views reflect the need for universities in Botswana to fully transform by assuming an authentic entrepreneurial culture that will be reflected in their structures and governance (Guerrero *et al.*, 2014).

6.5.1.3 Benefits of the entrepreneurial university

Entrepreneurial universities are seen to bring a wide range of benefits that include the stimulation of economic growth, innovation capabilities and regional competitiveness (Guerrero *et al.*, 2016), the improvement of entrepreneurship capital (Audretsch, 2014) and the activation, support and promotion of entrepreneurship among diverse organisational stakeholders (Klofsten *et al.*, 2019; Cunningham & Menter, 2021; Graf & Menter, 2021). The findings from this sub-theme confirm most of these benefits.

The participants' views and perceptions present the benefits of the entrepreneurial university in three sections, namely: benefits to the university with 11 codes, mentioned 11 times; benefits to the economy with two codes, mentioned two times; and benefits to the individual with one code, mentioned twice. Therefore, the codes under this sub-theme are the benefits to the university, the economy and the individual. Furthermore, it is a very good concept to adopt. It is imperative, the way to go, a good idea or philosophy, attracts prospective students, the university becomes more practical, creating self-reliance, attaining of competitive edge, enables better recognition, generates tactful ideas, enables competitiveness, contributes to economic growth and lastly, good concept for the economy.

In sharing their views and perceptions on the entrepreneurial university concept, the participants identified a wide range of benefits from this university model. Participant #2 provided insight into the three levels of benefits gained from the entrepreneurial university model, mentioning that: *"I think this is quite an important concept because it tries to further research into something that is tangible, something that would benefit the university, the individual and the economy at large."* Participant #6 shared most of the benefits by explaining: *"I think it is a very good concept for a university to adopt because when it is entrepreneurial, it becomes competitive. It puts a competitive edge compared to other universities. The prospects may be able to recognise it better. Once they recognise it better, it may mean that they join that university because these days, students do not want to walk into the classroom all the time and listen to the teachers or lecturers teaching. So, when it is entrepreneurial, it becomes practical, more practical."*

Participant #7 added: *“I believe that we must have such entrepreneurial universities that encourage their employees to be entrepreneurial to impact. My general perception about an entrepreneurial university is that, as an individual, it gives me a chance to come up with tactful ideas in my institution.”* Participant #1 provided a benefit linked to the purpose of an entrepreneurial university, saying: *“So the purpose of that is to create some kind of self-reliance.”* The self-reliance attained from implementing an entrepreneurial university model is perceived to benefit the university. To add to this view, participant #3 said: *“Yes, actually, it is a good idea or philosophy”* and participant #4 explained: *“As for me, currently, from the engineering point of view and being trans-disciplinarian that I am, my views are that it should be the thing to go for now.”*

With regards to the benefits to the economy, participant #2 mentioned: *“...this idea of putting the entrepreneurship mindset in staff, students and even in management is good for the economy at the end of the day”*, while Participant #8 added: *“it is good in contributing to the economic growth of every country.”* This confirms Guerrero et al.’s (2016:551-563) finding that academia has contributed to economic development through entrepreneurial education, opportunity recognitions and intention, the creation of spin-offs, technology transfers, and science parks incubators as well as the establishment of relationships with the industry. All the benefits of the entrepreneurial university discussed above can be said to be a consequence of the nature of the intrapreneurial behaviour that exists in the universities.

6.5.1.4 Employment creation

The offering of entrepreneurship education in universities aims to develop the entrepreneurial spirit in both students and academics so that they may become job creators. Therefore, The implication is that universities must transform and identify new ways of stimulating job creation to foster sustainable economic growth and employment (Oyugi, 2021). The finding from this sub-theme contributes to this body of knowledge.

This final sub-theme under the entrepreneurial university theme has three codes mentioned four times: institutional employability initiatives, job creation through

innovative approaches and creating jobs to reduce unemployment. Participant #1 said: *“The view about an entrepreneurial university is that most emerging economies want to create jobs, want people to create jobs for themselves and to reduce unemployment... that is why many institutions have incubations, start-ups, and employability initiatives.”* Participant #8 added by saying: *“Well, really I think entrepreneurship, it is a, it is key as far as, you know, addressing, not only addressing the challenges of unemployment through job creation but also, you know, it is in contributing to the economic growth of every country... obviously with the emphasis on making sure that most of the engagements do result in, you know, job creation, if I may say, through innovative approaches...”* From the responses from the various participants, it can be seen that these entrepreneurial universities are perceived to have the inherent potential to create employment through their entrepreneurial initiatives. This is the crucial role and contribution to the economy that the Government of Botswana expects of the tertiary education sector (Vision 2036, 2016; NDP 11, 2016; HRDC, 2015:25-26).

In summary, the research participants hold strong views and perceptions on the entrepreneurial university concept. The insight obtained from the findings discussed above is that the nature of the intrapreneurial behaviour in Botswana's large tertiary education institutions is mainly characterised by the provision of entrepreneurial education as well as the carrying out of entrepreneurial initiatives which offer several benefits to the universities, to Botswana's economy and both students and lecturers. Another benefit is employment creation, which is key to sustainable economic development for the universities, society and the country at large.

6.5.2 Theme 1 - part 2: evidence of entrepreneurial university aspects

This second part of the entrepreneurial university theme reveals the participants' evidence on how their views and perceptions of the entrepreneurial university concept relate to their respective universities. These findings also present how the entrepreneurial university aspects manifest within the universities. A total of 85 codes were identified, which were later categorised into ten sub-themes as presented below:

- Research and knowledge transfer with four codes, mentioned five times
- Policies and strategies with ten codes mentioned 20 times
- Industry engagement with seven codes mentioned eight times
- Training with eight codes mentioned 12 times
- Leadership and governance with one code mentioned once
- Inter-varsity partnerships with one code mentioned once
- Consultancies with three codes are mentioned three times
- Business start-up initiatives with four codes are mentioned five times
- Incubations with three codes mentioned three times
- Building an entrepreneurial mindset with five codes mentioned 12 times

Universities today are expected to be more entrepreneurial in their organisational perspective and in the services they offer (Miller *et al.*, 2018). As part of the labour market, universities are also expected to transform into global, technological, innovative and competitive entities (Fernandez-Nogueira *et al.*, 2018). The insight from the evidence provided under these sub-themes and the respective codes will indicate whether these tertiary educational institutions meet the expectations. More importantly, the evidence will help address the empirical objective of obtaining insight into the nature of the intrapreneurial behaviour that fosters the entrepreneurial aspects in these universities.

The individual sub-themes are discussed in detail below, alongside extracts of quotations from the interviewees. Table 6.6 on the next page provides quotes from some participants for different sub-themes and codes. This will be followed by Figure 6.6, which is a matrix indicating the participants who provided a specific code. Figures 6.7 and 6.8 will then present the photographic image and systematised network diagrams, respectively, which show the linkage between the central theme and its sub-themes and codes.

Table 6.6: Evidence of entrepreneurial university aspects

Theme	Sub-themes	Codes and Quotations from participants
Entrepreneurial university	Research and knowledge transfer	Research unit that encourages projects: Participant #1: “...then we also do scenario cases.” Participant #5: “We have a research unit at the university, and they encourage that if you have done a project, you should present it.” Encouragement of research that generates revenue: Participant #9: “Our Executive Director is always encouraging us to work on research that brings funds. He does not encourage the kind of research that leads to just enhancing knowledge. He wants that type of research to bring in funds into the university.” Research and knowledge transfer to policymakers: Participant #9: “We just contribute to knowledge, and sometimes the work that we do is used by policymakers to change, you know, to change the environment to whatever environment you might be talking about. Because after churning out research, we usually share the output with the research offices in our various ministries. I would take mine to the Ministry of Education. The one who does finance would take it to the research office in the Finance Ministry, whichever way.”
	Policies and strategies	Policies, strategies and procedures exist: Participant #7: “There are policies for each and every new stream that we devise; for example, I will use my department. This department is responsible for helping organisations to take advantage of the HR policy gap. So, there are policies that affect us. Some policies are set for us to handle these things. There is a procedure that we do. If you have an idea on how to augment the university's revenue streams or bring about intrapreneurial activities.” Strategic direction followed through initiatives: Participant #1: “Yes, we have policies. We have strategies, five-year strategies. We are currently working on the one for 2022 to 2027. I am aware that when I joined them in 2017, we created the 2017 to 2022 which is ending this year. We try to follow it, you know, because it provides strategic direction.” Strategic objectives and policies exist for job creation and consultancy initiatives: Participant #8: “Our strategic objectives, to a very large extent, they do now also talk to, you know, job creation through encouraging graduates and enabling them, supporting them, you know, to be entrepreneurial. I mean I will give you an example, you know, with policies that encourage, you know, staff members themselves to engage, you know, in consultancies, you know, consultative initiatives where we provide services to industry.”

	No strategy or policy	No strategy or policy for entrepreneurship: Participant #2: <i>"I would not say we have a strategy or policy for an entrepreneurial university, but I would say we have strategic objectives as a university."</i>
	Industry engagements	Establishment of stakeholder partnerships: Participant #10: <i>"We are trying at this juncture to establish stakeholder partnerships in order to create an innovation hub or an innovation centre so as to promote this kind of agenda."</i> Signing of MOUs with the industry: Participant #9: <i>"We signed an MOU with the Ministry of Youth so that whatever programme they need deals with how to handle finance, how to budget and so on and so forth."</i> Invitation of industry guest lecturers: Participant #1: <i>"We also invite guest lecturers from the industry. We invite them even when we are reviewing our programmes so that they can look at our programme structures and look at how relevant these programmes are to the industry."</i>
	Training	Fostering entrepreneurship among students: Participant #3: <i>"Yes, actually, it is embedded in the traits of our students or graduates. When they complete, they should actually have that kind of entrepreneurial mindset."</i> Academics trained to be entrepreneurial through schools: Participant #6: <i>"I think we were going to work to attend the training on weekends, so some people managed and attended, and afterwards, we were given a certificate of attendance and participation,"</i> Training offered through short entrepreneurship programmes and projects: Participant #5: <i>"...we have courses that deal with entrepreneurship. We have certificates and diplomas that are currently being developed. However, we have the Bachelor of Entrepreneurship that is currently ongoing, and, in this course, students are encouraged to do entrepreneurial projects in their final year. For lecturers, well, for example, the University has a centre where we train people through short courses."</i>
	Leadership governance and	Good leadership and governance: Participant #10: <i>"...I can safely say we have good leadership and governance. I think that is on us, and that can indicate that we are an entrepreneurial university."</i>
	Inter-varsity collaborations	Inter-disciplinary collaborations with other institutions: Participant #10: <i>"We are also in the process of trying to bring or to collaboratively work with schools or inter-disciplines with other institutions to achieve this kind of agenda."</i>
	Consultancies	Consultancy collaborations between staff and students: Participant #8: <i>"Staff members themselves to engage, you know, in consultancies, you know consultative initiatives where we provide services to industry and through such initiatives, it also creates opportunities for such staff to share with students the industry"</i>

		<i>opportunities that have exposed or presented themselves.”</i> Academics write grant proposals: Participant #9: <i>“You know lecturers draw, they write proposals, grant proposals to make money.”</i> Consultancies develop business start-ups: Participant #8: <i>“Staff members themselves to engage, you know, in consultancies, you know consultative initiatives. That does lead to opportunities for, you know, business start-ups going forward.”</i>
	Business initiatives start-up	Holding of business start-up competitions: Participant #8: <i>“And this is also supported with, you know, a number of engagements like, you know, a business-related or an entrepreneurship-related start-up competition.”</i> Development of prototypes: Participant #9: <i>“And then the School of Computing, their students are always developing simulations. They will develop those prototypes.”</i> Small start-up businesses set up every year: Participant #8: <i>“...on an annual basis, we see direct evidence of that as students, you know, graduate with the, you know, small start-up businesses. It happens, you know, each and every year.”</i>
	Incubations	An incubator exists: Participant #3: <i>“So that mindset is actually there, and we also have an incubator, but we need actually to beef it up.”</i> Products developed from the incubator: Participant #3: <i>“...and there are some good examples showing the produce from the students.”</i> Plans to develop an innovation hub and incubation centres: Participant #10: <i>“...we are now at the stage where we are trying to establish the innovation and incubation centres.”</i>
	Building of an entrepreneurial mindset	Nurturing of an entrepreneurial mindset: Participant #2: <i>“...promotes innovation and this idea of putting the entrepreneurship mindset in staff, students and even in management.”</i> Entrepreneurship culture is evident: Participant #10: <i>“The culture of entrepreneurship is starting to take shape.”</i> Academics expected to demonstrate their capabilities: Participant #4: <i>“And so, we are always saying, you know, so what is it that you have done that substantiates, you know, what we try to strive to achieve.”</i>

Source: Compiled by the researcher

Figure 6.6 below presents a matrix which indicates the participants who provided specific codes.

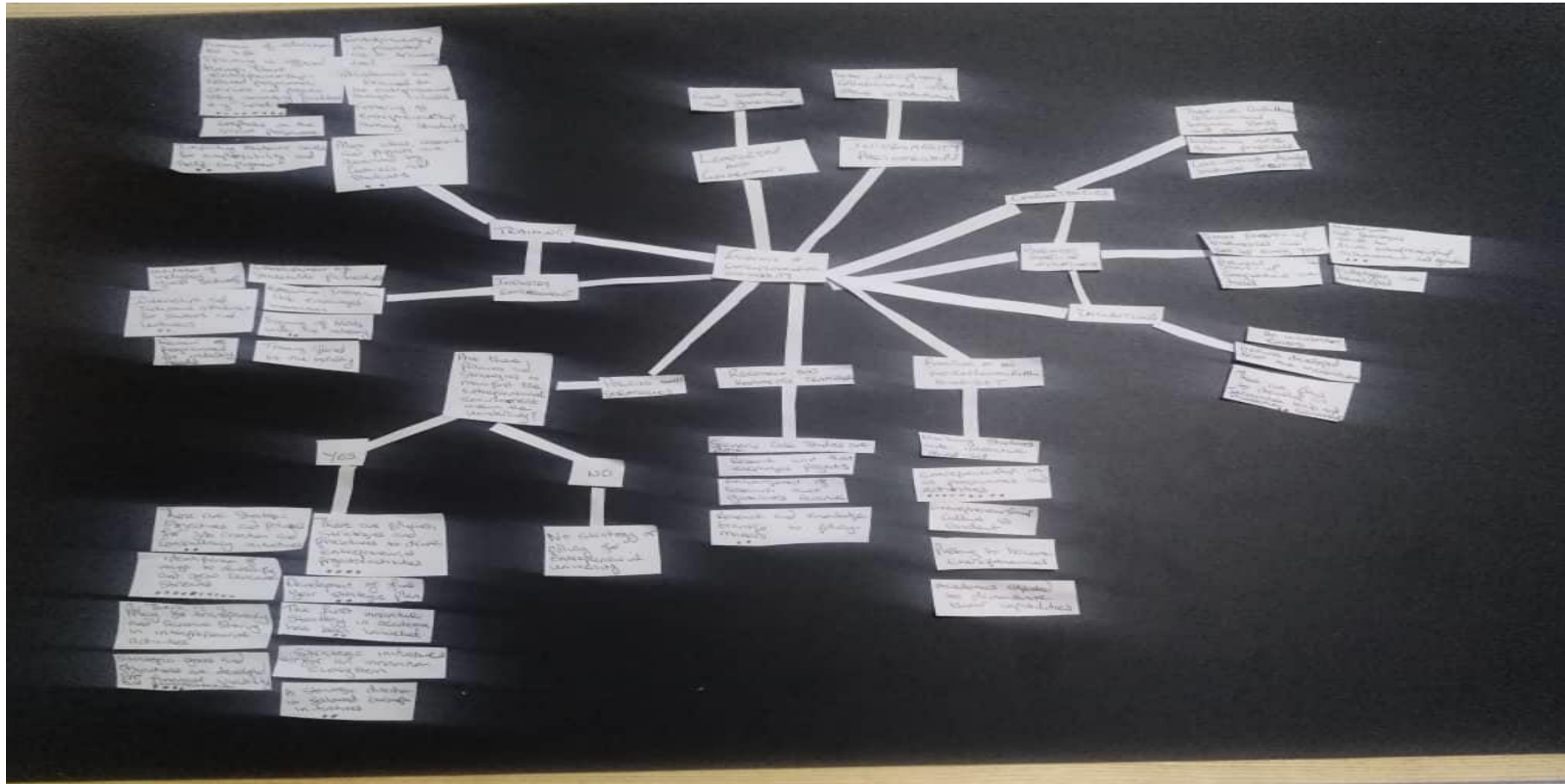
Figure 6.6: Matrix for evidence of entrepreneurial university aspects

Theme 1: Entrepreneurial university - Part 2		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Research and knowledge transfer	Scenario case studies are done	X				X					
	Research unit that encourages projects					X					
	Encouragement of research that generates revenue								X		
Policies and strategies	Research and knowledge transfer to policy makers								X	X	
	Policies, strategies and procedures exist	X		X		X	X	X	X		X
	Development of five year strategic plan	X	X								
	Launch of first academic innovative strategy							X			
	Strategic initiative exists for innovative ecosystem								X		
	Strategic direction followed through initiatives	X									
	Strategic objectives and policies exist for job creation and consultancy initiatives		X						X		
	Identification of ways to diversify and grow revenue streams							X			
	Policy exists for transparency and revenue sharing									X	
	Strategic goals and objectives developed for financial viability and augmentation				X	X		X			
Industry engagement	No strategy or policy		X								
	Establishment of stakeholder partnerships										X
	Botswana Innovation Hub encourages innovation									X	
	Signing of MOUs with the industry									X	X
	Training offered to the industry									X	
Training	Review of programmes for industry needs	X									
	Internships and industrial attachments for students						X				
	Invitation of industry guest lecturers	X									
	Most ideas, research and projects generated by lecturers and students					X	X				
	Fostering of entrepreneurship among students			X							X
	Academics trained to be entrepreneurial through schools						X			X	X
	Entrepreneurship promoted as a training tool									X	X
	Provision of education for life				X						
	Training offered through short entrepreneurship programmes and projects					X					
	Emphasis on the STEM programme				X						
Leadership and governance	Imparting student skills for employability and self-employment				X						
	Good leadership and governance										X
	Inter-disciplinary collaborations with other institutions										X
	Consultancy collaborations between staff and students								X		
	Academics write grant proposals									X	
Business start-up initiatives	Consultancies develop business start-ups								X		
	Small start-up businesses set up every year								X		
	Holding of business start-up competitions								X		
	Initiatives and strategies exist to drive entrepreneurship achievement and growth					X			X		
	Development of prototypes									X	
Incubations	An incubator exists			X							
	Products developed from the incubator			X							
	Plans to develop an innovation hub and incubation centres										X
Building of an entrepreneurial mindset	Nurturing students with an entrepreneurial mindset		X	X							
	Entrepreneurship in all programmes and activities		X	X	X	X	X				X
	Entrepreneurship culture is evident										X
	Pushing to become entrepreneurial		X						X		
	Academics expected to demonstrate their capabilities				X						

Source: Compiled by the researcher

Figure 6.7 below presents the photographic image of the evidence of entrepreneurial university aspects.

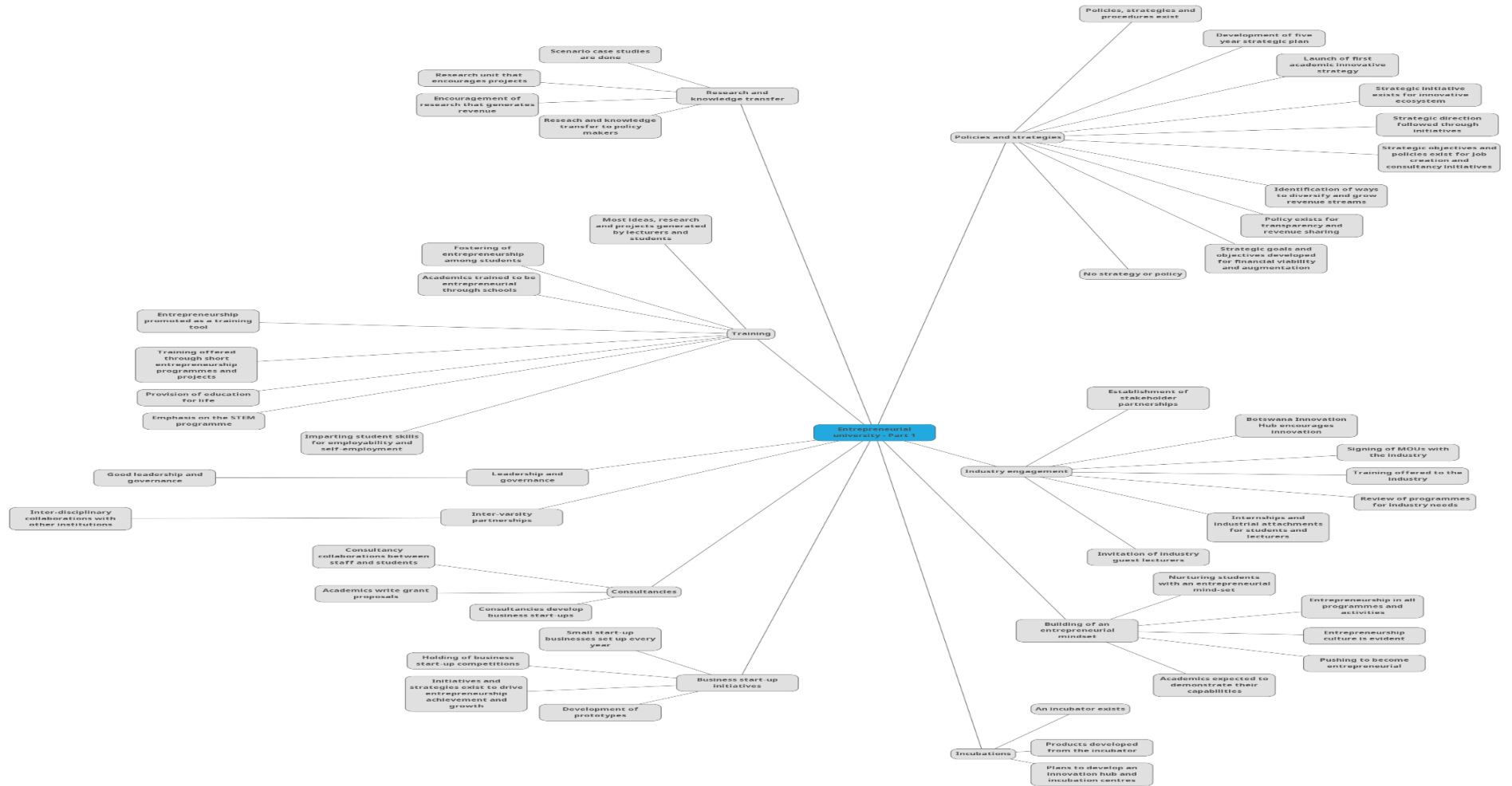
Figure 6.7: Photographic image of the network diagram for theme 1: Part 2



Source: Compiled by the researcher

Figure 6.8 on the next page presents a systemised network diagram on the evidence of entrepreneurial university aspects.

Figure 6.8: Systemised network diagram for theme 1- part 2



The codes under this theme will now be discussed in detail.

6.5.2.1 Research and knowledge transfer

The first sub-theme under part 2 of the entrepreneurial university theme is research and knowledge transfer. This sub-theme is presented with four codes mentioned five times. Despite the small number of codes and their frequency in the responses, research and knowledge transfer are key areas universities in Botswana are expected to prioritise. These institutions have been mandated to develop Botswana's human capital as the country endeavours to develop a knowledge economy. The government expects tertiary education institutions to improve their research and innovation capacities by training market-ready graduates to influence an entrepreneurial and prosperous society. The tertiary education institutions are expected to align their research and education standards to a culture of innovation in the country (Vision 2036, 2016; NDP 11, 2016:54).

The phrases of codes provided are: scenario case studies are done, a research unit that encourages projects, encouragement of research that generates revenue and research and knowledge transfer to policymakers. In explaining how his perceptions relate to his university as evidence of the manifestation of entrepreneurial aspects, Participant #1 mentioned that research activities are done through scenario cases: *"Yes, it actually relates, that is why I was sharing this, we are doing all these right now: internships, industrial attachment and then we also do scenario cases."* Participant #5 explained that the university has set up a research unit: *"We have a research unit at the university, and they encourage that if you have done a project, you should present it."* Further, academics are encouraged to conduct research that would generate revenue for the university, as explained by Participant #9: *"Our Executive Director is always encouraging us to work on research that brings funds. He does not encourage the kind of research that leads to just enhancing knowledge. He wants that type of research to bring in funds into the university."* Lastly, Participants # 9 and #10 added that the research that the conduct of the academic is used for knowledge transfer initiatives for policymakers: *"...sometimes the work that we do is used by policymakers to change, you know, to change the environment to whatever environment you might be talking about. Because after churning out*

research, we usually share the output with the research offices in our various ministries. I would take mine to the Ministry of Education. The one who does finance would take it to the research office in the Finance Ministry, whichever way.” (Participant #9). *“We are also into knowledge transfer.”* (Participant #10).

This finding confirms that tertiary education institutions now have to undertake activities categorised as:

- Research involving innovation and transfer of technology
- Teaching comprising lifelong learning
- University participation in social and cultural affairs (Mora *et al.*, 2015).

Their role is, therefore, to organise knowledge generation through research and knowledge transfer through education (Etzkowitz & Dzisah, 2008; Lombardi *et al.*, 2019). The finding under this sub-theme provides evidence that this is happening in the universities. However, it may not be to a greater degree as indicated by the low number of the phrases of codes given by the participants.

6.5.2.2 Policies and strategies

The entrepreneurial university concept calls for higher education institutions to develop policies and strategies for embarking on entrepreneurial innovations and initiatives for economic development in the knowledge economy. This is vital to achieve the anticipated widespread effects on the facets of entrepreneurship emerging from the academic spheres (Volkodavova *et al.*, 2019). One of the effects can be derived from the universities’ transformation, which can reveal new ways of stimulating job creation among university graduates to foster sustainable economic growth and employment (Oyugi, 2021). These effects can be determined by measuring a university’s entrepreneurial orientation to predict the spinout of patents and licenses (Tatarski *et al.*, 2020).

The findings from this sub-theme contribute to this body of knowledge. This second sub-theme on policies and strategies is presented with nine phrases of codes, mentioned 19 times, which provide evidence of the existence of policies and

strategies for entrepreneurship in universities. One code, mentioned once, shows no evidence. These codes are: policies, strategies, and procedures exist, development of a five-year strategic plan, the launch of first academic innovative strategy, strategic initiative exists for innovative ecosystem, strategic direction followed through initiatives, strategic objectives and policies exist for job creation and consultancy initiatives, policy exists for transparency and revenue sharing, strategic goals and objectives developed for financial viability and augmentation and lastly, no strategy or policy.

The high frequency of responses on the evidence of the manifestation of the entrepreneurial aspects in the universities indicates that policies and strategies for intrapreneurial behaviour do exist in these tertiary education institutions. Participant #1 provided a number of codes as he mentioned: *“Yes, we have policies. We have strategies, five-year strategies. We try to follow it, you know, because it provides strategic direction.”* Participant #3 also said: *“So yes, this is a policy and strategy that is embedded in the structure...”* while Participant #7 elaborated: *“In 2018, we launched our first innovative strategy. This was a different kind of strategy I have ever seen in the academic environment. When we launched this strategy, a key objective or area was highlighted: to augment the university so that we can maintain financial streams.”*

Participant 8 also added a number of codes by elaborating: *“We have strategic initiatives where we are focusing on idealisation, you know, developing ideas through an innovation ecosystem with support through incubators...our strategic objectives to a very large extent, they do now also talk to, you know, job creation. I will give you an example, you know, with policies that encourage, you know, staff members themselves to engage, you know, in consultancies, you know, consultative initiatives where we provide services to industry.”* On this note, Participant #7 explained: *“Since developing that strategy, I am going to give you what the the University team managed to do to diversify its revenue. So, what we did is that we developed, I would call them companies that augmented the university's revenue streams.”* Participant #7 went on to add, *“There is a procedure that we do. If you have an idea on how to augment the university's revenue streams or bring about intrapreneurial activities.”*

Lastly, one code shows that there are no policies and strategies for intrapreneurial behaviour. With reference to his university's context, Participant #2 said, *"I would not say we have a strategy or policy for an entrepreneurial university, but I would say we have strategic objectives as a university."* This can mean that the strategic objectives in this specific university are not specific to an entrepreneurial university or for supporting intrapreneurial behaviour. However, most of the participants (90%) provided evidence of the existence of policies and strategies for supporting intrapreneurial behaviour in their respective universities.

The evidence provided by most of the participants is in line with various researchers whose findings show that tertiary education institutions are required to introduce strategic management in their operations (Callagher *et al.*, 2015; Benneworth *et al.*, 2016; Aragonés-Beltrán *et al.*, 2017; De La Torre *et al.*, 2017; Mariani *et al.*, 2018). The insight obtained here indicates that when crafting their entrepreneurial strategic visions, the universities do focus on promoting intrapreneurial behaviour among academics. The universities can, therefore, be seen to be endeavouring to become entrepreneurial through their corporate strategies and policies that guide their intentions towards entrepreneurship (Guiri *et al.*, 2019).

6.5.2.3 Industry engagement

Industry engagement is a key component of the university's third mission, which involves creating, using, implementing and exploiting university knowledge, assets and competencies with external stakeholders as well as the general society (Meoli *et al.*, 2018). In performing this mission, universities collaborate with economic actors in the industry to establish and strengthen partnerships (Kotosz *et al.*, 2016). The partnerships are built around the commercialising of scientific research by universities in a process of reciprocal local community engagement, regional development and collective support (Kohtamäki, 2015). The evidence provided under this sub-theme adds to this body of knowledge. Industry engagement is presented with seven phrases of codes, mentioned eight times. These codes are: establishment of stakeholder partnerships, Botswana Innovation Hub encourages innovation, signing of MOUs with the industry, training offered to the industry, review

of programmes for industry needs and lastly, internships and industrial attachments for students and lecturers.

The participants provided evidence of industry engagement in their universities. Participant #10 mentioned: *"We are trying at this juncture to establish stakeholder partnerships to create an innovation hub or an innovation centre to promote this kind of an agenda."* External stakeholders are also seen to be actively participating in the creation of the partnerships, as explained by Participant #9: *"The Botswana Innovation Hub encourages our university to pursue innovation within the society and internationally. They hold workshops for that. You may realise that a lot is going on. They encourage universities to develop entrepreneurial ideas and to share them with the Botswana Innovation Hub so that they can help them and turn the ideas into something productive."* The universities further sign memoranda of agreement with the industry: *"As I touched on the issue of stakeholder partnerships. We have several memoranda of understanding with local industries where we are trying to transfer and apply the knowledge in a diverse context."* (Participant #10).

The partnerships also include the academics providing training for the industry, as explained by Participant #9: *"We have just had a meeting with the Gaborone Mayor, that whatever he has, we can train them from governance up to whatever level, up to emotional intelligence, if there is need so these are some of the things that we do."* On the other hand, the industry also offers services to the universities, as highlighted by Participant #1: *"We also invite guest lecturers from the industry. We invite them even when we are reviewing our programmes so that they can look at our programme structures and how relevant these programmes are to the industry and the needs of the industry."* Lastly, the industry engagement includes internships and industrial attachments for students and lecturers, *"We have our students coming up with projects and research areas, and then they also go for industrial attachment."* These responses indicate an active level of industry engagement in the universities, which is evidence that the third mission has been assigned the importance it deserves and that it is being practically undertaken.

6.5.2.4 Training

Training is a major part of the entrepreneurial university aspects in the universities that participated in this study, as already discussed in the preceding sub-themes. Training takes precedence among the intrapreneurial initiatives firstly because of the faith that has been placed on the potential of these higher education institutions (HEIs) to supply the skills and knowledge needed for innovation and economic growth (Kruss *et al.*, 2015). Secondly and specific to Botswana, the government and policymakers are demanding the country's tertiary educational institutions to promote and encourage entrepreneurship among students with the view that universities are drivers of socio-economic development (Ebewo *et al.*, 2017). According to Lekoko (2011), Botswana's universities must be transformed into entrepreneurial educational centres and activity hubs.

The training sub-theme is presented with eight phrases of codes, mentioned 12 times. These are most ideas, research and projects generated by lecturers and students, academics trained to be entrepreneurial through schools, fostering of entrepreneurship among students, entrepreneurship promoted as a training tool, provision of education for life, training offered through short entrepreneurship programmes and projects, imparting student skills for employability and self-employment and lastly, emphasis on the STEM programme. All these codes provide evidence of how training manifests as a key entrepreneurial aspect in the universities, which aligns with the cited literature. Through the training, both lecturers and students come up with ideas for research to inform their entrepreneurial initiatives, as explained by Participant #5: *"For me, an entrepreneurial university means that the university can have projects for both the staff and students. The university must deliberately make efforts to say how are we are going to ensure that the concept of entrepreneurship is embedded in our curriculum and how are we ensuring that it really works"*.

Participant #6 mentioned: *"We have our students coming up with projects and research areas."* Academics also receive training as explained: *"I think we were going to work to attend the training on weekends, so some people managed to attend and afterwards, we were given a certificate of attendance and participation"*

and completing the Wadhvani Foundation course” (Participant #6). It can be seen that entrepreneurship is being promoted as a training tool, and the training is offered through short entrepreneurship programmes and projects. These are aimed at fostering entrepreneurship among students as well as for the impartation of employability and self-employment skills. Participant #10 mentioned: “We are also at a stage where we are trying to foster entrepreneurship among our students so that they can achieve the objectives of the university. In other words, we are trying to promote entrepreneurship as a tool for maybe training in our institution.”

Participant #5 said: *“We train people through short courses, and I have been part of that.”* Participant #3 said this about entrepreneurship training: *“Yes, actually, it is embedded in the traits of our students or graduates. When they complete, they should actually have that kind of entrepreneurial mindset.”* Participant #4 explained further: *“We want to impart skills that will make them employable in their terms. They can be self-employed. The programmes offered will be directed to making the life of students complete in the sense that we actually pride ourselves on providing education for life.”* Lastly, Participant #4 provided more insight into the entrepreneurial training offered to students: *“From day one, we want to inculcate skills that will make the graduates self-employable if you like. Well, you can even look right when we look at the emphasis on STEM (Science, Technology, Engineering and Mathematics). The STEM programme, you know, teaches those values straight from the beginning to make sure that students can be entrepreneurial and produce something that they can market out there.*

It can be seen that these universities in Botswana use training and research in entrepreneurship as a basis for offering formal education through academic curricula or programmes and entrepreneurship research. This enables them to refine capabilities in individuals’ behaviours, knowledge, skills and attitudes. The goal is ultimately to foster entrepreneurial mindsets through a unified culture across academia and among academic staff (Sá *et al.*, 2018; de la Torre *et al.*, 2018).

6.5.2.5 Leadership and governance

This is another sub-theme on the evidence of the manifestation of the entrepreneurial aspects in the universities. It is presented with one code, mentioned once. Participant #10 presented this evidence: *“In a nutshell, I can safely say we have good leadership and governance. I think that is on us, and that can indicate that we are an entrepreneurial university.”* Lombardi et al. (2019:3394) also share this view on good leadership and explain that the university leadership or management that understands and supports an entrepreneurial culture and strategy is key to the entrepreneurial university. Their decisions, behaviours, and actions are supposed to foster intrapreneurial behaviour. In addition, Stolze and Sailer (2021:1-25) state that the leadership has to be change-oriented, with a clear vision and goals to advance the third mission.

This sub-theme indicates the presence of proper leadership that evaluates the existence of an entrepreneurial agenda and a budget for entrepreneurial activities in the universities. This evidence also gives insight into the role of good governance in the manifestation of the entrepreneurial university aspects. Good governance is demonstrated through a strengthened steering core, which refers to speed, flexibility and focused responses to the increasingly changing requirements (Clark, 1998a). As Miller et al. (2014) pointed out, the changing nature of universities in terms of content, structure, governance and strategies, as influenced by various stakeholders, continues to shape the entrepreneurial university model.

6.5.2.6 Inter-varsity partnerships

This sub-theme was also presented with one code mentioned once. Participant #10 mentioned: *“We are also trying to bring or to collaboratively work with schools or inter-disciplines with other institutions to achieve this kind of agenda.”* This finding contributes to the body of knowledge on the business and organisational context, one of the organisational factors for enhancing the entrepreneurial university. This context involves neighbouring organisations and companies in the same or similar business sector collaborating with the university through formal and informal networks for the sharing of research, knowledge and ideas (Errasti et al., 2018;

Bezanilla *et al.*, 2020). The inter-varsity partnerships that the universities engage in help to achieve exactly this.

6.5.2.7 Consultancies

The sub-theme on consultancies is presented with three phrases of codes that were mentioned three times. These are consultancy collaborations between staff and students, consultancies developing business start-ups and academics writing grant proposals. The small number of codes and their low frequency could mean that consultancies are not widely manifesting among the universities that participated in this study. However, they still provide an insight into the nature of the entrepreneurial university aspects or the intrapreneurial behaviour in the universities. Participant #7 provided a detailed explanation: *“You know, staff members themselves to engage, you know, in consultancies, you know consultative initiatives where we provide services to industry and through such initiatives, it also creates opportunities for such staff to share with students the industry opportunities that they have been exposed to or presented themselves to our students as they engage, as we provide platforms for them to engage with industry, as solution providers as well. That does lead to opportunities for, you know, business start-ups going forward.”* As they undertake consultancy work, academics also seek funding, as mentioned by Participant #9: *“You know lecturers draw, they write proposals, grant proposals to make money and so forth and so forth.”*

Consultancies demonstrate the entrepreneurial university mission, which includes establishing connections between the university and its environment to actively foster local development (Dalmarco *et al.*, 2018). The entrepreneurial university model incorporates consultancy work as a means of logically responding to challenges faced by external stakeholders through the fostering of out-reach initiatives built on technology transfer and knowledge-based start-ups (Audretsch, 2014; Volkodavova *et al.*, 2019). Therefore, the universities demonstrate the entrepreneurial university mission through their consultancies.

6.5.2.8 Business start-up initiatives

As with consultancies, business start-up initiatives also provide evidence of the manifestation of entrepreneurial university aspects in the universities. By developing business start-up initiatives, these universities assume their newly assigned function as catalysts for regional and national economic development in Botswana's developing economy (Culkin, 2016; Guerrero *et al.*, 2014). This function is assigned to entrepreneurial universities because they are natural incubators for potential entrepreneurs through their potential to provide conducive atmospheres for exploring and exploiting new ideas (Culkin, 2016:4-6; Trequattrini *et al.*, 2018). This sub-theme was presented with four phrases of codes, mentioned five times. The codes, which all speak to this function, are: small start-up businesses set up every year, holding of business start-up competitions, initiatives and strategies exist to drive entrepreneurship achievement and growth and development of prototypes.

Business start-ups, therefore, do occur in the universities. As Participant #8 explained: *"On an annual basis, we see direct evidence of that as students graduate with small start-up businesses. It happens, you know, each and every year. This is also supported with several engagements like a business-related or an entrepreneurship-related start-up competition."* Participant #8 went on to elaborate: *"As I did mention, we did start to engage in initiatives, strategies and initiatives that encourage, you know, entrepreneurship such that at the moment we are an academic institution, no question about that, that is actually working towards driving, you know, entrepreneurship achievement, you know, within our students or our graduates. And we have seen that growing over the years. Our strategic objectives to a very large extent, they do now also talk to, you know, job creation through encouraging graduates and enabling them, supporting them, you know, to be entrepreneurial through, you know, focusing on also getting the business start-ups."*

Participant #8 also said: *We have strategic initiatives where we are focusing on idealisation, you know, developing ideas through an innovation ecosystem with support through incubators that we take our students through as part of the innovation ecosystem from idealisation, engagement with the industry for solution provision, coming up with solutions that they suggest to the industry and ultimately*

going out for a business start-up in that initiative.” Participant # 5 provided another strategy that her university employs to drive entrepreneurship achievement and growth. She said: *“We did that project; the university gave us some seed funding.”* Participant #9 provided further evidence on the development of prototypes in his university: *“And then the School of Computing, their students are always developing simulations which we do not know much about if you are not in the School of Computing. They will develop those prototypes.”* The development of prototypes enables the measurement of a university’s entrepreneurial orientation as it predicts the spinout of patents and licenses (Tatarski et al., 2020:1-15). These responses, therefore, indicate a significant measure of these universities’ entrepreneurial orientation.

6.5.2.9 Incubations

Incubations lead to the development of business start-ups in the universities (Compagnucci & Spigarelli, 2020). This sub-theme is presented with three codes, mentioned three times. The codes are: an incubator exists, products are developed from the incubator and plans to develop an innovation hub and incubation centres. Participant #3 mentioned: *“We also have an incubator, but we need to beef it up, and there are some good examples which show the produce from the students.”* On the other hand, Participant #10 said: *“We are now at the stage where we are trying to establish the innovation centre and the incubation centre.”*

Based on the few codes mentioned and their low frequency under the sub-themes of consultancies, business start-up initiatives and incubations, the insight gained is that these entrepreneurial university aspects do not predominately occur in the universities that participated in the study, yet these are the key components of the intrapreneurial behaviour that should be manifesting. These universities need to attain an entrepreneurial focus through their performance of the third mission, which requires the commitment of funds to develop services for society, industry, other institutions and alumni. These services include consultancy work, patent exploitation and registration through the formation of companies, commercialisation of intellectual property, collaborative research, research conferences, venture capital, business

networking and development and innovation partnerships with other industries and entrepreneurs (Compagnucci & Spigarelli, 2020).

6.5.2.10 Building of an entrepreneurial mindset

This is the last sub-theme under the entrepreneurial university theme. It is presented with five codes, mentioned 12 times. This high frequency indicates that the participants experience the building of the entrepreneurial mindset to a large extent in their respective universities. The codes are nurturing students with an entrepreneurial mindset, entrepreneurship in all programmes and activities, entrepreneurship culture is evident, pushing to become entrepreneurial, and academics are expected to demonstrate their capabilities. All these codes show the role universities are adopting in promoting entrepreneurial thinking (Taucean *et al.*, 2018). This role is meant to enable universities to directly impact individuals' views on self-efficacy and their intention to establish new businesses (Bergmann *et al.*, 2016). This ultimately activates and promotes entrepreneurship among diverse organisational stakeholders (Klofsten *et al.*, 2019), improves entrepreneurship capital (Audretsch, 2014) and stimulates economic growth, innovation capabilities and regional competitiveness (Guerrero *et al.*, 2016).

On nurturing students with an entrepreneurial mindset, Participant # 2 said: *"I believe that the University is quite driving in that direction. First of all, by ensuring that there is an entrepreneurship module that runs across the university. Secondly, by trying to promote those students who appear to have an innovative mindset through nurturing them through our E-Lab"*. Participant #3 said, *"Yes, actually, it is embedded in the traits of our students or graduates. When they complete, they should actually have that kind of entrepreneurial mindset."* The entrepreneurial mindset is thus instilled through the curriculum as mentioned: *"The university must deliberately make efforts to say how are we are going to ensure that the concept of entrepreneurship is embedded in our curriculum and how are we ensuring that it really works"* (participant #5), *"we have programmes that are, that fall under the Department of Entrepreneurship."* (Participant #6) and *"We also have entrepreneurship in teaching and learning"* (Participant #10). Participant #10 also added: *"Actually, we have a programme of entrepreneurship, and we also have corporate entrepreneurship as*

one of the programmes that we are offering, and the culture of entrepreneurship is starting to take shape...”

Participant #2 sees the entrepreneurial mindset being developed through efforts by the university to become entrepreneurial: *“I would say to a greater extent this university is trying to push into that direction.”*, while Participant #8 said, *“At the moment, we are an academic institution, no question about that, that is working towards driving, you know, entrepreneurship achievement.”* In all this, academics are expected to demonstrate their entrepreneurial capabilities, as mentioned by Participant #4: *“And so, we are always saying, you know, so what is it that you have done that substantiates, you know, what we try to strive to achieve.”* The universities are putting a lot of effort into developing an entrepreneurial mindset among staff and students.

In summary, sufficient evidence was provided by the participants on how their views and perceptions of the entrepreneurial university relate to their respective universities. The participants were also able to provide evidence of the manifestation of entrepreneurial university aspects in their respective universities. However, certain areas still require more effort and transformation to enhance the implementation of the entrepreneurial university model. It can be noted that the nature of intrapreneurial behaviour in these large tertiary education institutions is mainly demonstrated through entrepreneurial education and initiatives. However, the initiatives need to be enhanced and extensively supported.

6.6 THEME TWO: INTRAPRENEURIAL ACADEMIC

This study sought to find out how an intrapreneurial academic is described based on behavioural traits in the participating universities. This was vital because research on the review of individual-level intrapreneurship is not standard, and so there is a need for more research at this level (Blanka, 2019:921). This is because entrepreneurial employees and their human capital are vital to the success of intrapreneurial initiatives. This has been referred to as intrapreneurial orientation (Blanka, 2019:932). To successfully adopt an intrapreneurial orientation, it is essential to note that the factors that motivate employees to act entrepreneurially depend on their

specific traits, which organisations need to be aware of (Hanson, 2017:319). As such, intrapreneurial dimensions that influence intrapreneurs need to be closely studied (Blanka, 2019:921). Further, this level of research is necessary because intrapreneurial behaviour is mainly a result of employees' individual and personal decisions (Rigtering & Weitzel, 2013:342).

As stated under theme 1, one of this study's empirical objectives was to obtain insight into the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions. Theme 1 presented the findings on the managers' views and perceptions of the entrepreneurial university concept and the evidence of the manifestation of entrepreneurial aspects in Botswana's tertiary educational institutions. Theme 2 focuses on the managers' descriptions of the concept of an intrapreneurial academic and the behavioural traits of both a high and low-performing intrapreneurial academic within the context of their universities. Understanding how an intrapreneurial academic is viewed will also provide insight into the nature of the intrapreneurial behaviour that exists in the universities. This insight will be enhanced by further understanding the behavioural traits that describe a high and low-performing intrapreneurial academic in the contexts of these universities. To achieve this, the researcher specifically asked the participants the following questions; "How would you, as a manager, describe the concept or idea of an "intrapreneurial academic" within the context of this university? "How would you describe the behavioural traits of a high and low-performing intrapreneurial academic?" A wide array of responses were received and transcribed. The number of codes generated by these questions was a total of 135 out of a total of 855 codes. Table 6.7 and figures 6.9, 6.10 and 6.11 on the following pages present the breakdown of the categories and codes.

The main categories of code words that emerged are:

- Possesses self-efficacy
 - Undertakes consultancies and large projects
 - Collaborates in inter-varsity curriculum development
 - Does not solely rely on salary
 - Applies for international funding

- Involved in research and knowledge transfer
 - Employs academic knowledge
 - Research to earn a living
 - Relates teaching to real-life opportunities
 - Contextualises expertise to economic, societal and industry needs
 - Applies knowledge to economic, societal and industry challenges
- Involved in stakeholder engagement
 - Community service
- Demonstrates opportunity recognition and exploitation
 - Identifies and exploits opportunities
- Provides entrepreneurial education
 - Includes entrepreneurship in the module profile
 - Encourages students to be entrepreneurial
- A change agent
 - Continuously brings about change
- Proactive
 - Understands real-life issues and assists students with the issues
 - Generates entrepreneurial ideas
- Innovativeness
 - Innovative
- Possesses business acumen
 - Commodifies abilities and competencies
 - Turns identified solutions into businesses and employment
 - Possesses skills to run business incubation
 - Generates income
 - Develops short courses that bring in clients

The analysis of this theme provides the findings on how the research participants described the concept or idea of an “intrapreneurial academic” within the context of their universities. This concept does exist in the university environment based on the various descriptions that were ascribed to it. These descriptions indicate that the academics endeavour to behave entrepreneurially and take up intrapreneurial initiatives, contrary to Sambo (2018:193), who stated that large tertiary education

institutions do not typically behave entrepreneurially and struggle to promote intrapreneurial activities. Therefore, it can be seen that there has been a significant change towards the adoption of an entrepreneurial orientation in the universities. The participants' descriptions of intrapreneurial academics in their respective universities provide insight into these changes being undertaken by university management to support intrapreneurial behaviour among academics.

It can be seen that the case in universities had changed from the way Hadidi and Kirby (2016:141) observed it when they explained that most academic managers are more concerned about having their key staff involved in entrepreneurial activities and the possible negative effects this may have on the research performance of their institutions. On the contrary, the current situation is clear that academic managers expect their staff to conduct research for knowledge transfer purposes that will bring revenue to the university, apart from solving economic, societal and industry problems.

The code words or phrases that emerged as data under this theme were analysed in Table 6.7 below.

Table 6.7: Intrapreneurial academic

Theme	Sub-themes	Codes and Quotations from participants
Intrapreneurial academic	Possesses self-efficacy	Undertakes consultancies and large projects; Does not solely depend on salary; Applies for international funding: Participant #5: <i>“An intrapreneurial academic is that individual who does not just depend on the university for their salary, who can carry out large projects like consultancies, like applying for international funding and in our school, we have done that.”</i>
	Involved in research and knowledge transfer	Employs academic knowledge: Participant #2: <i>“I think an intrapreneurial academic is someone who utilises their academic knowledge and research in order to earn a living out of it. For instance, I would say if I am a researcher and I am invited to make a presentation, and I cost my time and charge for it for doing so, I become an intrapreneurial academic because I am commodifying my abilities, my competencies, what I can do best.”</i> Relates teaching to real-life opportunities: Participant #4: <i>“I think somebody who is not just bent on, you know, teaching for the sake of teaching but seeking opportunities to relate what you are teaching to real life out there or there are opportunities that may be out there.”</i> Applies knowledge to economic, societal and industry challenges: Participant #8: <i>“They do actually, you know, try and contextualise, you know, the academic content that they are actually, your knowledge, that they are acquiring as skills within, you know, the framework of the application area in terms of where and how can the knowledge they are acquiring be applied and this, therefore, means contextualising that, you know, with the needs of the economy, the society and the industry and be able to use the knowledge that they are acquiring as an academic, either through research and engagements in communities of practice towards, you know, addressing the challenges in the industry, society and economy.”</i>
	Stakeholder engagements	Community service: Participant #1: <i>“Yes, the concept of an entrepreneurial academic is to create a platform, to ensure that or to provide entrepreneurial education for young and aspiring entrepreneurial students and also to engage with stakeholders and realise the vision of various community operatives.”</i>
	Demonstrates opportunity recognition and exploitation	Identifies and exploits opportunities: Participant #4: <i>“Well, I will define an intrapreneurial academic as somebody who ventures to look for opportunities that can be turned into, you know, an income generation scheme once you finish your studies.”</i>
	Provides	Includes entrepreneurship in module profile: Participant #10: <i>“And all academic staff are encouraged to</i>

	entrepreneurial education	<i>have a contemporary topic in their module profile where they are supposed to teach students on issues to do with entrepreneurship."</i> Encourages students to be entrepreneurs: Participant #10: <i>"The university is also encouraging staff to encourage students that they should not just work to do programmes for the sake of looking for employment, but they should do programmes for the sake of creating employment for themselves."</i>
	A change agent	Continuously brings about change: Participant #4: <i>"So that for me would be somebody who is intrapreneurial, it is somebody who is constantly looking for a change, but the change brought about by looking at what he is teaching and what the possibilities are out there in terms of self-employment.."</i>
	Proactive	Understands real-life issues and assists students in dealing with them: Participant #7: <i>"You understand the real-life issues that students are facing and the real issues that they are going to face when they enter the market. As an academic, my perception is that you are supposed to be an entrepreneur, and I am for the idea that an academic or a lecturer or a person in the academic field should be entrepreneurial to help students deal with issues that are affecting them, doing their time in the university and when they have graduated and are going to the market."</i> Generates entrepreneurial ideas: Participant #7: <i>"The intrapreneurial is an area in which we encourage internal staff to come up with entrepreneurial ideas."</i>
	Innovativeness	Innovative: Participant #10: <i>"So, the university also encourages the academic staff to be innovative because of the competition that we are facing, especially in developing market-driven products as well coming up with even the same programme and trying to package it in such a way that at the end of the programme, the graduate is able to create employment for himself and create jobs for others."</i>
	Possesses business acumen	Commodifies abilities and competencies: Participant #2: <i>"For instance, I would say if I am a researcher and I am invited to make a presentation, and I cost my time and charge for it for doing so, I become an intrapreneurial academic because I am commodifying my abilities, my competencies, what I can do best."</i> Possesses skills to run incubation: Participant #3: <i>"I think is that the education sector or I mean the institutions should come up with something like incubation, you know, within the institution, I think that is what even the entrepreneurial institutions do. You come up with, you design a sort of business, and in those businesses, you put now colleagues with skills who know how to run businesses, you see."</i> Generates income: Participant #4: <i>"Somebody who ventures to look for opportunities that can be turned into, you know, an income generation scheme."</i>

Source: Compiled by the researcher

Figure 6.9 below presents the matrix indicating the participants who provided a specific code on this theme.

Figure 6.9: Matrix for intrapreneurial academic

Theme 2: Intrapreneurial academic		Participants									
Sub- themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Possesses self-efficacy	Undertakes consultancies and large projects					X					
	Collaborates in inter-varsity curriculum development					X					
	Does not solely rely on salary					X					
	Applies for international funding					X				X	
Involved in research and knowledge transfer	Employs academic knowledge		X								
	Researches to earn a living		X								
	Relates teaching to real-life opportunities				X						
	Contextualises expertise to economic, societal and industry needs								X		
	Applies knowledge to economic, societal and industry challenges								X		
Involved in stakeholder engagement	Community service	X									
Demonstrates opportunity recognition and exploitation	Identifies and exploits opportunities				X						
Provides entrepreneurial education	Includes entrepreneurship in module profile										X
	Encourages students to be entrepreneurial										X
A change agent	Continuously brings about change				X						
Proactive	Understands real-life issues and assists students							X			
	Generates entrepreneurial ideas							X			
Innovatiness	Innovative										X
Possesses business acumen	Commodifies abilities and competencies		X								
	Turns identified solutions into businesses and employment								X		
	Possesses skills to run business incubation							X			
	Generates income				X						
	Develops short courses that bring in clients						X				

Source: Compiled by the researcher

According to Neessen *et al.* (2018:542), intrapreneurs are recognised by their behaviours, attitudes and characteristics. The analysis of this second theme generated nine critical sub-themes that present the research participants' descriptions of the intrapreneurial academic behavioural traits, attitudes and characteristics in the context of their universities. The first sub-theme stated that an intrapreneurial academic is described as one who possesses self-efficacy. This sub-theme has four codes, mentioned five times. The second one is research and knowledge transfer involvement, with five codes mentioned five times. This is followed by involvement in stakeholder engagement with one code mentioned once. The fourth sub-theme is the demonstration of opportunity recognition and exploitation, also with one code mentioned once. The next is the provision of entrepreneurial education with two codes, mentioned twice. This is followed by a change agent with one code mentioned once. Another sub-theme generated is proactive with two codes, mentioned twice, followed by innovativeness with one code mentioned once. The last sub-theme is possession of business acumen with five codes, mentioned five times.

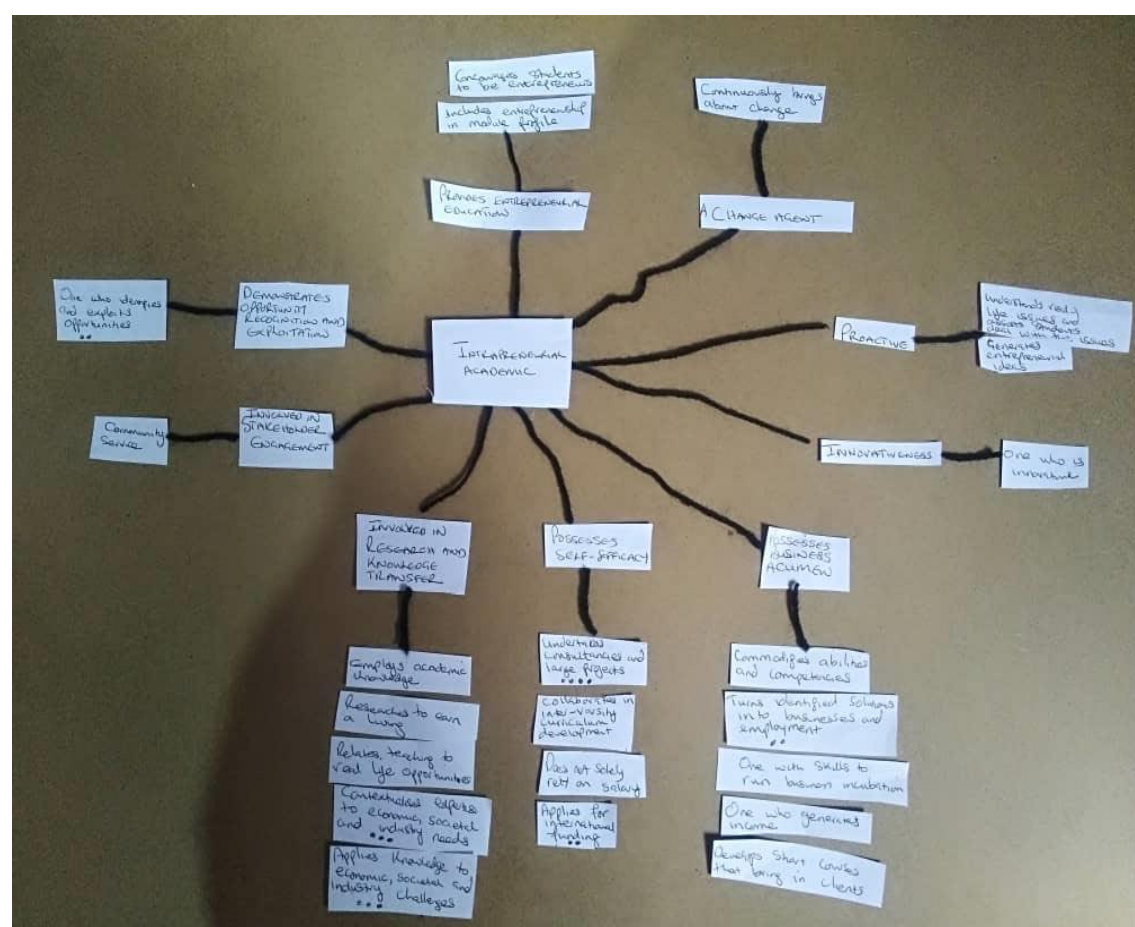
The sub-themes mentioned more frequently are possession of self-efficacy, involvement in research and knowledge transfer and possession of business acumen. These are followed by the sub-themes of providing entrepreneurial education and proactive. The sub-themes mentioned less frequently are involvement in stakeholder engagement, demonstration of opportunity recognition and exploitation, change agent and innovativeness. This finding provides the insight that the managers' descriptions of the concept of an intrapreneurial academic in the context of their universities are mainly built on self-efficacy, research and knowledge transfer, as well as business acumen. However, this description also includes the provision of entrepreneurial education, which has already been identified as a major entrepreneurial aspect in the universities that participated in this study.

The description of an intrapreneurial academic also includes being proactive, involved in stakeholder engagement, demonstrating opportunity recognition and exploitation, being a change agent and being innovative. These behavioural dimensions are among the behaviours referred to in the definitions of intrapreneurship. One such definition is by Neessen *et al.* (2018), which states that

intrapreneurship involves behaviours that exceed expectations, change the organisation's course, and define the organisation's personality as innovative, proactive, and one that involves taking risks. Neessen *et al.* (2018) list the behaviour dimensions of an intrapreneur to include innovativeness/creativity, proactiveness, opportunity recognition and exploitation, risk-taking and networking, most of which are among the participants' descriptions of an intrapreneurial academic. Therefore, the research participants' descriptions of the concept of an intrapreneurial academic are in line with the available literature on this concept or idea.

Figure 6.10 below presents the network diagram of the sub-themes and code words for this theme as directly taken from the code book. Not all the 135 code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

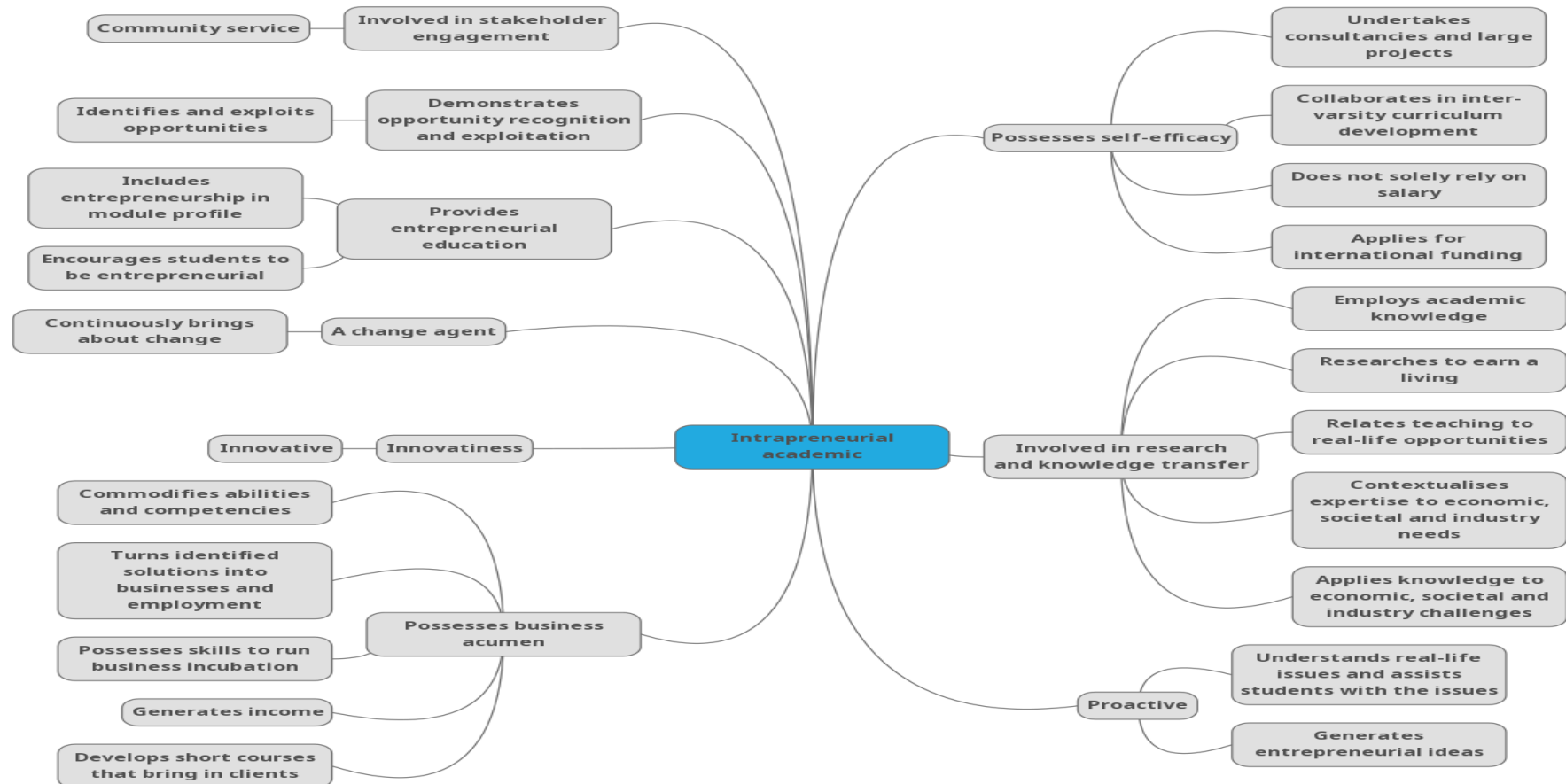
Figure 6.10: Photographic image of intrapreneurial academic - theme 2



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.11 below.

Figure 6.11: Systemised network diagram for theme 2



6.6.1 Descriptions of the concept or idea of an intrapreneurial academic

A detailed discussion of the sub-themes and their respective code words in this sub-heading of Theme 2 is now provided.

6.6.1.1 Possesses self-efficacy

The first sub-theme to describe the concept or idea of an “intrapreneurial academic” within the context of the universities is the possession of self-efficacy. The codes under this sub-theme were all provided by one of the ten research participants, indicating that it may not be a widespread description of an intrapreneurial academic in the context of the participating universities.

Wang *et al.* (2013) define self-efficacy as one’s belief that one can successfully execute a particular task. That belief enables intrapreneurs to broker their abilities by integrating knowledge with organisational knowledge, social capital and networking skills to initiate and develop intrapreneurial projects (Blanka, 2019). Intrapreneurial behaviour increases when employees have higher levels of self-efficacy, which is a consequence of past experience, education and training and the mentoring they have received (Hanson, 2017). The first code under this sub-theme describes an intrapreneurial academic as someone who undertakes consultancies and large projects. This is clearly a consequence of a belief in one’s ability to execute the extensively technical aspects that makeup consultancies and large projects. As such, it can be seen that an intrapreneurial academic is enabled to undertake consultancies and large projects by all these elements of self-efficacy. As described by Participant #5, an intrapreneurial academic is one: *“Who can carry out large projects like consultancies, like applying for international funding and in our school, we have done that. We have applied or been invited, even by people we did not know, to be part of this project. We have applied for a project of Sustainable Development Goals.”* This indicates a high level of self-efficacy among academics.

The second code is collaboration in inter-varsity curriculum development. The ability to develop a curriculum, especially in collaboration with other universities, requires a person with self-efficacy. A person’s belief in their capability to develop curricula

across institutions is what ensures that such initiatives are successfully executed. As explained by Participant #5 again, *“We are going to develop courses, and these courses are going to be shared amongst participating institutions. There are six universities in total in the project. So, if I develop it in Botswana, it is going to be used for students in these other universities that we are collaborating with.”* The expression of self-belief in the ability to develop the required courses at the inter-iversity level is very evident in the response from Participant #5.

The last two codes used to describe an intrapreneurial academic are that such a person does not solely rely on the salary and has the ability to apply for international funding. These codes were also provided by Participant #5, who said: *An intrapreneurial academic is that individual who does not just depend on the university for their salary, who can carry out large projects like consultancies, like applying for international funding.* From these codes, it can be seen that the intrapreneurial academic in the context of this university possesses the self-efficacy that enables them to generate revenue for themselves and the university.

6.6.1.2 Involvement in research and knowledge transfer

This is the second sub-theme that the participants provided to describe the concept or idea of an intrapreneurial academic. Academics' involvement in research and knowledge transfer is one of the main activities in an entrepreneurial university. This is because the entrepreneurial university has expanded traditional university teaching and research missions beyond the sole purpose of creating knowledge. Emphasis has been placed on third mission activities that are built on commercialising newly created knowledge through entrepreneurial initiatives (Cunningham *et al.*, 2022). The third mission is defined as the creation, use, implementation and exploitation of university knowledge, assets and competencies with external stakeholders as well as the general society (Calcagnini *et al.*, 2016; Secundo *et al.*, 2017b; Meoli *et al.*, 2018). The third mission, therefore, involves activities in research and knowledge transfer. The finding under this sub-theme indicates that an intrapreneurial academic in the universities that took part in this study is undertaking the third mission through research and the transfer of knowledge to society at large and to the industry.

The first code under this sub-theme describes an intrapreneurial academic as employing or exploiting academic knowledge. This description falls within the definition of the third mission concept and its group of activities whose main purpose is to connect the university to its surrounding environment (Pinheiro *et al.*, 2015). These activities depend on research and a new management model for delivering university endeavours (Unger & Polt, 2017). This can be seen in what Participant #2 mentioned: *“I think an intrapreneurial academic is someone who utilises their academic knowledge, research, to earn a living out of it.”* The second code in this sub-theme is also highlighted in Participant #2’s response that an intrapreneurial academic researches to earn a living. The money earned is shared between the academics and the university. This finding builds on the study by Monsen *et al.* (2010), who established that intrapreneurial intentions are influenced by expectations of profit distribution derived from intrapreneurial initiatives in an organisation.

The third code describes an intrapreneurial academic who relates teaching to real-life opportunities. Participant #4 said: *“I think somebody who is not just bent on, you know, teaching for the sake of teaching but seeking opportunities to relate what you are teaching to real life out there or there are opportunities that may be out there.”* This teaching approach has become imperative because academics have had to engage in activities aimed at turning research output not only into content for their teaching but also into technological development, establishing new businesses, as well as encouraging change in social and governmental practices (Wadhvani *et al.*, 2017:175-198). These activities are designed around the opportunities that exist in the external environment. What is most significant is that these activities have become deep-rooted in the minds of policymakers (Rubens *et al.*, 2017), as can be seen with the Botswana government’s expectations on the tertiary education sector (NDP 11, 2016; HRDC, 2015; Vision 2036, 2016). As such, the universities have had to adapt to this changing context by becoming more entrepreneurial by promoting intrapreneurial initiatives (Farrukh *et al.*, 2019).

Intrapreneurial practices are believed to be how higher education institutions can cultivate closer connections with markets (Dalmarco *et al.*, 2018; Doin & Rosa, 2019). As such, the finding from this sub-theme contributes to this body of knowledge by highlighting that teaching in universities is related to real-life

opportunities as a means of engaging with markets through value-creation activities (de Moraes *et al.*, 2020).

Similar to the third code, the fourth code under this sub-theme describes an intrapreneurial academic as one who contextualises expertise to economic, societal and industrial needs.

The fifth code adds to the fourth code by describing an intrapreneurial academic who applies knowledge to economic, societal and industry challenges. Participant #8 provided both codes as he described an intrapreneurial academic as: *“One who, even as they go through the rigour of academics within their field or discipline, they do actually, you know, try and contextualise, you know, the academic content that they are actually, your knowledge, that they are acquiring as skills within, you know, the framework of the application area in terms of where and how can the knowledge they are acquiring be applied and this, therefore, means contextualising that, you know, with the needs of the economy, the society and the industry and be able to use the knowledge that they are acquiring as an academic, either through research and engagements in communities of practice towards, you know, addressing the challenges in the industry, society and economy.”* As the academics address these challenges, they enable their universities to become pivotal institutions in the stimulation of economic growth, innovation capabilities and regional competitiveness (Guerrero *et al.*, 2016).

This finding on the intrapreneurial academic is in line with what Etzkowitz (2003b) and Cunningham *et al.* (2019) explain, that faculty members are considered as potential intrapreneurs or agents with the role to create platforms that direct social change, making behavioural shifts possible by altering the fundamental conditions that surround entrepreneurial incentives. It is from this that universities assume the title of entrepreneurial universities, which are mainly seen as the main contributors to competitiveness, economic growth, social and cultural development as well as wealth creation in today's world (de la Torre *et al.*, 2017; Cai & Etzkowitz, 2020). Universities achieve all this through a number of activities that include the purposeful promotion of entrepreneurial skills, innovation, social welfare, economic and technological development as well as the development of human capital (Etzkowitz

et al., 2000; Guerrero *et al.*, 2015), all of which are evidently being undertaken in the universities that took part in this study.

6.6.1.3 Involvement in stakeholder engagement

This next sub-theme describes an intrapreneurial academic as one who carries out initiatives that lead to stakeholder engagement. The code that was provided under this sub-theme is community service. As mentioned by Participant #1, an intrapreneurial academic works: *“To engage with stakeholders and realise the vision of various community operatives.”* This is done so as to create partnerships that are built around the commercialising of scientific research by universities in a process of reciprocal local community engagement, regional development and collective support (Jäger & Kopper, 2014; Ramachandra & Mansor, 2014; Vargiu, 2014; Kohtamäki, 2015). The finding from this sub-theme and code is on the pathways to an entrepreneurial university, specifically on the stage where the university can be seen to be dynamic in commercialising and commodifying the staff's research output. This is the last stage that sees the university engaging with stakeholders to foster growth in the local and regional innovation domain (O'Reilly *et al.*, 2019).

6.6.1.4 Demonstration of opportunity recognition and exploitation

The code under this sub-theme describes an intrapreneurial academic as one who identifies and exploits opportunities. Opportunity recognition and exploitation are some of the behaviour dimensions of an intrapreneur (Neessen *et al.*, 2018). According to Baczynska *et al.* (2016), when creating a new product or process, intrapreneurs identify opportunities and use resources and knowledge to exploit the opportunities successfully. Baggen *et al.* (2016) add that there is a relationship between entrepreneurial employee activities and opportunity identification competence. This is because self-perceived creative self-efficacy influences opportunity recognition. This influence of self-efficacy in opportunity recognition can be seen in Participant #4's description of an intrapreneurial academic: *“I will define an intrapreneurial academic as somebody who ventures to look for opportunities that can be turned into, you know, an income generation scheme...”* The intrapreneurial academic is, therefore, seen here as one who employs their ability and knowledge to

identify opportunities they can exploit for revenue generation. Research shows that an intrapreneurial academic, as can be deduced in Participant # 4's response, is intrinsically motivated by their ability to tolerate personal risk, be persistent, search for new opportunities, ideas and improvements, and the sense of achievement they get from the work they do (Smith *et al.*, 2016; Hanson, 2017).

6.6.1.5 Provides entrepreneurial education

This sub-theme presents two descriptions of an intrapreneurial academic, one that includes entrepreneurship in the module profile and encourages students to be entrepreneurial. Participant #10 mentioned: *“All academic staff are encouraged to have a contemporary topic in their module profile where they are supposed to teach students on issues to do with entrepreneurship, and the university is also encouraging staff to encourage students that they should not just work to do programmes for the sake of looking for employment, but they should do programmes for the sake of creating employment for themselves.”* It can again be seen from this response that the offering of entrepreneurial education is a key feature of the entrepreneurial university in the universities that participated in this study. As pointed out by Participant #10, all staff are encouraged to provide entrepreneurial education and to foster the entrepreneurial mindset among students. This is driven by the need for tertiary education institutions to adapt to the role of promoting entrepreneurial thinking to activate the formation of business activities and to capitalise on societal ideas (Taucean *et al.*, 2018; Vision 2036, 2016).

The universities strategically offer entrepreneurial education to promote entrepreneurship for economic and social soundness (Ahmed *et al.*, 2017; Budyldina, 2018:265-277). The desired outcome of this provision of training and support is for universities to directly impact individuals' views on self-efficacy and their intention to establish new businesses (Bergmann *et al.*, 2016; Saeed *et al.*, 2015). According to Oyugi (2021), universities are transforming to reveal new ways of stimulating job creation among university graduates to foster sustainable economic growth and employment. As various research studies on entrepreneurial universities have consistently emphasised, it can be seen that the universities in this study are also endeavouring to play a critical role in supporting entrepreneurship

(Duruflé *et al.*, 2018; Audretsch *et al.*, 2016; O'Reilly *et al.*, 2019; Cunningham & Menter, 2021; Graf & Menter, 2021; Wagner *et al.*, 2021).

6.6.1.6 A change agent

An intrapreneurial academic is also described as one who continuously brings about change in the context of the universities. Participant #4 said: *"It is somebody who is constantly looking for change, but change is brought about by looking at what he is teaching and what the possibilities are out there in terms of self-employment."* Therefore, this change is a consequence of the type of training provided at the university and the identification of entrepreneurial opportunities in the external environment. These activities affect the transformation of the traditional university mission of research and teaching (Guerrero *et al.*, 2017:150-178) as they include the establishment of connections between the university and its environment to actively foster the bigger picture of local development (Dalmarco *et al.*, 2018).

6.6.1.7 Proactive

An intrapreneurial academic is also seen as proactive in the context of the universities studied. Proactivity is another behaviour dimension of an intrapreneur (Neessen *et al.*, 2018; Baczynska *et al.*, 2016; Urbano & Turro, 2013), and it is also a key element in a university's entrepreneurial orientation. According to Razavi and Ab Aziz (2017), intrapreneurs are proactive in identifying market trends and internal organisational conditions to keep track of opportunities and innovations. These behavioural traits can be seen in the codes provided under this sub-theme.

The intrapreneurial academic was first described as being proactive through their understanding of real-life issues and their ability to assist students with them. Participant #7 mentioned: *"I believe that as an academic, if your work as a job, work is stated to working with students or to dealing with students and you understand the real-life issues that students are facing and the real issues that they are going to face when they go into the market. As an academic, my perception is that you are supposed to be an entrepreneur, and I am for the idea that an academic or a lecturer or a person in the academic field should be entrepreneurial to help students deal*

with issues that are affecting them, during their time in the university and when they have graduated and are going to the market.” The ability to understand real-life issues in the market and to support students in dealing with these issues through innovations is developed from being proactive in understanding both organisational conditions and market trends. This understanding is attained through organisational information creation, which involves correlating the type of information derived with other information through a chain reaction. This way, the universities can achieve self-renewal, which is an intrapreneurial strategy (Ozbozkurt, 2019).

An intrapreneurial academic is also described as proactive through their ability to generate entrepreneurial ideas. This code addresses the idea of employee intrapreneurship, which is conceptualised in terms of employees' agentic and strategic work behaviours whose purpose is to create new businesses for the organisation (venture behaviour) and to progressively improve an organisation's potential to respond to internal and external advancements (strategic renewal behaviour) (Gawke *et al.*, 2019). This refers to intrapreneurial behaviour (IB), which is voluntary employee behaviour involving identifying opportunities, producing ideas, creating new products, and new business lines (Antoncic & Zorn, 2004; De Jong *et al.*, 2011).

As Participant #7 also said, *“The intrapreneurial academic come up with entrepreneurial ideas.”* In generating entrepreneurial ideas, intrapreneurial academics assume a place of great value to the universities. This is because their ability to employ opportunistic tactics and to take advantage of small changes influences significant changes within the entire organisation as it turns their generated ideas into business success (Heize & Weber, 2016; Moriano *et al.*, 2014; Pinchot, 1987). As such, these behaviours of intrapreneurial academics enable them to become implementers of new logic, and so they come up with initiatives that can impact the university's performance at different levels (Fellnhöfer *et al.*, 2017; Kollmann *et al.*, 2017).

6.6.1.8 Innovativeness

Being innovative is another behaviour dimension of an intrapreneur that is widely referred to in the literature (Covin & Slevin, 1991; Lumpkin & Dess, 1996; Knight, 1997; Antoncic & Hisrich, 2001; Morris & Kuratko, 2002; Rigtering & Weitzel, 2013; Gawke *et al.*, 2018:508; Gawke *et al.*, 2019). Innovation refers to significant improvements in a product or process, and as such, intrapreneurial efforts are often to execute these innovations that result from the research and development efforts of individuals or teams (Baum *et al.*, 2014). Intrapreneurial academics that are innovative enable the university to successfully attain rapid growth by applying innovative solutions in their daily business activities, which result in new and improved goods and services (Ozbozkurt, 2019).

As mentioned by Participant #10: *“So, the university also encourages the academic staff to be innovative because of the competition that we are facing, especially in developing market-driven products.”* This gives insight into the highly competitive tertiary education environment that universities in Botswana operate in. There is clearly a demand for universities to develop innovative products that meet market demand if they are to thrive in this environment. Academic intrapreneurs are, therefore, encouraged to possess a significant responsibility to convert ideas into profitable products or services through innovation (Ozbozkurt, 2019:1090-1091). This is because employees' individual innovative behaviour forms the micro-foundation of innovation and intrapreneurship in organisations (Felin *et al.*, 2015:575). In encouraging and supporting an innovative culture, these universities in Botswana are increasing their ability to respond quickly, achieve their objectives, and adapt faster than their competitors (Gürsoy & Güven, 2016:152-153).

6.6.1.9 Possesses business acumen

Under this sub-theme, the codes provided describe an intrapreneurial academic as possessing business acumen through their ability to commodify abilities and competencies and turn identified solutions into businesses and employment. The intrapreneurial academic is seen here to demonstrate their business acumen through the possession of skills to run business incubations and the ability to generate

income as well as to develop short courses that bring in clients. Participant #2 spoke of the commodifying of abilities and competencies: *“For instance, I would say if I am a researcher and I am invited to make a presentation, and I cost my time and charge for it for doing so, I become an intrapreneurial academic because I am commodifying my abilities, my competencies, what I can do best.”* Participant #8 added: *“So, in short, being able to contextualise the academic knowledge within the environment of the society, economy and industry towards providing solutions that can lead to, you know, business emergencies.”*

These descriptions of an intrapreneurial academic in the context of these universities refer to the production, conference and commercial exploitation of practical research findings locally, nationally and internationally, which is a function of entrepreneurial universities (Goethner & Wyrwich, 2019). This potential to activate the formation of business activities makes these higher education institutions (HEIs) the main suppliers of the skills and knowledge needed for innovation and economic growth (Kruss *et al.*, 2015).

In ascribing a behavioural trait for an intrapreneurial academic, Participant #3 explained: *“What I think is that the education sector or I mean the institutions should come up with something like incubation, you know, within the institution, I think that is what even the entrepreneurial institutions do. You come up with, you design a business, and in those businesses, you now put colleagues with skills who know how to run businesses.”* Participant #4 said: *“I will define an intrapreneurial academic as somebody who ventures to look for opportunities that can be turned into, you know, an income generation scheme.”* Participant #6 added: *“So, looking at what we do on a daily basis as academics and as employees, I would say us being given the mandate to come up with short courses that bring clients, mostly private clients and government clients, to the university, I believe that the, well the most thing that we do as an intrapreneurial idea or concept within the university.”*

It can be deduced here that the intrapreneurial academic in the context of these universities demonstrates the skills to effectively run a university’s incubation centre and develop courses for different types of students or clients, all aimed at generating revenue for the university. Like many other universities in the world, these

universities in Botswana are adopting the entrepreneurial culture as a new means of generating imperative funds, partnerships and facilities from diverse sources (Mariani *et al.*, 2018).

6.6.2 Behavioural traits of a high-performing intrapreneurial academic

The research participants were also asked to describe the behavioural traits of high-performing intrapreneurial academics in the context of their respective universities. Although they repeated some of the traits they used to describe the concept or idea of an intrapreneurial academic in their universities, they also provided new traits to describe a high-performing intrapreneurial specifically. Table 6.8 below presents these traits with supporting quotes from some of the participants.

Table 6:8: Behavioural traits of a high-performing intrapreneurial academic

Behavioural trait	Quotations from participants
Top achiever	<i>“I think I just said that someone who really values their worth as an academic and ensures that they do not give away themselves for free but out of what they have, they can earn something. And also someone who does not depend on a salary. An academic who, over and above the paycheck, can use their academic abilities to earn passive income. I think that means a high-flying intrapreneurial academic.”</i> (Participant #2)
Risk taker	<i>“And I also think, a risk taker. I think it is one critical trait because of the stiff competition in the academic environment in which we are operating. He should be a risk taker and come up with solutions to each risky case to achieve the objectives.”</i> (Participant #10)
Ethical individual	<i>“Of course, one who does it ethically, without compromising the principles of ubuntu, maintaining their dignity as an academic”</i> (Participant #2).
Performs opportunity	<i>“Yes, well, the behaviour of such a person, in my view,</i>

recognition exploitation	and	<i>would be somebody who is constantly looking at the market, what is out there, and he constantly, like I said before, looking for opportunities or niche areas which he could then tap into.” (Participant #4).</i>
Researcher		<i>“Yes, well, the behaviour of such a person, in my view, would be somebody who is constantly looking at the market, what is out there, and he constantly, like I said before, looking for opportunities or niche areas which he could then tap into.” (Participant #1)</i>
Committed individual		<i>“You know, behavioural is qualitative, something that is subjective, so not something that is objective, but in terms of traits of high performing intrapreneurs, actually they are expected to, I think commitment is very important.”(Participant #10)</i>
Creative and innovative individual		<i>“A practical lecturer, a business owner, innovative individual, very creative, someone gets involved in developing entrepreneurial ideas to transform the society or just a community maybe of small and medium business people.” (Participant #9).</i>
Change agent		<i>“They need to be a social change agent as an intrapreneurial academic so that you instil the same concept in the students.” (Participant #10)</i>
Resilient collaborative	and	<i>“For me, that would be somebody who is a go-getter, somebody who applies for as many projects as they can because with projects, you are never sure.” (Participant #5)</i> <i>“A person who encourages others to become entrepreneurial, not being selfish.” (Participant #9)</i>
Business oriented		<i>“I think I just said that someone who really values their worth as an academic and ensures that they do not give away themselves for free but out of what they</i>

	<i>have, they can earn something.” (Participant #2).</i>

Source: Compiled by the researcher

Below is a detailed discussion of the traits of a high-performing intrapreneurial academic.

6.6.2.1 Top achiever

Intrapreneurs are top achievers because they are responsible for converting ideas into profitable products or services through innovation and confident risk-taking (Ozbozkurt, 2019:1090-1091). These employees demonstrate proactive efforts that lead to “out-of-the-box” thinking in processes that have a bottom-up set-up (Bosma & Kelley, 2018:32). Such employees tend to deviate from their formal work requirements to increase the variety of their work to contribute to the intrapreneurial goals of an organisation (Gawke *et al.*, 2019).

Participant #2, Participant #8 and Participant #10 provided behavioural traits of a top achiever that are observed in high-performing intrapreneurial academics in the context of their universities. Participant #2 said: “*Such individuals are high fliers who work over and above their paycheck*”. Participant # 8 said: “*High-performing intrapreneurial academics generate tangible output through their academic engagements as they set objectives and targets for developing products and services*”. Participant #10, on the other hand, said: “*High performers are those who step out of their comfort zone in order to come up with disruptive ideas that promote the entrepreneurial spirit in the university*”. These are clearly individuals within the universities who tend to depart from the norm or the customary as they experiment with new inventions in the form of practices, processes, structures and techniques that impact university performance (Fellnhöfer *et al.*, 2017; Kollmann *et al.*, 2017; Hecker, 2017).

6.6.2.2 Risk taker

Risk-taking is a key component of an organisation's entrepreneurial orientation (EO) and, therefore, a vital behavioural trait that a high-performing intrapreneurial academic must possess. Entrepreneurial orientation points to an entrepreneurial organisation as one that takes part in product-market innovation, undertakes somewhat risky ventures, and is the first to introduce 'proactive' innovations, beating competitors to the punch (Miller, 1983:770). This means that EO indicates an organisation's actual entrepreneurial behaviour (Stambaugh *et al.*, 2017) and its performance (Wales, 2016), which depend on intrapreneurs' risk-taking behaviour. This is why risk-taking is referred to as an internal organisational element vital for supporting entrepreneurship within an organisation. This is demonstrated by an organisation's propensity to willingly engage and commit necessary resources for their employees to exploit opportunities with uncertain outcomes (Lumpkin & Dess, 1996).

In line with the literature discussed above, Participant #10 said: *"A high performer is a risk taker because this is a critical behavioural trait needed to face the stiff competition in the tertiary education environment in which universities in Botswana operate."* Therefore, a high-performing intrapreneurial academic has to be a risk taker who comes up with solutions for each risky case to achieve university objectives. The risk-taking capability, thus, enables the universities to engage in bold rather than cautious actions (Lumpkin & Dess, 1996).

6.6.2.3 Ethical Individual

A high-performing intrapreneurial academic was also described as ethical. Ethical behaviour refers to the exhibition of moral and ethical practices that support employee productivity improvements through creative and innovative work behaviour (IWB) (Zahra & Waheed, 2017; Nauman & Qamar, 2018). These studies are, however, specifically on ethical leadership's influence on employees' innovative work behaviour. The assigning of ethical conduct as a behavioural trait of a high-performing intrapreneurial academic is this study's finding, which will contribute to the body of knowledge on the role of ethics in promoting intrapreneurial behaviour.

In his explanation, a participant said: “In being a top achiever or a *high-flying intrapreneurial academic*, one must do this in an ethical way, without compromising the principles of being humane as well as maintaining dignity as an academic.” Being ethical is an imperative behavioural trait, especially because universities and their employees face many challenges in making the entrepreneurial university concept operational and in developing university competencies in entrepreneurial activities (Etzkowitz, 2003b; Volkodavova *et al.*, 2019.) Further, universities and their employees find themselves strategically overloaded as they endeavour to integrate the many missions that they have to embark on, such as excellent research, quality education and the facilitation of knowledge transfer (Benneworth *et al.*, 2017). These challenges call for solutions that are generated and applied by an ethical cohort of academics who will not compromise the processes and competencies needed to operationalise the entrepreneurial university concept and its missions.

6.6.2.4 Involved in opportunity recognition and exploitation

Universities are expected to use their skills to recognise and seize business opportunities (O'Reilly *et al.*, 2019), and this is the work of an academic entrepreneur, who is an academic faculty member who conducts technology commercialisation through the use of formal engagement methods that exploit specific opportunities in the market (Alexander *et al.*, 2015; Miller *et al.*, 2018).

Participants #4 and Participant #5 explained why a high-performing intrapreneurial academic is actively involved in opportunity recognition and exploitation. Participant #4 said: “A *high performer is constantly looking at the market and the external environment to identify opportunities in niche areas which can be tapped into. This is someone who does not just replicate what has been going on in the past but looks for new opportunities, for instance, in the technological trends in this digital age or social media environment, to make a change in people's lives*”. Participant #5 added that: “A *high performing intrapreneurial academic looks for opportunities to generate revenue that they will share with that university*”. Therefore, through a high-performing intrapreneurial academic who identifies and exploits opportunities, these universities can respond quickly to the constantly changing demands of the external

environment by adopting new tasks, activities and values (Volkodavova *et al.*, 2019:1-9).

6.6.2.5 Committed individual

The attitudes of intrapreneurs are observed through these employees' commitment to the organisation. This is because there is a relationship between commitment and intrapreneurial behaviour (Farrukh *et al.*, 2017). Commitment entails an employee's identification with the organisation or a sense of belonging, which influences employee intrapreneurial behaviour (Farrukh *et al.*, 2017). Participant #2 stated: *"A high-performing intrapreneurial academic is someone who strongly values their worth as an academic in a university"*, while Participant #10 said: *"A high performer is seen through a demonstration of commitment, which is a very important behavioural trait"*. This agrees with existing research showing that commitment to the organisation consequently fosters intrapreneurship (Antoncic & Antoncic, 2011:589–607; Giannikis & Nikandrou, 2013).

6.6.2.6 Creative and innovative researcher

Intrapreneurs are also recognised by the behaviour dimensions of innovativeness or creativeness (Neessen *et al.*, 2018:542) because it is their intrapreneurial efforts, whether individually or in teams, that execute innovations from research and development activities (Baum *et al.*, 2014). Participant #9 and Participant #10 explained that a high-performing intrapreneurial academic has to be creative and innovative. Participant #9 said: *"This is an innovative individual who is very creative and gets involved in developing entrepreneurial ideas that transform the society as well as small and medium business people"*. Participant #10 also reiterated this point and said: *"A high performer is innovative and is actually encouraged by the university to have this trait"*. This is because as these universities transform into entrepreneurial organisations, they are gaining the understanding that for them to successfully attain rapid growth, they must apply innovative solutions in their daily business activities so as to produce new and improved goods and services (Ozbozkurt, 2019). The universities attain competitiveness and wealth creation

through creativity and innovativeness (de la Torre *et al.*, 2017; Cai & Etzkowitz, 2020).

6.6.2.7 Change agent

A high-performing intrapreneurial academic must also be a change agent. As a faculty member, an academic is considered a potential intrapreneur or agent with the role of creating platforms that direct social change and making behavioural shifts possible by altering the fundamental conditions that surround entrepreneurial incentives (Etzkowitz, 2003b; Cunningham *et al.*, 2019). Further, intrapreneurship enables organisations to attain competitive advantage as it flourishes on individual employees opting to take up new opportunities and assuming the responsibility to influence creative change (Obeidat *et al.*, 2014). These individuals, referred to as intrapreneurs, are drivers of innovative products and services because they are constantly thinking of the next step in the future. They are passionate change agents who bring transformation to the whole organisation by being highly engaged, clear, and consistent in their work (Govindarajan & Desai, 2013).

In line with this body of literature, Participant #4, Participant #7, and Participant #10 describe a high-performing intrapreneurial academic as a change agent. Participant #4 said: *“A high performer is someone who brings about change in people’s lives through the opportunities that he or she constantly identifies and exploits”*. Similarly, Participant #10 said: *“A high performer is a social change agent”*. Participant 7, on the other hand, said: *“The most important trait of a high performer is being a problem solver that brings about change”*. This change agency role of an intrapreneurial academic enables the universities to contribute to social and cultural development (de la Torre *et al.*, 2017; Cai & Etzkowitz, 2020).

6.6.2.8 Resilient and collaborative

Based on the three general pillars of an entrepreneurial university, namely, education, research and socio-economic development (Dalmarco *et al.*, 2018), many universities strive to become knowledge centres that collaborate with different productive systems and research organisations. This aims to improve the

commercialisation of research results and create new business models through higher levels of research and development (Qiao & Yang, 2015). This calls for an intrapreneurial academic who is resilient and open to collaboration.

Participant #5, Participant #6 and Participant #9 all describe a high-performing intrapreneurial academic as being resilient and collaborative. Participant #5 stated: *“A high performer persistently applies for projects despite the uncertainty involved”*. Participant #6 added: *“A high performer is hard-working, tireless, does assigned work whenever required and is not self-centred.”* This was echoed by Participant #10, who said: *“A high performer is self-less and collaborative as the person shares ideas with others and encourages them to be intrapreneurial.”* All these are characteristics of high performing intrapreneurs which have to do with their skills and abilities including social skills, teamwork skills (Van Dam et al., 2010), persistence, endurance, and implementation of new ideas (Sundin & Tillmar, 2008).

6.6.2.9 Business oriented

Business orientation is a fundamental feature of an entrepreneurial university. An entrepreneurial university is defined as a higher education institution that protects knowledge, its transfer and the commercialisation of innovative business activities between universities and various stakeholders, including the government, based on financial and organisational economic standards (Kalenyuk & Dyachenko, 2016). The business orientation feature is clearly highlighted in this definition, which entails that academics must be business-oriented to implement entrepreneurial university activities.

Participant #2, Participant #9 and Participant #10 point out that high performers must be business-oriented in their academic endeavours. Participant #2 said: *“This is an individual who does not work for free in that he or she earns a living from their expertise”*. Participant #9 added: *“This a practical lecturer in that he or she is a business owner”*, while Participant #10 said: *“This is someone with an entrepreneurial spirit”*. All these responses indicate business orientation as a behavioural trait of high-performing intrapreneurial academics in these universities.

6.6.3 Behavioural traits of a low-performing intrapreneurial academic

The managers were further asked to describe low-performing intrapreneurial academics' behavioural traits in their respective universities' contexts. The behavioural traits provided include risk averseness, no self-efficacy, no recognition of opportunities, low motivation and commitment, self-centeredness, not entrepreneurial/intrapreneurial, purely academic, not proactive, no industry engagement, not a change agent and laziness.

All these behavioural traits reflect personal or individual dimensions that can help to university management to identify academic intrapreneurs as they influence the intentions of individuals to become intrapreneurs (Hornsby *et al.*, 1993; Marchiori *et al.*, 2018:916). In this form, these individual self-determined behaviours of employees deter intrapreneurial behaviour within the universities (Åmo & Kolvereid, 2005:7-19) because they do not stimulate individual entrepreneurial cognitions or motivational dimensions (Kuratko *et al.*, 2005b).

Most of the behavioural traits provided to describe a low-performing intrapreneurial academic are the opposite of those attributed to the concept of an intrapreneurial academic as well as to a high-performing intrapreneurial academic. Therefore, providing a detailed discussion of these traits will be repetitive. As such, Table 6.9 presented on the following page suffices in illustrating these traits with quotations from some of the participants.

Table 6:9: Behavioural traits of a low-performing intrapreneurial academic

Behavioural trait	Quotations from participants
Risk averseness	<i>"I think that one is a reverse of what I was saying but a low performing intrapreneurial academic... someone I think who is not a risk taker." (Participant #10)</i>
No self-efficacy	<i>"You do not have confidence as an intrapreneurial academic. It is difficult to instil the same discipline into your learners or to support this. So, I think those are some of the traits that a low-performing intrapreneurial academic has. And even a negative self-esteem..."</i>
No recognition of opportunities	<i>"So a low-performing intrapreneurial academic is someone who does not recognise the opportunities that surround him as an academic and focuses perhaps on just working for the paycheck at the end of the month." (Participant #4).</i>
Low motivation and commitment	<i>"A low-performing intrapreneurial academic is someone who is low motivated, who does not have motivation, someone who just works when they are rewarded, someone I think who is not a risk taker, someone who is not committed..."</i>
Self-centredness	<i>"I think if you are inconsiderate or if you are, yes, I think inconsiderate. If you are not concerned about what is happening around you, how will you become an intrapreneurial academic?"</i>
Not entrepreneurial/intrapreneurial	<i>"It is an academic really whose focus it is</i>

	<i>only on the quest for knowledge and innovative ideas and contribution to the knowledge and innovation society as a whole but without the need per se, without the drive per se, to start an entrepreneurship agenda... more focusing on academics without actually a core interest in commercialisation per se.”(Participant #8)</i>
Purely academic	<i>“That is just somebody who is employed, is an academic, yes, but he thinks all you do is take your lesson plan, go teach, you are done, close the book, that is it for the day. I mean somebody who is really not interested in changing the situation he is in or even for those he is trying to teach. He is just employed to teach and finish and go.” (Participant #4)</i>
Not proactive	<i>“A person who is dynamic and thoughtful. A person who can work outside his comfort so as to come up with his disruptive ideas...”</i>
No industry engagement	<i>“So, what is more important is to create some kind of relevance in terms of curriculum development to industry inspiration. But if that is missing, it is a challenge.” (Participant #2)</i>
Not a change agent	<i>“I mean somebody who is really not interested in changing the situation he is in or even for those he is trying to teach. He is just employed to teach and finish and go.” (Participant #4)</i>
Lazy	<i>“They are always tired. They are always showing attributes of people who are tired,</i>

	<i>who complain a lot, who nag a lot, who will be saying why are you giving me such kind of work? The work should be given to somebody else because I have worked on this. It is not supposed to be me to work on it, so they are always exhausted. They always show signs of exhaustion and are unwilling to try or participate in tasks put before them.”</i>

Source: Compiled by the researcher

In summary, the participants provided clear descriptions of the concept or idea of an intrapreneurial academic within the context of their universities. Since research on the review of individual-level intrapreneurship is not standard, the findings on this theme contribute to this body of knowledge. The findings are that intrapreneurial academics in the participating universities are mainly described as those possessing self-efficacy and business acumen, are involved in research, knowledge transfer and stakeholder engagement, demonstrate opportunity recognition and exploitation, provide entrepreneurial education, and act as change agents who are proactive and innovative. All these traits also indicate the nature of intrapreneurial behaviour in the universities.

These intrapreneurial academics are considered high performing when their behavioural traits include being business-oriented, resilient and collaborative, committed, creative and innovative researchers, top achievers, risk takers, ethical individuals, change agents and those who perform opportunity recognition and exploitation. Low-performing intrapreneurial academics, on the other hand, were described as being risk averse, having no self-efficacy, demonstrating no recognition of opportunities, having low motivation and commitment, self-centred, not entrepreneurial/intrapreneurial, purely academic, not proactive, not engaging the industry, not change agents and basically lazy.

The behavioural traits of both high-performing and low-performing intrapreneurial academics directly influence the nature of entrepreneurial initiatives taken in the

universities and the extent to which they are carried out. As such, these behavioural traits provide criteria for identifying intrapreneurs to ensure intrapreneurial behaviour's potential to improve the performance of Botswana's large tertiary education institutions. For the universities to successfully adopt an intrapreneurial orientation, it is essential to note that these behavioural traits, determined by employees' individual and personal decisions, influence their intrapreneurial behaviour.

6.7 THEME THREE: UNIVERSITY SUPPORT FOR INTRAPRENEURIAL BEHAVIOUR

This study also sought to find out how the universities in Botswana support intrapreneurial behaviour. This is a crucial aspect as it supports the purpose of this study, which is to propose a framework for supporting intrapreneurial behaviour for improved performance in Botswana's large tertiary education institutions. Both practitioners and academics accept intrapreneurship as the genuine and significant driver of innovative organisational performance and competitive strategy. This is because it increases employees' abilities to identify and exploit new ideas, new strategies for business expansion and new business models for operating an existing business (Hayton *et al.*, 2013; Hadad, 2015; Lambert, 2016).

On the other hand, intrapreneurship is developed by members of an organisation who make the most of all production factors as they look for opportunities and innovations to attain organisational goals and objectives. Therefore, intrapreneurial behaviour must be supported so employees may internalise it (Gursory & Guven, 2016:152). Kuratko *et al.* (2014:39) recommend establishing an internal environment conducive to individual entrepreneurial activity, which must be supported by managers who conduct proper assessments of the key intrapreneurial dimensions. Managers must measure the existence of support for these elements and how employees perceive them. Kuratko *et al.* (2014) further recommend that managers fully commit to establishing intrapreneurial behaviours.

The previous two themes explained the research participants' views, perceptions and descriptions of the entrepreneurial university and intrapreneurial academic

concepts as they manifest in their respective universities. Understanding how the entrepreneurial university and intrapreneurial academic concepts are viewed provided an insight into the nature of the intrapreneurial behaviour that exists in the universities that took part in this study, which is one of this study's empirical objectives. Understanding the nature of the intrapreneurial behaviour in these universities makes it necessary to look at what the universities are doing to support it and the importance of this support. This is so because the manifestation of the entrepreneurial university aspects and the behavioural traits of the intrapreneurial academic will be better understood by looking into the support that is provided.

This theme, therefore, covers the second empirical objective, which seeks to explore the interpretations of the importance of support for intrapreneurial behaviour in Botswana's large tertiary education organisations. The following question was asked to all 10 participants: **"In your experience, how does the university support intrapreneurial behaviour?"**

University support in the question above refers to a management style that supports intrapreneurship and provides a particular climate and political field in which intrapreneurs can thrive (Carrier, 1996:12; Smith *et al.*, 2016). This is, therefore, the role of top management or senior executives who are in charge of an organisation's functional areas (Menz, 2012:45). According to Amo (2010:145), intrapreneurship begins at the top management level through the support for intrapreneurial ideas.

Kuratko *et al.* (2014a) explain that top management support is the degree to which top managers support, facilitate, and promote intrapreneurial behaviour. This support is seen through top management's deliberate efforts to facilitate and promote employees' entrepreneurial initiatives (Zbierowski, 2016). Top management leads the generation of innovative ideas and the provision of the required resources guided by organisational policies and appropriate managerial practices (Alpkan *et al.*, 2010; Bloodgood *et al.*, 2015; Banumathi & Samudhararajakumar, 2015:5). This means that the universities' top management determines the intrapreneurial behaviour that exists and this is revealed in the experiences shared through each participant's responses in this study. The question to the participants resulted in 99 code words, and the sub-categories identified from the code words were:

- Support for process improvement
- Provision of training
- Enabling industry engagement
- Support for initiatives
- Support for business development and revenue generation
- Policy and strategy development
- Setting up of structures
- Inter-varsity collaborations

These sub-categories and quotations directly from the participants' interviews are presented in Table 6.10 on the next page.

Table 6.10: University support for intrapreneurial behaviour

Theme	Sub-themes	Codes and Quotations from participants
University support for intrapreneurial behaviour	Support for process improvement	Conducting of bench-marking exercises: Participant #7: <i>"We are also consistently involved in bench-marking event exercises in which we go to other universities to see what they have done differently that we can adopt as the University."</i>
	Provision of training	Provision of training with the industry: Participant #10: <i>"We have got workshops with industries, we have got public lectures, and we have experts' programmes like currently with the National University of Science and Technology where we are trying to promote the same agenda."</i> Training that benefits academic staff: Participant #2: <i>"So I think that way it is a support for entrepreneurship. Maybe also through exposing the academic staff to training that benefits them. Because remember, when one gets training, it's not the property of the university."</i> Staff receive entrepreneurship training: Participant #2: <i>"So when one is trained on entrepreneurship, they are also empowered to empower the student. So I think by so doing, the university is also supporting or promoting an entrepreneurial spirit among academics."</i>
	Enabling industry engagement	Industry participation in programme development: Participant #1: <i>"Yes, the university supports intrapreneurial behaviour by engaging, as I alluded to, engaging with the industry and involving the industry in the development of programmes..."</i> Signing of MOUs: Participant #7: <i>"I would say we have an open policy or we have a policy in which we collaborate and sign MOUs with different organisations that have the same mindset or that have the same vision with the University. So, we engage with different stakeholders in and around Botswana to help us with our ideas."</i> Invitation of industry experts for knowledge transfer: Participant #10: <i>"Actually, we have got mentorship opportunities where sometimes we invite experts from the industry to come and share with members of staff, even with the students, trying to transfer skills and knowledge from experts to students."</i>

	Support for initiatives	Active involvement in entrepreneurial activities: Participant #5: <i>"I see a lot of the University employees being very active with some entrepreneurial activities."</i> Provision of a research fund: Participant #9: <i>"There is a research fund in the office of the Deputy Director of the Executive Director, Academic."</i> Support for access to grants: Participant #10: <i>"We have funds for projects through grants, but we have not achieved quite a lot in that particular area, but it is one area that the university is trying to support intrapreneurial behaviour in the university."</i>
	Support for business development and revenue generation	Policies for revenue generation: Participant #5: <i>"We have policies that encourage that we make money in the university. And we are implementing those incrementally because we are a very small university."</i> Facilitating solutions that become commercial entities: Participant #8: <i>"Well, I think among academics, what we have seen the University move towards is, you know, providing policies or putting in place policies that allow academics, you know, to engage, within of course, you know, a directed, you know, environment by the policies and procedures of the University, to engage with the industry community and the society at large in the provision of solutions that actually can then result in industry and the academics themselves running, you know, commercial entities within the context of you know, of generating revenue, not only revenue but creating job opportunities. Also does so through, you know, supporting research, research in this case that actually can culminate or realise, if I may say, commercialisable products. Creating this whole ecosystem that will take student ideas from inception to potential commercialisation."</i>
	Policy and strategy development	Policies and strategies for achieving patents: Participant #8: <i>"In short, the University supporting that through its policies, through its strategies, from a perspective of both researching towards a potential, you know, patents, you know, whether achievable or any other research output that can actually, you know, create revenue."</i>
	Setting up of structures	Deputy Vice Chancellor in charge of entrepreneurship: Participant #5: <i>"...in the new structure, we were to have a DVC who was going to be dealing with development issues, and under that portfolio, there were going mainly towards the entrepreneurship route of both the lecturers and the students."</i> Setting up of Competency Department: Participant #7: <i>"We also have a department, a competency development department, that department it really deals with entrepreneurship in our university, diversifying revenue in our university so that is the prevailing structure or that is the prevailing"</i>

		<i>department that helps us to think of such activities.”</i>
	Inter-varsity collaborations	Collaborations with other universities: Participant #2: <i>“And also these collaborations with other universities; locally, regionally and internationally. I think while they are also doing that, an entrepreneurial mindset is promoted.”</i>

Source: Compiled by the researcher

Figure 6.12 on the following page presents a matrix indicating the participants who provided a specific code on this theme.

Figure 6.12: Matrix for university support for intrapreneurial behaviour

Theme 3: University support for intrapreneurial behaviour		Participants									
Sub- themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Support for process improvement	Conducting of bench-marking exercises							X			
Provision of training	Training partnership with an international organisation										X
	Provision of training with the industry										X
	Visits to students on internship	X									
	Training that benefit academic staff		X					X	X		
	Staff receive entrepreneurship training		X								
	Mentorships of alumni businesses			X							X
	Promotion of experiential entrepreneurship programmes			X					X		X
	Support for competitions for idea generation			X							X
Enabling industry engagement	Industry participation in programme development	X									
	Knowledge transfer representations by industry representatives	X									X
	Signing of MOUs							X			
	Approval of external engagements		X	X				X	X		
	Industry-academic collaborations in revenue generation								X		
	Industry-academic collaborations in creating employment								X		
	Fostering collaborations with specific industries										X
Support for initiatives	Support for anything innovative				X						
	Active involvement in entrepreneurial activities					X					
	Conducive environment for entrepreneurial activities					X					
	Provision of financing and facilities						X				
	Provision of proposal and research fund									X	
	Sharing of information on proposals									X	
	Support for access to grants										X
Support fr business development and revenue generation	Policies for revenue generation					X					
	Facilitating solutions that become commercial entities								X		
	Policies and strategies for achieving patents								X		
	Research output that creates revenue								X		
Policy and strategy development	Policies for revenue generation					X					
	Policies for engagement with the industry							X	X		
	Policies and strategies for achieving patents							X	X		
Setting up of structures	Deputy Vice Chancellor in charge of entrepreneurship					X		X			
	Setting up of Competency development Department							X			
Inter-varsity collaborations	Collaborations with other universities			X							

Source: Compiled by the researcher

Intrapreneurship activities are a consequence of top management's desire to support intrapreneurship initiatives and can only flourish through top management's solid support (Bloodgood *et al.*, 2015; Banumathi & Samudhararajakumar, 2015; Antoncic & Hisrich, 2004). The analysis of this third theme generated eight critical sub-themes that present the research participants' experiences on how their respective universities support intrapreneurial behaviour.

The first sub-theme indicates that the top management supports process improvement in the university. This sub-theme has one code mentioned once. The second sub-theme states that top management provides training with eight codes mentioned 14 times. This is followed by the sub-theme stating that top management enables industry engagement with seven codes mentioned 11 times. The fourth sub-theme is support for initiatives with seven codes, mentioned seven times. The fifth is top management's support for business development and revenue generation with four codes, mentioned four times. This is followed by policy and strategy development, with three codes mentioned four times. Another sub-theme generated is the setting up of structures with two codes, mentioned three times. The last sub-theme is that top management supports inter-varsity collaborations with one code mentioned once.

The sub-themes mentioned more frequently are the provision of training and enabling of industry engagement. These are followed by the sub-themes on support for initiatives and support for business development and revenue generation. The sub-themes mentioned less frequently are policy and strategy development, setting of structures, inter-varsity collaborations and support for process improvement. These sub-themes provide the insight that the university's support for intrapreneurial behaviour is, to a large extent, in the provision of training and in fostering industry engagement. To a lesser extent, the support can also be seen in entrepreneurial initiatives and business developments that generate revenue. Management also provides support through policies and strategies, inter-varsity collaborations, and process improvement. However, given the frequency of responses on these sub-themes, it can be said that the participants have limited experiences about these

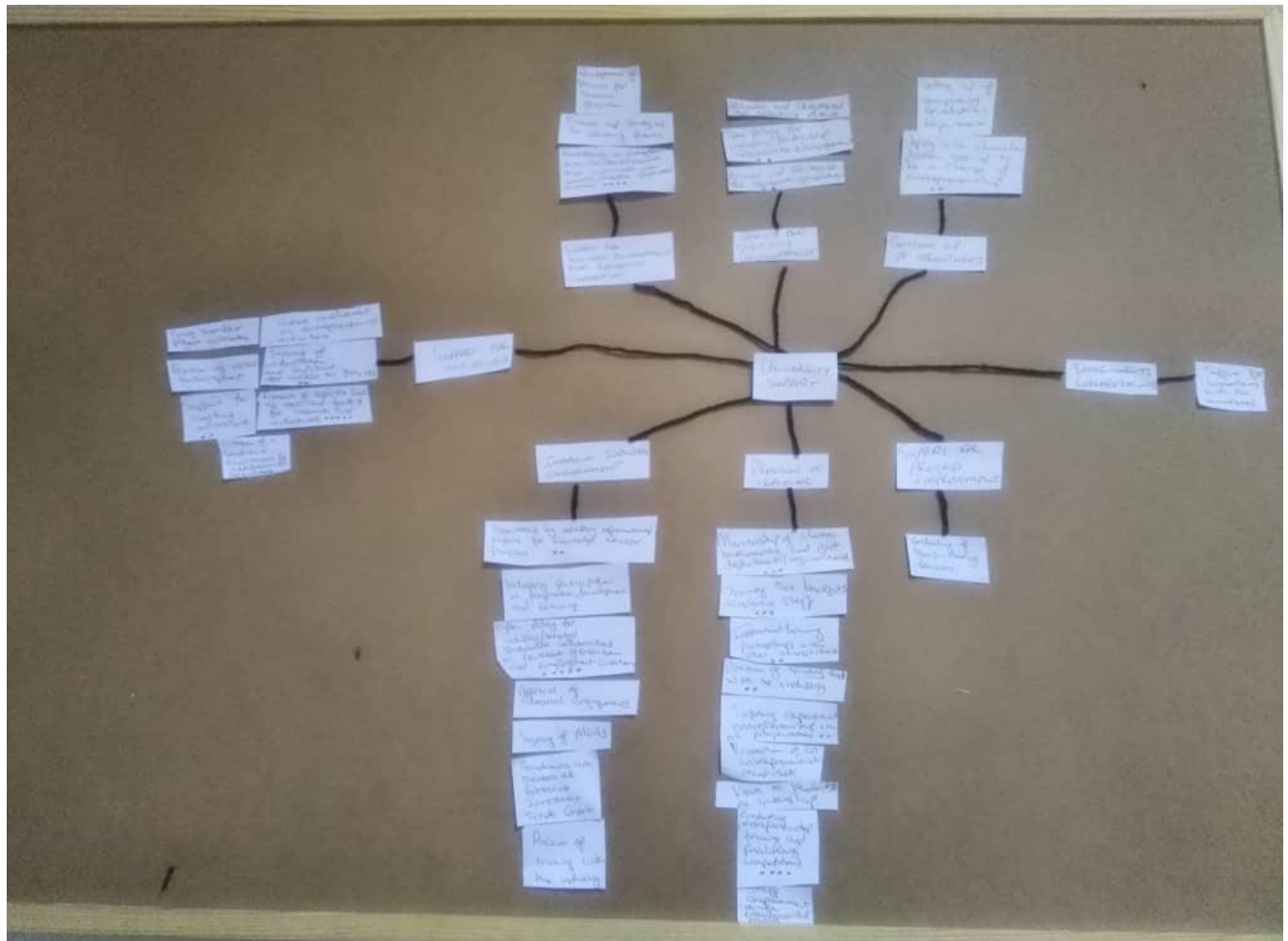
aspects. More top management support is needed to enhance progress in these aspects.

It has been established that top management support determines the ultimate direction of progress in an organisation's intrapreneurial activities (Bloodgood *et al.*, 2015; Banumathi & Samudhararajakumar, 2015). Top management support is further seen as the primary facilitator for intrapreneurial behaviour and process innovation (Lekmat & Chelliah, 2014; Wood *et al.*, 2014; Armesh *et al.*, 2014). Zbierowski (2016:84) adds that intrapreneurship results from the positive attributes of top management leadership. Lukes and Stephan (2017) state that top management support significantly influences employees' innovative behaviour. It is vital for the growth and progression of an innovative culture as it enables intrapreneurs to communicate and execute their innovative ideas (Baruah & Ward, 2014).

Intrapreneurial behaviour is, therefore, an outcome of top management's transformational leadership (Zbierowski, 2016:84). This implies that if top management support for idea generation, risk-taking and reward systems is lacking, employees are most likely to get frustrated with rigid and conservative organisational policies that do not encourage innovation (Alpkan *et al.*, 2013:1). It can be said that the experiences shared by the participants on their respective universities' support for intrapreneurial behaviour provide findings that add to this very crucial body of knowledge.

Figure 6.13 on the next page presents the network diagram of the sub-themes and code words for this theme as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

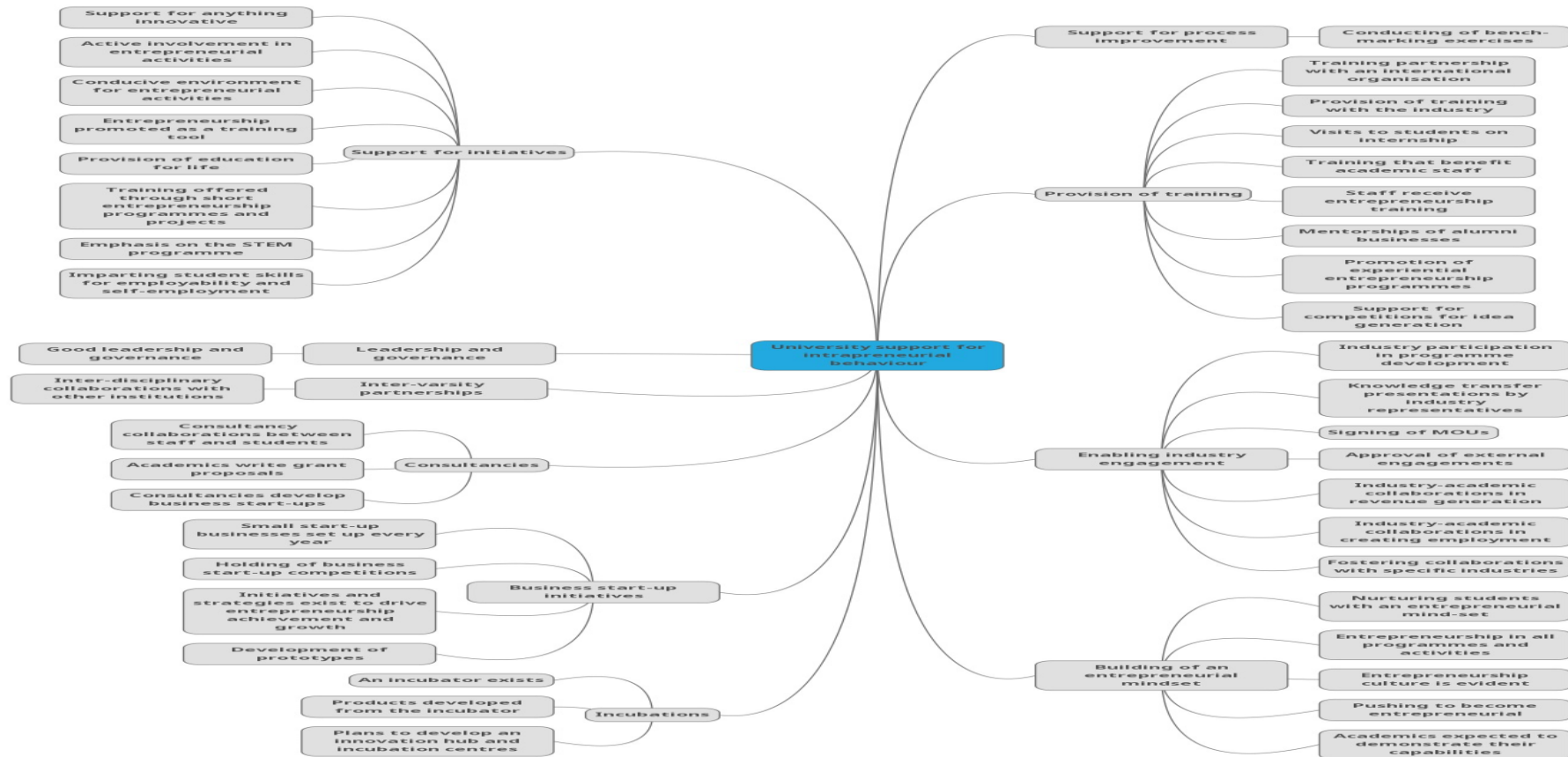
Figure 6.13: Photographic image of university support for intrapreneurial behaviour – theme 3



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.14 below.

Figure 6.14: Systemised network diagram for theme 3



6.7.1 University support for intrapreneurial behaviour

A detailed discussion of the sub-themes in this theme is now provided.

6.7.1.1 Support for process improvement

This first sub-theme has one code, which is the conducting of bench-marking exercises and was mentioned only by Participant #7, who said: *“We are also consistently involved in bench-marking event exercises in which we go to other universities to see what they have done differently that we can adopt as the University.”* Based on this one mention, it can be deduced that this experience is not common in the universities that participated in this study despite its vital importance in stimulating intrapreneurial behaviour. This is possibly because it is only in recent years that governments are expecting organisations such as tertiary educational institutions to orient themselves towards intrapreneurship as they have not been traditionally entrepreneurial by nature (Cantaragiu & Hadad, 2014:833). For universities to meet this expectation, there is a need to execute deliberate process improvement activities that will enable these institutions to adopt entrepreneurial activities and business approaches.

Further, the universities’ research findings are expected to birth knowledge-based businesses that will develop knowledge economies in the 21st century (Sambo, 2018:193). Therefore, these tertiary education institutions must undertake consistent process improvement activities such as bench-marking exercises to identify performance gaps from the best practices in leading entrepreneurial universities.

6.7.1.2 Provision of training

This next sub-theme is the highest form of support that universities provide. The emphasis on the provision of training to foster intrapreneurial behaviour can be attributed to the fact that the entrepreneurial domain is changing rapidly (OECD, 2012). There is, therefore, a constant need for employee upskilling and knowledge acquisition. Universities must have a formal policy for developing their employees’ careers to keep up with the changes and achieve their goals (OECD, 2012:1-54). In

addition, employees' personal knowledge, which is referred to as knowledge obtained from education and training, is one of the key characteristics of intrapreneurs. To further emphasise the importance of training in intrapreneurial behaviour, Martiarena (2013) and Urbano and Turro (2013) argue that intrapreneurs tend to possess high educational qualifications or previous participation in intrapreneurship training in relation to other employees.

And so, to highlight the extent of university support for training, Participant #10 said: *"I remember for the past few years, we were having a partnership with an international organisation which was coming to assist lecturers in terms of training and also capacitating knowledge of entrepreneurship in our students."* This is to show that the university supports training partnerships with international organisations. Participant #10 went on to share that his university supports partnering with the industry to provide training. He mentioned: *"We have got workshops with industries, we have got public lectures, and we have experts' programmes like currently with the National University of Science and Technology where we are trying to promote the same agenda."*

Participant #1 shared the university's support for students' internships. He mentioned: *"Yes, the university supports intrapreneurial behaviour by ... also paying site visits to the students who are doing internship and all the like."* Another participant mentioned management's support for training that benefits the academics. He said: *"...so I think that way it supports entrepreneurship. Maybe also through exposing the academic staff to training that benefits them."* Participant #2 stated that management supports entrepreneurship training for staff: *"While it is meant for training the students, but normally you do not give what you do not have. So when one is trained on entrepreneurship, they are also empowered to empower the student."* This is viewed as entrepreneurial education, which focuses on the university's teaching mission and the development of entrepreneurial capabilities among students and faculty members (Altmann & Ebersberger, 2013; Galán-Muros et al., 2017; Guerrero et al., 2016).

Entrepreneurship education is necessary for the development of human capital, which leads to local developments (Šmídová et al., 2017:499-516), especially when

it includes lifelong learning (Bae *et al.*, 2014; de la Torre *et al.*, 2017). Entrepreneurship education can include, among others, the setting up of knowledge transfer offices (KTOs) and training on basic research, practical applications, local community engagements and professionalism (Popescu *et al.*, 2015). The training component has been clearly highlighted in the research participants' responses.

It was also mentioned that management supports mentorship initiatives. Participant #3 said: *"The University supports intrapreneurial behaviour, and as I said, we use this also as a measure of our performance to see how many graduates are also working out there as employees, how many graduates out there who are also working, I mean, who started their own businesses. You know, we actually help these businesses, we mentor them. Actually, there is what is called BITC. We are actually part of this. We are mentors of this Botswana Investment Trade Centre."* Participant #10 said, *"Actually, we have got mentorship opportunities where sometimes we invite experts from the industry to come and share with staff members, even with the students, trying to transfer skills and knowledge from experts to students. So, the mentorship programme is an opportunity, even in the university, there are those mentorship opportunities..."*

It can be seen that the universities provide ample support for the training of both staff and students so as to foster intrapreneurial behaviour. The emphasis on training can also be seen to be arising from the policies and strategies that governments are adopting, which aim at mobilising universities as stimulants for innovation, competitiveness, and economic growth (Audretsch, 2014; Urbano & Guerrero, 2013;; Vision 2036, 2016; HRDC, 2015; NDP 11, 2016).

In the case of Botswana, the government developed the Education and Training Sector Strategic Plan (ETSSP, 2015-2020), which aimed at reforming the human development landscape in the tertiary education sector. This plan called on tertiary education institutions to embark on new strategies and reforms, which include revision of curricula; up-skilling and motivation of lecturers; matching training with industry needs; providing programmes that would develop skills in areas that have been identified as critical to improve the performance of all key sectors in Botswana's economy and increase the use of technology (NDP 11, 2016). It is,

therefore, evident that the universities have been responding to this call by the government in their support for training.

6.7.1.3 Enabling industry engagement

This sub-theme is the next highest form of university support. Universities are connecting and collaborating with the business world for knowledge sharing and for students to learn experientially (Etzkowitz, 2013a; Fernandez-Nogueira *et al.*, 2018). Participant #1 shared that the university supports industry engagement by facilitating industry participation in programme development and knowledge transfer presentations. He mentioned: *“Yes, the university supports intrapreneurial behaviour by engaging, as I alluded to engaging with the industry and involving the industry in the development of programmes and also paying site visits to the students who are doing internship...and inviting people from the industry to come and make presentations.”*

Participant #7 said that the university supports the signing of MOUs. He said: *“In terms of our stakeholders, I would say we have an open policy, or we have a policy in which we collaborate and sign MOUs with different organisations that have the same mindset or that have the same vision with the University. So, we engage with different stakeholders in and around Botswana to help us with our ideas.”* Seven participants spoke of management support for external engagements or collaborations. For instance, Participant #2 mentioned: *“Maybe the first thing is since as of now the university does not disapprove engagements outside the university as long as it does not compromise one's performance in their core duties, so I think that way it is a support for entrepreneurship”* while Participant #8 said: *“Well I think among academics, what we have seen the University move towards is, you know, providing policies or putting in place policies that allow academics, you know, to engage, within, of course, you know, a directed, you know, environment by the policies and procedures of the University, to engage with the industry community and the society at large in the provision of solutions that actually can then result in industry and the academics themselves running, you know, commercial entities within the context of you know, of generating revenue, not only revenue but creating job opportunities.”*

It can be seen from these responses that the universities are carrying out entrepreneurial activities through entrepreneurial academics. These are referred to as academic faculty members with an entrepreneurial mindset expressed through less formal engagement and collaborative opportunities with commercial partners to enhance their research and teaching objectives (Miller *et al.*, 2018), as can also be observed from the participants' responses. The expected outcome is that the universities will become increasingly economically engaged through informal technology and knowledge transfer activities that mainly involve the generation of highly innovative spin-offs, consultancies, contract research, joint/collaborative research, shared facilities, secondments, training and continued professional development, student placements and student projects (Abreu & Grinevich, 2013; Ferreira *et al.*, 2017). All these outcomes result in notable economic and social value for both academics and their external partners (Abreu & Grinevich, 2013).

6.7.1.4 Support for initiatives

The participants also stated that university management supports initiatives. Participant #4 said that management in his university supports anything innovative. He mentioned: *"So, I must say there is a lot of intent on the management's side to support anything that is innovative."* Participant #5 added that university management provides a conducive environment for entrepreneurial activities. She said: *"The environment is conducive in the University. All the departments are free to do any activity, projects, or anything they would like to do, either as a department or a school or they combine with another school."* Participant #9 spoke of the provision of funds: *"There is a fund for us to start developing proposals, and you can get a little money maybe to do some work. There is a research fund in the office of the Deputy Director of the Executive Director, Academic."*

The support for initiatives enables these universities to adjust to today's rapidly changing markets, consumer tastes, competition, and technologies that require them to support an innovative culture (Gursory & Guven, 2016:152). This culture leads to improved performance and quick response demonstrated through attaining

objectives and adapting faster than competitors (Gursory & Guven, 2016:152; Olughor, 2014:9).

6.7.1.5 Support for business development and revenue generation

Under this sub-theme, Participant #5 stated that her university has developed policies to support revenue generation. She mentioned: *"We have policies that encourage that we make money in the university. And we are implementing those incrementally because we are a very small university."* Participant #8 added that the university facilitates solutions that become commercial entities: *"You know, to engage, within, of course, you know, a directed, you know, environment by the policies and procedures of the University, to engage with the industry community and the society at large in the provision of solutions that actually can then result in industry and the academics themselves running, you know, commercial entities within the context of you know, of generating revenue, not only revenue but creating job opportunities."*

Participant #8 continued to explain that the university supports research output that generates revenue: *"In short, the University supporting that through its policies, through its strategies, from a perspective of both researching towards a potential, you know, patents, you know, whether achievable or any other research output that can actually, you know, create revenue."* This indicates that the expected outcomes of the business developments and revenue generation are mainly attained by the academic, who is the main actor in determining the success of the university's business engagement activities as well as the development of its entrepreneurial potential (Guerrero *et al.*, 2015). It can be seen that the academic's role in the universities in areas of both basic and applied research, teaching and business administration is being supported by the university's top management to support business development and revenue generation.

6.7.1.6 Policy and strategy development

Under this sub-theme, the participants pointed out that the management supports intrapreneurial behaviour by developing policies and strategies. Policies and

strategies ensure that organisations' decision-making processes are guided by formally explained and documented procedures, plans, and policies and not informal processes (De Clercq *et al.*, 2015). University policies are used to measure universities' entrepreneurial orientation and their faculties (Todorovic, 2005; Tatarski *et al.*, 2020). Therefore, the existence of policies and strategies to foster intrapreneurial behaviour, as stated in the participants' responses, indicates a measure of entrepreneurial orientation in the faculties of the participating universities.

Under this sub-theme, five participants mentioned the types of policies that their universities have developed to foster intrapreneurial behaviour. Participant #5 said that there is a policy for revenue generation. She mentioned: *"We have policies that encourage that we make money in the university."* Participant #8 and Participant #9 mentioned the policy for engaging with the industry: *"Well, I think among academics, what we have seen the University move towards is, you know, providing policies or putting in place policies that allow academics, you know, to engage, within of course, you know, a directed, you know, environment by the policies and procedures of the University, to engage with the industry community and the society at large."* (Participant #8). Participant #9 said: *"Also, you know, bringing in a lot of industry representatives to come and talk to students about being an entrepreneur, what it means to be an entrepreneur, what are the challenges and how people can go about it. There should be a lot of connection between ourselves and industry, strong connections."*

Participant # 8 and Participant #9 also spoke of policies and strategies for achieving patents. Participant #8 said: *"In short, the University supporting that through its policies, through its strategies, from a perspective of both researching towards a potential, you know, patents."* Participant #9 added: *"There is a fund for us to start developing proposals, and you can get a little money maybe to do some work."* These policies are developed to formalise university entrepreneurial activities, thereby enhancing their entrepreneurial orientation and intrapreneurial behaviour among academics.

6.7.1.7 Setting up of structures

In order to effectively act entrepreneurially, universities have to take steps to actively make changes in their organisational structures and governance (Dovey & Rembach, 2015). An organisational structure is a dimension that represents the levels of flexibility of the organisation, the communication patterns in the entire organisation and the centralisation of decision-making (Zur & Walega, 2015). All these aspects are concerned with the design of specific positions within the organisational structure (Mintzberg, 1993), which affect the enhancement of intrapreneurship (Delić *et al.*, 2016:44; Hayton, 2005; Hornsby *et al.*, 1999; Kanter, 1985).

In line with this body of knowledge, Participant #5 and Participant #7 spoke of a position and department in their organisational structures responsible for entrepreneurship. Participant #5 mentioned: *“In the new structure, we have a DVC who is going to deal with development issues, and under that portfolio, the DVC is going to be mainly working towards the entrepreneurship route of both the lecturers and the students,”* Participant #7 said: *“We also have a department, a competency development department, that department really deals with entrepreneurship in our university.”* The design of specific positions within these universities’ structures supplies knowledge and reinforcement for entrepreneurial efforts as well as an entrepreneurial atmosphere. This lessens the inherent risks in entrepreneurial processes (Cunningham *et al.*, 2019).

6.7.1.8 Inter-varsity collaborations

Under this sub-theme, only one code was provided: that the university supports collaborations with other universities. Participant #2 is the only one who mentioned this: *“And also these collaborations with other universities; locally, regionally and internationally. I think while they are also doing that, an entrepreneurial mindset is promoted.”* This is referring to internalisation, which involves a number of coordinated activities such as the establishment of joint degrees with universities in other countries, the execution of international research projects, access to a pool of revenue and the international exchange of students, academics and other partners

(Errasti *et al.*, 2018). All these activities constitute the main components of an entrepreneurial university (Errasti *et al.*, 2018), which are being demonstrated in Participant #2's university as it collaborates with local, regional and international universities.

The signal frequency of mention under this sub-theme can be deduced to indicate that the other universities in this study are not actively involved in internationalisation. However, universities must incorporate an international or global perspective into the planning and carrying out of their educational programmes, research and knowledge transfer. This will promote change and development through diverse thinking, which offers new insights that alter traditional methods of teaching. This will also facilitate the accommodation of external stakeholders in managing the entrepreneurial university (Taucean *et al.*, 2018).

6.7.2 Key support factors

To further probe university support for intrapreneurial behaviour, the participants were asked to highlight the key factors in supporting it. Table 6.11 below presents these key support factors with supporting quotations from some of the participants.

Table 6.11 Key support factors

Key support factor	Quotations from participants
Financial support	<i>"It is key to obviously have, you know, financial support towards the development of entrepreneurship, you know, related ideas."</i> (Participant #8)
Effectiveness and efficiency	<i>"To avoid wastage of resources, remember we are dealing with entrepreneurial, we are dealing with things that are not touchable, we are dealing with invisible elements, so due diligence is also quite important in order to achieve this particular objective."</i> (Participant #10)
Good leadership	<i>"I think leadership is very, very critical because without good leadership, this aspect will not be able to be fruitful. So, leadership is very critical"</i>

	<i>in supporting this behaviour.” (Participant #10)</i>
Industry/stakeholder support and engagement	<i>“Also, you know, bringing in a lot of industry representatives to come and talk to students about being an entrepreneur, what it means to be an entrepreneur, what are the challenges and how people can go about it. There should be a lot of connection between ourselves and industry, strong connections.” (Participant #9)</i>
Inter-varsity collaborations	<i>“I think the other thing is availing opportunities to collaborate with particularly the universities showcased as very intrapreneurial. So I think it will be good to provide these collaborative partnerships with such entities so that they would provide an environment for incubating these intrapreneurial cultures that we want to foster.” (Participant #4)</i>
Conducive environment	<i>“...like I said, through policies, you know, through enabling the frameworks that allow, you know, academics who are tutors or lecturers to be able to engage within their academic context as well as be able to run businesses themselves. Because for me, it works better if you could actually have an entrepreneurial, an academic who is trying to develop entrepreneurs within, you know, the institution, who themselves are actually intrapreneurial academics who can actually, you know, lead by example.” (Participant #8)</i>
Relevant human resources	<i>“OK, I can say the key to supporting intrapreneurial behaviour is your human resource. I believe that is where your ideas are coming from, so that means that they need to be nurtured, they need to be covered and they need to be taken good care of. So, if they are well taken care of and well empowered, they are able to support intrapreneurial behaviour or the intrapreneurial exercises that you embark on.” (Participant #7)</i>

Work discretion	<i>"I think these behaviours can be catalysed by one, you know, giving staff the necessary room to breathe if you like, being different from just going to class. I think you need to support staff in terms of time so they have time to even think about the issues besides their normal work routine."</i> (Participant #4)
Policy and strategy development	<i>"The other factor is that the University should deliberately have policies. Recently, I was in a committee where we completed the Student Employability strategy. In that strategy, we are talking about exactly what our students can do so that by the time they leave the university, they have some entrepreneurial skills, can start their own businesses, and can run people's businesses if they do not start theirs."</i> (Participant #5)
Entrepreneurial orientation	There are several factors: access to finance, an entrepreneurial orientation, the ability to take risks." (Participant #1)
Self-efficacy and training	Yes, there are several factors: access to finance, education, self-efficacy." (Participant #1)

Source: Compiled by the researcher

A detailed discussion of the key support factors provided by the research participants is now provided.

6.7.2.1 Financial support

According to Markuerkiaga *et al.* (2014) and Fernandez-Nogueira *et al.* (2018), entrepreneurship funding is one of the internal environment factors that support entrepreneurship and is vital for the autonomy and development of universities. This funding is mainly for research and teaching in entrepreneurship or as seed money for creating entrepreneurship projects, companies and organisations (Bezanilla *et al.*, 2020).

Participant #1 and Participant #8 highlighted financial support as a key factor in supporting intrapreneurial behaviour. Participant #1 said: *“Access to finance from institutions that provide funding for entrepreneurship in Botswana, like the Citizen Entrepreneurship Development Agency (CEDA), is key”*, while Participant #8 mentioned that: *“It is key to have financial support towards the development of entrepreneurship.”* It can be seen that for entrepreneurship to thrive in these universities, there is a need for access to a wide range of funding sources (OECD, 2012).

6.7.2.2 Effectiveness and efficiency

For tertiary education institutions to make the entrepreneurial university concept operational and to develop university competencies in entrepreneurial activities, they must do more than just state strategic goals (Etzkowitz, 2003b; Volkodavova *et al.*, 2019). Universities must apply all their efforts to be effective and efficient as they integrate the many missions that they have to embark on, such as excellent research, quality education and the facilitation of knowledge transfer activities (Benneworth *et al.*, 2017).

Participant # 10 explained: *“It is critical for universities to apply due diligence and to avoid the wastage of resources because entrepreneurial activities involve dealing with things that are not tangible. Due diligence is quite important for the university to achieve the entrepreneurship objective.”* This response resonates with the call on higher education institutions to embark on entrepreneurial innovations and initiatives for economic development in the knowledge economy to have the anticipated widespread effects on the facets of entrepreneurship emerging from the academic spheres (Volkodavova *et al.*, 2019).

6.7.2.3 Good leadership

Good leadership has to do with support from the management team. This factor looks into the leadership or management of the university to analyse their understanding and support of the university’s entrepreneurial culture and strategy through the decisions they make, their behaviours and actions (Lombardi *et al.*,

2019:3394). Participant #10 explained: *“Good leadership is extremely critical because, without it, the entrepreneurship agenda in the universities would not be fruitful. Good leadership is very critical in the support for intrapreneurial behaviour.”*

The finding from this response contributes to the body of knowledge on the need for proper university leadership that evaluates the existence of an entrepreneurial agenda and a budget for entrepreneurial activities. The lack of proper leadership hinders the same development and performance the universities desire. This is the situation in several African tertiary education institutions (Muriisa, 2014).

6.7.2.4 Industry/stakeholder support and engagement

The fostering of partnerships between academics and external stakeholders is said to be pivotal to universities' ability to attain their third mission initiatives (Mora *et al.*, 2015; Secundo *et al.*, 2015; Cesaroni & Piccaluga, 2016; Secundo *et al.*, 2016; Taheri & van Geenhuizen, 2016; Pinheiro *et al.*, 2017). The third mission is defined as the creation, use, implementation and exploitation of university knowledge, assets and competencies with external stakeholders as well as the general society (Calcagnini *et al.*, 2016; Secundo *et al.*, 2017b; Meoli *et al.*, 2018). Participant #1, Participant #8, and Participant #10 all provided key support factors that agree with these researchers.

Participant #1 said: *“Collaboration and institutional support is one of the key factors in fostering intrapreneurial behaviour.”* Participant #8 added: *“Creating a platform for engagement with the industry is key because the industry provides opportunities for students to engage with successful entrepreneurs and learn from their experiences”,* while Participant #10 said: *“Support from stakeholders is a very important and critical factor.”* This evidently highlights that the participation and support of industry professionals, whether from the same or different business sectors, is key in the design, development and delivery of the curriculum as well as in the execution of the third mission (Errasti *et al.*, 2018; Compagnucci & Spigarelli, 2020).

6.7.2.5 Inter-varsity collaborations

This involves the creation of synergies between universities through joint degrees with universities in other countries, the execution of international research projects, access to a pool of revenue and the international exchange of students, academics and other partners (Errasti *et al.*, 2018:71–91). As already discussed above, all of these make the main components of an entrepreneurial university (Errasti *et al.*, 2018). In speaking about the inter-varsity collaborations in his university, Participant #4 explained: *“It is important for universities to avail opportunities for collaborating with particularly universities which have been showcased as being very intrapreneurial so that they would provide an environment for incubating the intrapreneurial cultures that the universities want to foster.”* This is effected through sharing research, knowledge and ideas (Errasti *et al.*, 2018; Bezanilla *et al.*, 2020). Further, the collaborative opportunities with inter-varsity partners enhance the universities’ research and teaching objectives (Miller *et al.*, 2018).

6.7.2.6 Conducive environment

This sub-theme refers to creating a favourable environment for encouraging entrepreneurial activities in universities (Obaji & Olugu, 2014; Budyldina, 2018). To establish this type of environment, universities must have substantial conditions that involve assessing and supporting the third mission activities if academics are to be motivated (Sá *et al.*, 2018). The conditions will provide opportunities for the academic staff to apply their research findings and to diffuse new technologies, which will draw further feedback from the industry, presenting new opportunities to obtain information, skills, and technologies as well as to execute commercialisation initiatives that generate increased profits (Novotny, 2014; Hayter, 2015; Bigliardi *et al.*, 2020).

In stating the importance of a conducive or favourable environment, Participant #2 said, *“It is important to help academics to become entrepreneurial and not to prevent them.”* This emphasises the need to motivate academics to execute entrepreneurial and third-mission activities. Participant #8, on the other hand, said: *“Like I said, through policies, you know, through enabling the frameworks that allow, you know,*

academics who are tutors or lecturers to be able to engage within their academic context as well as be able to run businesses themselves.” These businesses are an outcome of commercialisation initiatives which increase profits for the university and offer personal payoffs for the academics (D’Este & Perkmann, 2011). Therein lies the value of a conducive environment for entrepreneurial activities.

6.7.2.7 Relevant human resources

Relevant human resources for an entrepreneurial university comprise faculty members who possess a scholarly understanding of the scientific features and application aspects of new technology (Miller *et al.*, 2018). Such personnel’s direct participation in entrepreneurship is vital for developing fundamental innovations and commercialised technology (Criaco *et al.*, 2014). Participant #7 explained: *“Human resources are key in supporting intrapreneurial behaviour because they are the source of entrepreneurial ideas, and so they must be nurtured and empowered.”* Participant #10 added: *“The support for intrapreneurial behaviour requires skilled human resources.”* This entails that the universities must have the potential to recruit and develop the academic staff’s confidence in their entrepreneurial skills (Miller *et al.*, 2018:9–37).

6.7.2.8 Work discretion

Work discretion refers to the degree to which one views the organisation as tolerating failure, providing decision-making latitude and freedom from excessive oversight. It also involves the delegating of authority and responsibility to lower-level managers and workers (Kuratko *et al.*, 2014a:39). Giving employees significant decision-making latitude is seen explicitly as an essential means of encouraging their intrapreneurial behaviour (De Jong *et al.* 2015; Kuratko *et al.*, 2005b). Participant #4 explained: *“Work discretion is one of the key support factors for intrapreneurial behaviour... intrapreneurial behaviour can be catalysed by work discretion, which involves giving staff the necessary room to breathe, which would give them a different atmosphere from the classroom. Work discretion also means supporting staff by giving them time to think about other issues outside their normal work routine.”* Giving the staff this kind of support and latitude encourages definite

features of intrapreneurial behaviour, such as proactivity (De Jong *et al.*, 2015) because it enables employees to choose and organise their work freely (Kuratko *et al.*, 2014a:37).

6.7.2.9 Policy and strategy development

According to Taucean *et al.* (2018), this factor involves the analysis of a university's mission statement, policies and strategies to determine whether there is an adaption to the need to enhance entrepreneurial thinking and business creation among students and academic staff. It also involves exploiting ideas in society (Taucean *et al.*, 2018). Concepts such as 'Company/Organisation' or 'Entrepreneurship' must exist in the university's documents on the mission, objectives, vision values, policies and strategic plans to strengthen the entrepreneurial stance, and this must not just be a statement (Errasti *et al.*, 2018; Taucean *et al.*, 2018; OECD, 2016).

Participant #5 and Participant #8 provided policy and strategy development as another key support factor for intrapreneurial behaviour. Participant #5 said: *"The university has developed deliberate policies and strategies for developing students' entrepreneurial skills"*, while Participant #8 added: *"My university has policies and an enabling framework for academic entrepreneurship."* As these universities develop and implement their policies and strategies, they are enhancing the adoption of the third mission and gaining strategic improvements while abandoning traditional management practices and replacing them with new models (Teece, 2018).

6.9.2.10 Entrepreneurial orientation

Entrepreneurial orientation (EO) points to an entrepreneurial organisation as one that takes part in product-market innovation, undertakes somewhat risky ventures, and is the first to introduce 'proactive' innovations, beating competitors to the punch (Miller, 1983:770). An entrepreneurial orientation also refers to an entrepreneurial strategic posture that leads to an advanced positive relationship between knowledge-based resources, organisational performance and effective corporate entrepreneurship (Dess & Lumpkin, 2001). Therefore, EO makes an organisation regarded as innovative, proactive and risk-taking (Rezaei & Ortt, 2018:879).

Participant #1 and Participant #3 spoke of entrepreneurial orientation as another key support factor for intrapreneurial behaviour. Participant #1 stated: *“Entrepreneurial orientation is among the most important factors that establish intrapreneurial behaviour.”* Participant #3, on the other hand, said: *“Entrepreneurial orientation comes with increasing involvement in social entrepreneurship.”* The fact that the universities are adopting an entrepreneurial orientation means that they have recognised that entrepreneurship is a strategy that organisations continually adapt to maximise innovation performance, competitiveness, and overall organisational performance (Lumpkin & Dess, 2001; Kuratko, 2007). These universities use entrepreneurial orientation to improve performance (Rezaei & Ortt, 2018:880).

6.7.2.11 Self-efficacy and training

The self-efficacy factor refers to an individual's perception or belief that they can successfully perform a particular task (Wang *et al.*, 2013). It is recognised that intrapreneurial behaviour increases when employees have higher self-efficacy (Urbano & Turro, 2013). Self-efficacy also has a very close connection to training. The training factor refers to the degree to which the university provides training in entrepreneurship to its staff (Errasti *et al.*, 2018). The training may be in the form of knowledge transfer and in the setting up of spin-off companies to foster entrepreneurship among their students and academic staff (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019). The desired outcome of the training is to directly impact individuals' views on their self-efficacy and intentions to establish new businesses in the university (Bergmann *et al.*, 2016; Saeed *et al.*, 2015).

Participant #1, Participant #2 and Participant #5 highlighted self-efficacy and training as key support factors for enhancing intrapreneurial behaviour. Participant #1 said: *“Self-efficacy is among the key support factors for fostering intrapreneurial behaviour.”* Participant #2 added: *“Empowering staff through training and exposure develops their self-efficacy”*, while Participant #5 said: *“Staff need to be developed in self-efficacy to enhance their intrapreneurial behaviour.”* Staff are being recognised as the main resource in the universities' implementation of the entrepreneurship strategy, the offering of entrepreneurship education, the establishment of business start-ups and all other entrepreneurial initiatives being embarked on (OECD, 2012).

With reference to Participant #2's response, there is a constant need for employee upskilling and knowledge acquisition (OECD, 2012).

The up-skilling and knowledge acquisition means that the staff gain personal knowledge, which is knowledge obtained from education and training. This is a characteristic of intrapreneurs. According to Martiarena (2013), intrapreneurs tend to possess high educational qualifications or previous participation in intrapreneurship training in relation to other employees. This training leads to an increase in spin-offs as it enables employees to have high self-efficacy (Alrumaithi *et al.*, 2015).

In summary, the participants provided evidence that there is university support for intrapreneurial behaviour. This support is in the facilitation of process improvement activities, provision of training, enabling of industry engagement, execution of initiatives, facilitation of business development and revenue generation activities, the development of policies and strategies, the setting up of structures and lastly, in the facilitation of inter-varsity collaborations. From the codes generated and their frequency in the responses, the insight obtained is that the main forms of support that the universities provide are providing training, enabling industry engagement and facilitating initiatives. The least forms of support are in facilitating process improvement activities and inter-varsity collaborations, setting up structures, facilitating business development and revenue generation activities, and developing policies and strategies. More effort must be placed in these areas to fully enhance the academics' intrapreneurial behaviour.

The participants also highlighted several factors that they consider key to supporting intrapreneurial behaviour. These include financial support, effectiveness and efficiency, good leadership, industry/stakeholder support and engagement, inter-varsity collaborations, a conducive environment, relevant human resources, work discretion, policy and strategy development, entrepreneurial orientation, self-efficacy and training. Having explored the participants' interpretations of the importance of support for intrapreneurial behaviour in the tertiary education organisations that participated in this study, the finding is that the universities do support intrapreneurial behaviour, and they regard it with a great level of importance in view of the efforts

being applied. However, there is still a need to increase and improve these efforts so as to better foster the academics' intrapreneurial behaviour.

6.8 THEME FOUR: HINDRANCES TO INTRAPRENEURSHIP

This theme, as is the case with theme three, addresses the empirical objective which seeks to explore the interpretations of the importance of support for intrapreneurial behaviour in Botswana's large tertiary education organisations. Having gained insight from the findings in theme three into the existence of university support for intrapreneurial behaviour, the form in which this support is provided and the factors that are key to the support of intrapreneurial behaviour, this theme seeks to establish which support factors are lacking or missing in the current contexts of the universities. The lacking or missing support factors present hindrances to intrapreneurship, which will provide a further understanding of the interpretations of the importance of support for intrapreneurial behaviour in large tertiary education institutions. These missing support factors or hindrances to intrapreneurship will further clarify the nature of the behavioural traits of the intrapreneurial academic in the universities.

The role of management in supporting intrapreneurial behaviour is crucial because intrapreneurship begins at the top management level through their support for intrapreneurial ideas (Amo, 2010:145). It can be seen that tertiary education institutions require entrepreneurial leadership as the development of an entrepreneurial university needs a good measure of experimentation (entrepreneurialism) and less detailed planning (management) (Schoemaker *et al.*, 2018; Stolze & Sailer, 2021). This experimentation or entrepreneurialism requires management to consider and apply a wide range of factors in their support for intrapreneurial behaviour.

The different codes under this theme can be organised into these different sub-categories, namely:

- Industry linkage
 - Students' skills do not match industry needs

- Clear support for intrapreneurship
 - Not openly stating support for intrapreneurship
- Stimulation of intrapreneurial behaviour
 - Entrepreneurship training only for teaching
 - Being theoretical and classroom-based
 - No communication on intrapreneurial initiatives
 - Entrepreneurship talk but no action
 - Intrapreneurship not fully explored
 - No employee welfare and recreational facilities
 - No support for staff's research
 - Fear of retaining staff
 - No space for thinking
 - Lack of induction programmes
 - Being more academic than entrepreneurial
 - Failure to be vocational
- Rewards
 - Staff complaints due to low income
 - A large share of consultancy revenue goes to the university
 - Incentives not fully promoting entrepreneurial spirit
 - Lack of a reward system
- Staff enthusiasm
 - Cultural socialisation of dependency and quick gratification
 - Staff not keen and motivated to be intrapreneurial
- Understanding the complexity of academic entrepreneurship
 - Academic entrepreneurship is challenging
 - Difficulty in becoming solely entrepreneurial
- Aligning vision to entrepreneurship
 - Non-entrepreneurial visions and objectives in academia
- Nurturing of intrapreneurial behaviour
 - Theoretical understanding of entrepreneurship
 - No intellectual property registration
 - No benchmarking activities
 - Lack of stakeholder support

- No profit-making business
 - Lack of time and resources
- Programme implementation
 - Very slow implementation
- Human resources
 - Lack of human resources

Table 6.12 on the next page presents an overview and quotations directly from the participants to explain the hindrances to intrapreneurship.

Table 6.12: Hindrances to intrapreneurship

Theme	Sub-themes	Codes and Quotations from participants
Hindrances to intrapreneurship	Industry linkage	Student skills not matching industry needs: Participant #1: <i>"The challenge of where some of the students who have done business management and entrepreneurship are not able to fit in with the needs of the industry."</i>
	Clear support for intrapreneurship	Not openly stating support for intrapreneurship: Participant #2: <i>"Maybe to a large extent they are supporting, but maybe it needs to be said openly."</i>
	Stimulation of intrapreneurial behaviour	Entrepreneurship training just for teaching: Participant #2: <i>"Training you on entrepreneurship so that you can be entrepreneurs yourselves, not just for the sake of teaching students."</i> Entrepreneurial talk but no action: Participant #9: <i>"You know, we talk that, but we do not walk it; we still lean towards theory. For me, an entrepreneurial university must really be entrepreneurial."</i> Being more academic than entrepreneurial: Participant #8: <i>"I think we will continue being more academic than entrepreneurial for now if you ask me..."</i>
	Rewards	Staff complaints due to low income: Participant #2: <i>"Because sometimes lecturers who cause a lot of problems are those that are struggling to make a living because the salary is not adequate."</i> Lack of reward system: Participant #6: <i>"It is business at the end of the day, and the way the employees are rewarded or the way the employees are allowed to refresh and rejuvenate."</i>
	Staff enthusiasm	Cultural socialisation of dependency and quick gratification: Participant #5: <i>"I think motivation is low; people are not motivated to become entrepreneurs. And, you know, the cultural context that I come from, I have always been taught to go and buy from someone else. It plays a major role, you know, over-dependence of us on our government, on our management, it delays, that is what I see among us."</i> Staff not keen and motivated to be intrapreneurial: Participant #4: <i>"I think the only thing that is lacking is perhaps staff themselves coming out and then claiming those benefits that would have them to become intrapreneurial."</i>

	Understanding the complexity of academic entrepreneurship	Academic entrepreneurship being challenging: Participant #5: <i>“First and the most I am going to say the University is an open university. Sometimes, trying to organise students who are scattered all over is a challenge. Even if you want them to be able to do projects together. Because sometimes students need to come together and brainstorm an idea, to say what we want to do, trying it together.”</i> Difficulty in being solely entrepreneurial: Participant #8: <i>“You know, I think it is difficult for universities to become solely entrepreneurial.”</i>
	Aligning vision to entrepreneurship	Non-entrepreneurial visions and objectives in academia: Participant #3: <i>“Unless if the objectives or the vision of the university changes now, and it becomes an entrepreneurial university where it promotes that.”</i>
	Nurturing intrapreneurial initiatives	Theoretical understanding of entrepreneurship: Participant #2: <i>“And also these collaborations with other universities; locally, regionally and internationally. I think while they are also doing that, an entrepreneurial mindset is promoted.”</i> Lack of time and resources: Participant #7: <i>“You will see that they will go on many retreats to revitalise their ideas because that is what we do not have in the University.”</i> Participant #10: <i>“Resources are lacking to me. In this structure, resources are lacking, and because of that aspect, there is a challenge...”</i> Lack of stakeholder support: Participant #10: <i>“Stakeholder support is lacking to me. In this structure, stakeholder support is lacking, and because of that aspect, there is a challenge.”</i>
	Programme implementation	Very slow implementation: Participant #5: <i>“We make sure that they are going to be attached to certain organisations where they can learn skills, but having said that, attachment in the University is still happening very slowly. It does not happen as quickly...”</i>
	Human resources	Lack of human resources: Participant #7: <i>“One factor that I think is missing is the human resource factor. It is how the human resources of the University are being supported.”</i>

Source: Compiled by the researcher

Figure 6.15 on the following page presents the matrix indicating the participants who provided a specific code on this theme.

Figure 6.15: Matrix for hindrances to intrapreneurship

Theme 4: Hindrances to intrapreneurship		Participants									
Sub- themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Industry linkage	Student skills not matching industry needs	X									
Clear support for intrapreneurship	Not openly support for intrapreneurship		X								
Stimulation of intrapreneurial behaviour	Entrepreneurship training only for teaching			X							
	Being theoretical and classroom based									X	
	No communication on intrapreneurial initiatives									X	
	Entrepreneurial talk but no action									X	
	Intrapreneurship not fully explored		X								
	No employee welfare and recreational facilities							X			
	No support for staff research		X								
	Fear of retaining staff		X								
	No spaces for thinking			X							
	Lack of induction programme							X			
	Being more academic than entrepreneurial								X		
	Failure to be vocational									X	
Rewards	Staff complaints due to low income		X								
	Large share of consultancy revenue going to university		X								
	Incentives not fully promoting entrepreneurial spirit		X								
	Lack of a reward system						X	X			X
Staff enthusiasm	Cultural socialisation of dependency and quick gratification										X
	Staff not keen and motivated to be intrapreneurial				X					X	
Understanding complexity of academic entrepreneurship	Academic entrepreneurship being challenging			X		X					
	Difficulty of being solely entrepreneurial									X	
Aligning of vision to entrepreneurship	Non entrepreneurial visions and objectives in academia			X							
Nurturing of intrapreneurial initiatives	Theoretical understanding of entrepreneurship			X							
	No intellectual property registration			X							
	No bench marking activities			X							
	Lack of stakeholder support										X
	No profit making business			X							
	Lack of time and resources							X			X
Programme implementation	Very slow implementation					X					
Human Resources	Lack of human resources							X			

Source: Compiled by the researcher

Projects to activate intrapreneurship fail due to several hindrances that may exist in the organisation's internal and external environment (Buekens, 2014:580–586). It must be stated from the onset that stimulating employees' entrepreneurial work behaviour is a complicated process (Bysted & Jespersen (2014:217-241). The analysis of this fourth theme generated ten critical sub-themes presenting the interviewed managers' identification of the hindrances to intrapreneurship in their respective universities.

The first hindrance is the lack of industry linkage. This sub-theme has one code mentioned once. The second sub-theme is the unclear support for intrapreneurship with one code mentioned once. This is followed by the sub-theme on the limited stimulation of intrapreneurial behaviour with 12 codes mentioned 12 times. The fourth sub-theme is the lack of rewards with four codes, mentioned six times. The fifth is the lack of staff enthusiasm with two codes, mentioned three times. This is followed by a lack of understanding of the complexity of academic entrepreneurship, with two codes mentioned three times. Another sub-theme identified is the failure to align vision to entrepreneurship with one code, mentioned once. The next sub-theme is the poor nurturing of intrapreneurial initiatives with six codes, mentioned seven times. Another sub-theme identified is poor programme implementation, with one code mentioned once. The last hindrance identified is the lack of human resources. This sub-theme has one code mentioned once.

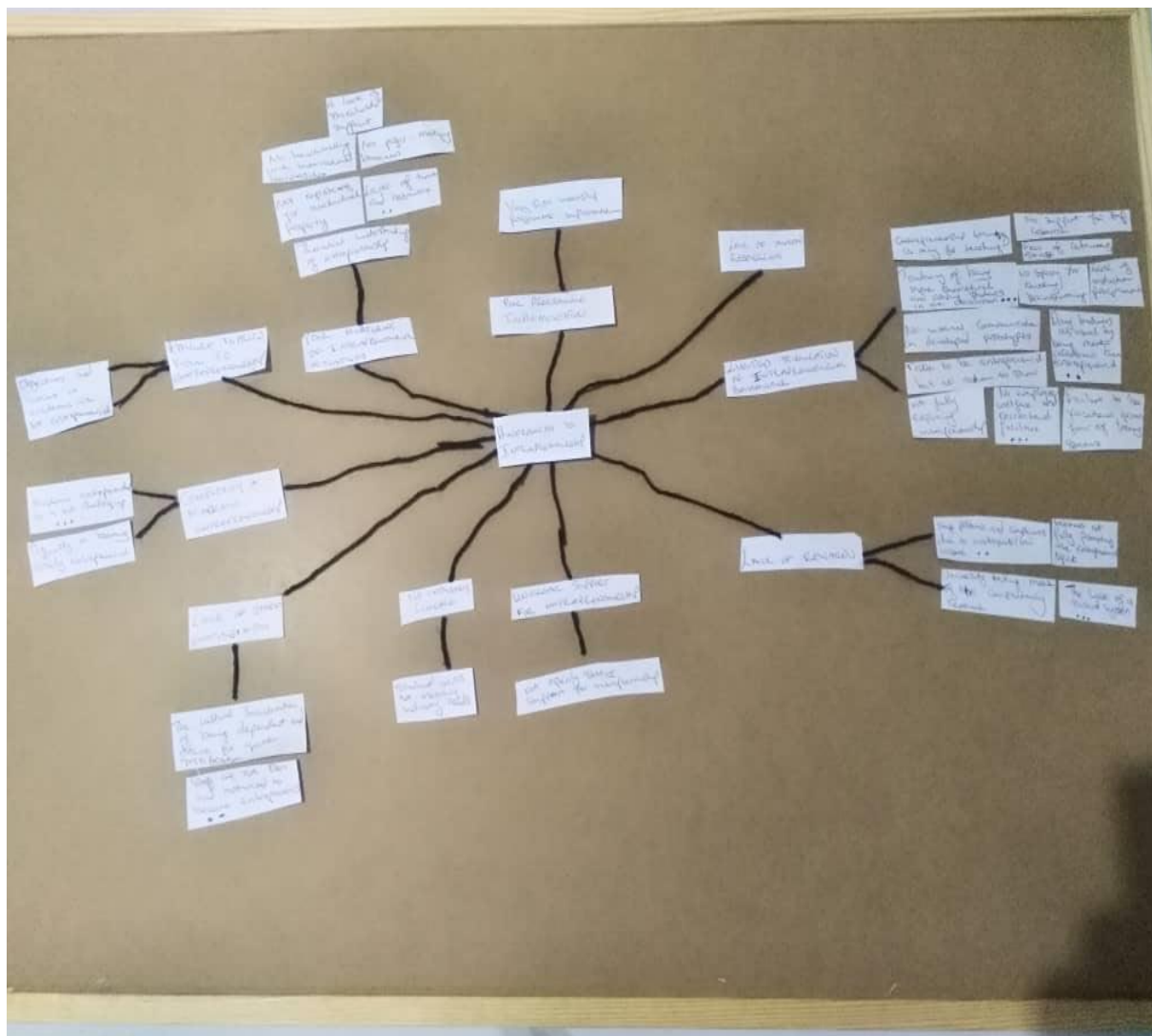
The hindrances mentioned more frequently are the limited stimulation of intrapreneurial behaviour, poor nurturing of intrapreneurial initiatives and the lack of rewards. The sub-themes on the lack of staff enthusiasm and the lack of understanding of the complexity of academic entrepreneurship follow these. The sub-themes mentioned less frequently are the lack of industry linkage, unclear support for intrapreneurship, failure to align vision to entrepreneurship, poor programme implementation and the lack of human resources. This provides the insight that the universities do have several lacking or missing support factors that hinder the enhancement of intrapreneurial behaviour among academics.

The hindrances to intrapreneurship in Botswana were also presented in the study by Botha and Nyanjom (2011), which found that intrapreneurship orientation in Botswana is affected by a wide range of barriers such as organisational structures, policies and procedures, established control systems, management, leadership and organisational culture. All these internal organisational factors determine the nature of prevailing support for intrapreneurship (Stam & Spigel, 2016:7). The missing support factors in the universities generated under this theme can be said to be a consequence of the same range of barriers that were identified in Botha and Nyanjom's 2011 study. This study's findings, therefore, build on Botha and Nyanjom's 2011 findings.

The hindrances to intrapreneurship indicate that top management is not conducting proper assessments of the key intrapreneurial dimensions in the universities. As such, they are not fully supporting establishing an internal environment conducive to individual entrepreneurial activity. The top managers need to measure the existence of support for the intrapreneurial dimensions and how employees perceive them. They need to be fully committed to establishing intrapreneurial behaviours (Kuratko *et al.*, 2014:39).

Figure 6.16 on the following page presents the network diagram of the sub-themes and code words for this theme as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

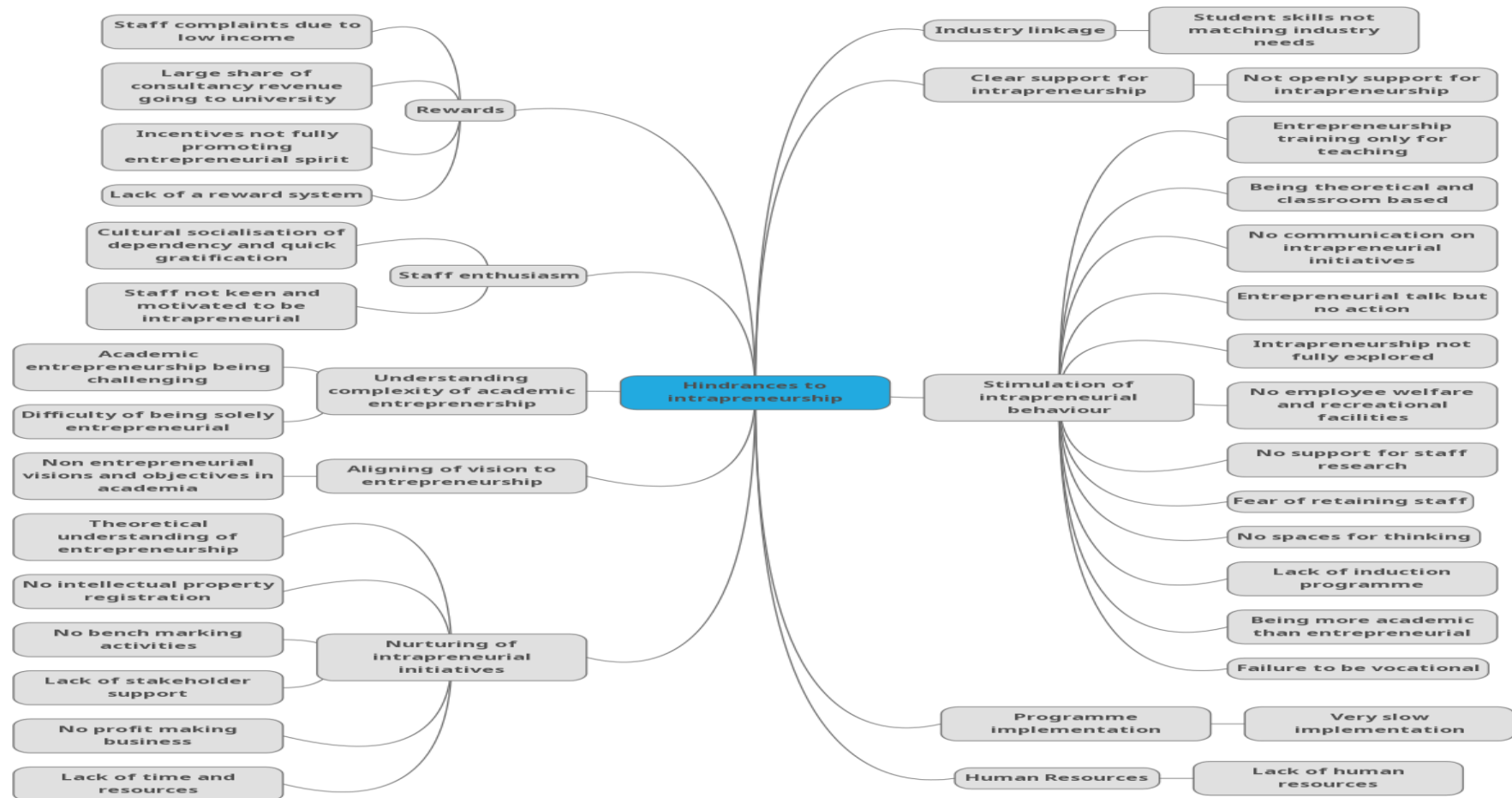
Figure 6.16: Photographic image of hindrances to intrapreneurship – theme 4



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.17 below.

Figure 6.17: Systemised network diagram for theme 4



A detailed discussion of the sub-themes in this theme is now provided.

6.8.1 Industry linkage

This first sub-theme has one code: the student skills do not match industry needs. This was mentioned by Participant #1, who said: *“Some of the students who have done business management and entrepreneurship are not able to fit in with the needs of the industry.”* Although this factor was mentioned by only one of the participants, it is one of the main challenges that Botswana's tertiary education sector faces. It has been documented that there is a need to match the skills produced by the education system with the needs of the economy (NDP 11, 2016:54). The tertiary education institutions in Botswana have not been able to sufficiently produce a highly skilled and productive workforce (Vision 2036, 2016:1-20). This has been attributed to several specific challenges that have been identified in this sub-sector of Botswana's economy. These include, among others, the very little collaboration between the institutions and the industry (NDP 11, 2016).

This emphasises the critical need for the university management to enhance industry engagement in the execution of entrepreneurial initiatives as well as in the design and delivery of the curriculum. Such linkages with the industry can potentially enhance university-business collaborations and transfer fundamental skills to upcoming entrepreneurs (De Luca *et al.*, 2014; Compagnucci & Spigarelli, 2020). The industry engagement may include guest lecturers or alumni who possess vital skills and external perspectives that do not exist within academic institutions (OECD, 2012).

6.8.2 Clear support for intrapreneurship

This sub-theme was also presented with one code that states that university management does not openly support intrapreneurship. Participant #2 mentioned: *“Maybe to a large extent they are supporting, but maybe it needs to be said openly.”* This statement provides the insight that management in this university has not clearly stated support for intrapreneurial behaviour to the academics. However, to support employees with entrepreneurial potential, the management support should

be clearly stated, as well as the models that management is employing to drive intrapreneurship at the organisational level (Karacaoglu *et al.*, 2013; Wolcott & Lippitz, 2007; Carroll, 2014).

There is a need for organisational ownership, which points to a person who is accountable for the innovation and new business that is an outcome of intrapreneurship (Wolcott & Lippitz, 2007). The provision of resources in terms of how time and financial resources are allocated for new business should also be clearly stated (Wolcott & Lippitz, 2007; Puech & Durand, 2017; Neessen *et al.*, 2018:560). This way, management can effectively build on the latent employee entrepreneurial potential or behaviour of intrapreneurs.

6.8.3 Limited stimulation of intrapreneurial behaviour

This sub-theme had 12 codes, the highest among all the sub-themes. The codes indicate the hindrances to stimulating intrapreneurial behaviour in universities and these are: entrepreneurship training is only for teaching purposes, the tendency of the universities to be theoretical in their approach and keeping the students in the classroom, the lack of internal communication on intrapreneurial initiatives being carried out, the tendency to talk about entrepreneurial initiatives but not taking action, intrapreneurship is not fully explored, there being no employees welfare and recreational facilities to help them rejuvenate and think of entrepreneurial ideas, the lack of support for research among staff, the fear of retaining staff after they develop their intrapreneurial behaviour, the lack of spaces for staff to have thinking time, the lack of induction programmes for staff to understand the intrapreneurial strategies in the universities, the universities being more academic than entrepreneurial in their operations and the failure for universities to be vocationally oriented due to fear of losing their “high tower” status.

In sharing these aspects, the participants highlighted which areas of support are lacking, thereby hindering the enhancement of intrapreneurial behaviour in the universities. To quote some of the participants, Participant #3 said: *“So perhaps if the university will say that we are now training you on entrepreneurship so that you can be entrepreneurs yourselves, not just for the sake of teaching students.”* This

statement builds on the fact that the training and research in the universities are mainly for the purpose of refining capabilities in the academics' behaviours, knowledge, skills and attitudes in entrepreneurship education or training (de la Torre *et al.*, 2018). However, the goal should be to foster entrepreneurial mindsets through a unified culture across academia and among academic staff in their teaching and beyond (Sá *et al.*, 2018). Participant #7 said: *"The way the employees are allowed to refresh and rejuvenate is that you will have a gym room where they work. You will see that they will go on many retreats to revitalise their ideas because that is what we do not have in the University"*, while Participant #9 said: *"But we still, all the universities, we call ourselves entrepreneurial, we hold students in the classroom. I do not like it that way. We have failed as universities to be vocational. It is like it takes away our status, you know. So, but then we also, you know, we always want to be vocational, but we do not want to let go of that traditional way of teaching. You cannot teach entrepreneurship as a theoretical concept."* These responses indicate the aspects that work against the same intrapreneurial behaviour that the universities are striving to stimulate among the staff and students.

6.8.4 Lack of rewards

Rewards fall under some of the most influential factors that motivate employees to develop their entrepreneurial competencies, thereby contributing to organisational performance (Turner & Pennington, 2015). However, rewards are lacking in the universities. This sub-theme is on this lack of rewards and is presented through four codes: staff complaints due to low income, a large share of consultancy revenue going to the university, incentives not fully promoting the entrepreneurial spirit, and the lack of a reward system. Participant # 2 said: *"Sometimes lecturers who cause a lot of problems are those that are struggling to make a living because the salary is not adequate. Another way that I think we can improve, we have it, but I think it can be expanded: the Consultancy Policy, where the employees who engage in consultancy declare a certain percentage to the university, but they remain with the larger chunk. I think if the university could incentivise those who participate in corporate training more, they would promote the entrepreneurial spirit."*

In addition, Participant #6, Participant #7, Participant #9 and Participant #10 spoke of the lack of a reward system in their respective universities. Participant #10 said: *“A reward system is also very important, which I think at the moment is lacking.”* These rewards can be both intrinsic and extrinsic (Baskaran *et al.*, 2018; Badoiu, 2020; Mahaney & Lederer, 2006). Intrinsic rewards are those that result from the job and include passion, autonomy and accomplishment. On the other hand, extrinsic rewards include those rewards outside the job experience, such as income and security (Mazzei *et al.*, 2017; Mahaney & Lederer, 2006). The statements from the participants mainly hinge on the lack of extrinsic rewards. However, management needs to support the provision of both monetary (extrinsic) and non-monetary (intrinsic) rewards (Mustafa *et al.*, 2018; Mahaney & Lederer, 2006). Based on the expectancy theory, employees are highly motivated to perform well following a reward system performance (Baskaran *et al.*, 2018). The lack of rewards in the universities, therefore, hinders the academics' intrapreneurial behaviour.

6.8.5 Lack of Staff enthusiasm

This sub-theme has two codes: cultural socialisation of dependency and quick gratification and staff not keen and motivated to be intrapreneurial. Participant #10 said: *“I think motivation is low. People are not motivated to become entrepreneurs. And, you know, the cultural context that I come from, I have always been taught to go and buy from someone else. It plays a major role, you know, over-dependence of us on our government, on our management, it delays, that is what I see among us.”* To change this situation, management needs to take strategic action to address the missing support factors, especially the reward system. Without such incentives, the academics will continue asking about the value of participating in intrapreneurial activities. Without any identifiable gain on their part, the academics will remain unenthusiastic about demonstrating intrapreneurial behaviour. This is because rewards determine significant performance at work (Manam, 2016), as they are believed to be linked to motivation.

According to Malik *et al.* (2015), extrinsic rewards such as bonuses, awards, and promotions are seen to promote innovation. As such, management needs to design and implement systems of rewards and reinforcements that will promote

intrapreneurial behaviour, lead to the execution of challenging work and, consequently, to notable achievements (Kuratko *et al.*, 2014a:40). To encourage intrapreneurial activities, a reward system should be designed in line with clear goals, responses, outcomes and feedback, emphasising the responsibility of employees as well as performance-based incentives (Kuratko *et al.*, 2014a:40). This way staff will be motivated to enthusiastically identify and execute intrapreneurial initiatives.

6.8.6 Understanding of the complexity of academic entrepreneurship

It is noted that academic entrepreneurship, or rather the entrepreneurial university model is a complex phenomenon that consists of diverse academic traditions, research values, levels of decision-making and sub-organisational cultures (Guerrero *et al.*, 2016a; Klofsten *et al.*, 2019; Phillips, 2018). According to Bysted and Jespersen (2014), stimulating employees' entrepreneurial work behaviour is a complicated process that demands an internal climate that encourages generating and realising ideas through financial, participative and decentralisation mechanisms. The process of making the entrepreneurial university concept operational requires the development of university competencies in entrepreneurial activities (Etzkowitz, 2003b; Volkodavova *et al.*, 2019). However, universities face many challenges as they find themselves strategically overloaded with many missions (Benneworth *et al.*, 2017).

The finding under this sub-theme indicates that management and academics do not fully understand the complex nature of academic entrepreneurship and lack the relevant competencies for the effective execution of intrapreneurial initiatives. Two codes were provided under this sub-theme, and these are academic entrepreneurship being challenging and the difficulty of being solely entrepreneurial. Participant #3, Participant #5 and Participant #9 provided these codes. Participant #3 mentioned: *"And we have already produced some entrepreneurs that are outside there, but from the lecturers' point of view, it is actually a bit of a challenge."* Participant #5, speaking in the context of her university, said, *"First and foremost, I am going to say the University is an open university. Sometimes trying to organise students who are scattered all over is a challenge."* Participant #9, on the other hand,

mentioned: *"You know, I think it is difficult for universities to become solely entrepreneurial."* All these participants agree that operationalising the entrepreneurial university is a complex process requiring certain competencies. This is, therefore, a challenge for their universities, especially as they endeavour to execute their teaching, research and third missions. This overload of missions tends to hinder academic entrepreneurship (Benneworth *et al.*, 2017).

6.8.7 Aligning vision to entrepreneurship

The university vision must be analysed to determine whether it reflects the enhancement of entrepreneurial thinking and business creation among students and academic staff (Taucean *et al.*, 2018). An analysis of the code provided by Participant #3 shows that there are non-entrepreneurial visions and objectives in academia. Participant #3 mentioned: *"Unless the university's objectives or vision changes now, and it becomes an entrepreneurial university where it promotes that. Then it would be fine."* This statement indicates that the challenges in promoting intrapreneurial behaviour among academics are a result of the university's objectives or vision, which does not reflect the entrepreneurial university concept.

To align the vision to entrepreneurship, the 'Entrepreneurship' concept, for instance, must exist in the universities' vision values in order to strengthen the entrepreneurial stance (Errasti *et al.*, 2018; Taucean *et al.*, 2018; OECD, 2016). The entrepreneurial vision for the universities' future must, therefore, foster the kind of re-envisioning that will bring about the much-needed entrepreneurial change (Hamington & Ramaley, 2018; Wakkee *et al.*, 2019).

6.8.8 Nurturing of intrapreneurial initiatives

This sub-theme has six codes: theoretical understanding of entrepreneurship, no intellectual property registration, no benchmarking activities, lack of stakeholder support, no profit-making business and lack of time and resources. Participant #3 provided most of these codes. On academics' theoretical understanding of entrepreneurship, he said: *"Probably those kinds of lecturers, yes, but what I was saying is they have that theory in terms of understanding what entrepreneurship is."*

He went on to talk about the need for the university to register for intellectual property. He mentioned: *“They are actually producing real, you know, products. So we actually want these products maybe to be registered, you know, things of intellectual property are also very important.”* He also expressed the need for the university to conduct benchmarking exercises. He said: *“We can benchmark in Europe, especially Germany. That is what we actually need to do.”* He said about the need for the university to have a profit-making business: *“Like the issue that I talked about to have probably a sort of a business within ourselves, that can generate profit but then put employees there and some lecturers to run that.”*

Participant #10 spoke of the lack of resources and stakeholder support. He said: *“Resources and stakeholder support is lacking to me.”* Similarly, Participant #7 also spoke of a lack of time and resources. All these missing support factors hinder the effective nurturing of the academics’ intrapreneurial behaviour and, consequently, the university’s intrapreneurial initiatives. In view of this finding, university management must fully explore the opportunities to engage their employees’ intrapreneurial potentials profusely as well as to provide the environment for the proper development of intrapreneurial activities (Falola et al., 2017:10; Kuratko et al., 1990, 2001; Hornsby et al., 2009; Kuratko et al., 2014:39).

6.8.9 Programme implementation

This sub-theme is presented with one code, which is very slow implementation. Participant #5 mentioned this on implementing an internship programme in her university: *“We make sure that they are going to be attached to certain organisations where they can learn skills, but having said that, attachment in the University is still happening very slowly.”* Industrial attachment is an element of industry engagement. The very slow implementation of the industrial attachment programme in this university implies that there is also very limited engagement with the industry. This further means that the university is not profiting from the knowledge in the entrepreneurial environment, which comes from close interaction with the business sector (Etzkowitz, 2013a). This close interaction is vital as it leads to connections with the business world for knowledge sharing and for students to learn experientially (Fernandez-Nogueira et al., 2018).

The universities can respond to the needs of Botswana's knowledge-based economy through the timely implementation of industry engagement programmes, such as industrial attachment. They will be able to improve collaboration between the institutions and the industry. This interaction will resolve the current mismatch between the supply and demand of skills in the economy, as human resources will receive sufficient skills development from industry involvement. This will further improve productivity among the labour force and equip graduates with the requisite skills to become competitive, both locally and globally (Sam & Van der Sijde, 2014; NDP 11, 2016; De Luca *et al.*, 2014).

6.8.10 Human Resources

Participant #7 provided the one code under his sub-theme. He mentioned the lack of human resources: *“One factor that I think is missing is the human resource factor; it is how the human resources of the University are being supported.”* This statement indicates that the lack of human resources is caused by management's support. Management's support for their staff's intrapreneurial behaviour and initiatives is often negatively affected by institutional bureaucracy. This is a barrier to adopting intrapreneurship in organisations, especially large ones (Heinze & Weber, 2016). As a result, entrepreneurial individuals tend to find it challenging to pursue ideas from within the job positions they hold in the organisation, and so they opt to leave to become entrepreneurs (Govindarajan & Desai, 2013). This is often because the organisational culture is resistant to change and unwilling to try new ideas, business models, or markets that discourage intrapreneurs' enthusiastic spirit. Intrapreneurs leave to set up their own ventures when their organisations do not see intrapreneurship as a vital tool for growth (Buekens, 2014:580–586).

University management needs to understand that when there is high staff turnover, which reduces the size of their human resource, then excellence is being lost from old companies to new ones. This hinders the effective execution of intrapreneurial activities, and as such, management must endeavour to create a conducive EO environment so that the highly skilled human resources are not forced to leave to become successful entrepreneurs on their own (Thulin, 2018).

In summary, a number of support factors are missing or lacking in the universities that create hindrances to intrapreneurship. These factors are industry linkage, clear support for intrapreneurship, stimulation of intrapreneurial behaviour, rewards, staff enthusiasm, understanding the complexity of academic entrepreneurship, aligning vision to entrepreneurship, nurturing intrapreneurial initiatives, programme implementation and human resources. The university management must address these factors as they are the primary facilitators for intrapreneurial behaviour and process innovation.

6.9 THEME FIVE: INFLUENCE OF THE ENVIRONMENT (ENABLERS)

This theme addresses the empirical objective of exploring how the internal and external environment dimensions that influence intrapreneurial behaviour are promoted in Botswana's large tertiary education organisations. Internal and external environmental factors significantly contribute to nurturing intrapreneurship in developed countries (Behram & Ozdemirci, 2014). These refer to the business environment, which comprises forces, factors, or institutions that affect business activities and performance (Nasiripour *et al.*, 2012; Ting *et al.*, 2012). There must be congruence among the main internal environmental and external environmental factors if optimum organisational performance is to be achieved (Otache & Mahmood, 2015). The internal and external environmental factors need to be suitably aligned to achieve business objectives effectively and efficiently (Otache & Mahmood, 2015).

This theme is presented in two parts: the influence of the internal environment and the influence of the external environment. Each part of this theme has different codes, which can be organised into these different sub-categories, namely:

- Influence of the internal environment
 - Strategy and policy development, with three codes, were mentioned four times.
 - Staff welfare and support, with four codes, were mentioned four times.
 - Process improvement with three codes, mentioned three times.
 - Inter-varsity partnerships with one code were mentioned once.
 - Conducive environment with one code, mentioned once.

- Professionalism and enthusiasm for intrapreneurship with two codes mentioned twice.
- Financial provision with one code, mentioned once.
- Organisational vision and culture, with two codes, are mentioned twice.
- Product development with two codes mentioned twice.
- Available resources with two codes mentioned twice.
- Incentives and rewards with one code are mentioned once.
- Challenges faced with one code, mentioned once.
- Provision of training with four codes, mentioned eight times.
- Influence of the external environment
 - A conducive business environment with two codes was mentioned three times.
 - Environmental factors with two codes are mentioned three times.
 - The technological environment with one code was mentioned once.
 - Process improvement activities with one code, mentioned once.
 - Industry and government funding with three codes mentioned six times.
 - Government vision and strategic direction with two codes, mentioned three times.
 - Provision of training with two codes mentioned twice.
 - Implementation of the sustainable development goals – with one code, mentioned twice.
 - Stakeholder engagement and support with four codes, mentioned 12 times.

6.9.1 Part 1: Influence of the internal environment

This first part of the theme presents the findings on the internal environment. Table 6.13 on the following page presents an overview and quotations directly from the participants to explain the influence of the internal environment on intrapreneurial behaviour in the universities.

Table 6.13: Influence of the internal environment

Theme	Sub-themes	Codes and Quotations from participants
Influence of the internal environment	Strategy and policy development	Alignment of university strategy to policy: Participant #1: <i>“The alignment of our strategy with the policy of the context can help to drive entrepreneurial orientation.”</i> Development of enabling objectives, policies and strategies: Participant #8: <i>“Above all, it has a strategy that deliberately talks to entrepreneurial growth within the University, and I must say yes, at the moment, our strategy does actually talk to that which means accommodation for implementation of such entrepreneurship or entrepreneurial focus on strategic objectives becomes key. So really, in short, we are saying we need the policies, strategies, and policies to be in place.”</i>
	Staff welfare and support	Care and understanding of lecturer capabilities: Participant #2: <i>“Maybe we may fear in the beginning that people will leave, but I think as people see that you care about them and that as their pockets get fatter, they actually become more loyal to you than they were before.”</i> Participant #7: <i>“That means that he understands that we can bring ideas into the institution that can help him grow from where we are right now because really the biggest element or the biggest environment to affect everything is the culture.”</i> Enabling academics’ intrapreneurial behaviour: Participant #9: <i>“We are given the leeway to do so. We are encouraged to do as much as you can...”</i>
	Process improvement	Inter-disciplinary approach to teaching: Participant #4: <i>“So internally, the courses or the programmes being conducted do speak to each other in some way. They do, or there is an intentional will to interconnect that is disciplinary...”</i> Blending entrepreneurial skills in teaching: Participant #4: <i>“But if you teach engineering and you inculcate entrepreneurial skills in there, then of course things will happen.”</i> Need for intrapreneurship framework: Participant #8: <i>“So really, in short, we are saying we need the policies, we need the strategies, we need the policies to be in place, we need the framework for that to be in place, the infrastructure, the funding, you know, for that to be in place. I think in as far as the time, it is time to engage in such to be supported..”</i>

	Inter-varsity partnerships	Invitations and collaborations: Participant #5: <i>"Some of the things the visiting professor will be working with us on are case studies, attachment of students to organisations so that when you attached, then you come up with a project."</i>
	Conducive environment	Conducive environment for entrepreneurship: Participant #9: <i>"Also, the environment is very conducive for growth. "</i>
	Professionalism and enthusiasm for intrapreneurship	Academics' skills, zeal and mindset: Participant #10: <i>"So, we do have people with skills and the zeal to do the task. I do not know if you get my point. This factor, in considering the context of Botswana, is because a few people who are having, there is interest to say after you get into a job, the mindset to start a business initiative is just growing."</i> Professional leaders and staff: Participant #9: <i>"I think there is a lot of professionalism with the University and it just keeps you on your feet to say I should do the right thing because we work on contracts. If you do not do well, you go. So, if you work against the values of the University, then you are out of this place. That is a negative, but the environment itself, the leadership is very professional. And the lecturers are very professional."</i>
	Financial provision	Creation of funding chains and provision: Participant #8: <i>"You know, being able to create, you know, a funding, you know, funding chains, you know, for such, you know, initiatives, through budgets."</i>
	Organisational vision and culture	New entrepreneurial culture: Participant #10: <i>"So, the new entrepreneurship culture in the university has another impact, affecting or making it possible to support this kind of a system or the environment that you are asking about.."</i> MD's vision and culture: Participant #7: <i>"Ok, so the environmental factors here, I would say, which influence intrapreneurial behaviour in our institution is the culture, is our culture. Our culture is based on our Managing Director. It is how he started this institution where he wants to take this institution, that makes us want to support him in that regard. It is a cultural aspect and truly speaking that encourages us or that influences us to be supportive of his vision for the institution and for us to be entrepreneurial in that regard."</i>
	Product development	Curriculum development: Participant #1: <i>"I can just mention, internal maybe in terms of all the things I have talked about; curriculum development ...those are things which can help to support entrepreneurship."</i> Market research department: Participant #7: <i>"We have a department focusing solely on research, talking to the market and understanding what the market needs that can influence our curriculum"</i>

		<i>development.”</i>
	Available resources	Space: Participant #10: <i>“Then internally, we have factors like these ones; we have space for starting up projects, say, developing electricals, depending on the ambition. We have the space.”</i> A number of available resources: Participant #10: <i>“Then there are a number of resources available to influence the support of intrapreneurial behaviour.”</i>
	Incentives and rewards	Increase in monetary incentives: Participant #2: <i>“But I think as people see their pockets get fatter, they actually become more loyal to you than they were before.”</i>
	Challenges faced	Current social and economic challenges: Participant #3: <i>“Also, the social and economic challenges in today’s environment.”</i>
	Provision of training	Practical entrepreneurship education and training: Participant #3: <i>“The education of students and training of lecturers in entrepreneurship.”</i> Funding for staff training: Participant #9: <i>“They have paid a close network for us to take short courses in anything that we like, especially the business side . I think the institution was paying about P8 million or whatever to this network, so that people can train in all that business.”</i>

Source: Compiled by the researcher

Figure 6.18 on the following page presents the matrix indicating the participants who provided a specific code on this part of the theme.

Figure 6.18: Matrix for the influence of the internal environment

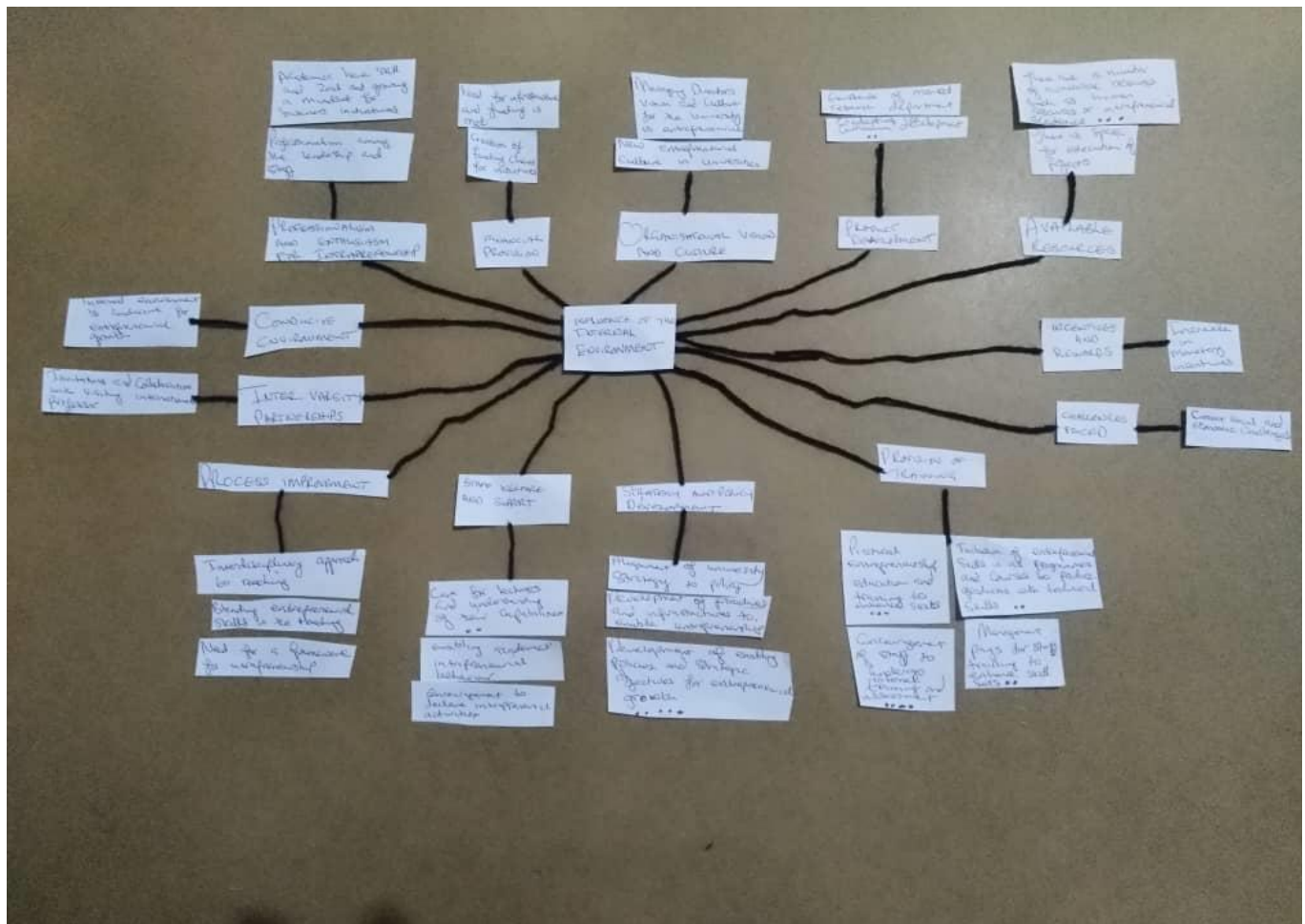
Theme 5: Influence of the environment - Internal Enablers		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Strategy and policy development	Alignment of university strategy to policy	X	X								
	Development of procedures and infrastructure								X		
	Development of enabling policies and strategic objectives								X		
Staff welfare and support	Care for lecturers		X								
	Understanding of academics' capabilities							X			
	Enabling academics' intrapreneurial behaviour									X	
	Encouragement to declare initiatives									X	
Process improvement	Inter-disciplinary approach to teaching				X						
	Blending entrepreneurial skills in teaching				X						
	Need for intrapreneurship framework								X		
Inter-varsity partnerships	Invitations and collaborations					X					
Conducive environment	Internal environment conducive for entrepreneurship growth									X	
Professionalism and enthusiasm	Professionalism among leadership and staff									X	
	Academics' skills, zeal and mind-set										X
Financial provision	Creation of funding chains								X		
Organisational vision and culture	New entrepreneurial culture										X
	MD's vision and culture							X			
Product development	Existence of market research department							X			
	Conducting curriculum development	X									
Available resources	Space										X
	A number of available resources										X
Incentives and rewards	Increase in monetary incentives		X								
Challenges faced	Current social and economic challenges			X							
Provision of training	Practical entrepreneurship education and training	X		X							
	Encouragement for internal staff training			X		X	X	X			
	Inclusion of entrepreneurial skills in all programmes				X						
	Management funding for staff training									X	

Source: Compiled by the researcher

The internal environment is under the control of managers and their organisations. This environment is crucial in an organisation's business planning and decision-making processes (Otache & Mahmood, 2015:527). It comprises factors such as the organisational structure, mission, vision, and reward systems, which enhance entrepreneurial activities within an organisation (Markuerkiaga *et al.*, 2014). These factors are key in influencing a university's disposition toward actualising the entrepreneurial university concept and fostering an entrepreneurial culture (de Moraes *et al.*, 2020). The analysis of this first part of theme 5 generated 13 critical sub-themes that present the research participants' identification of the internal environmental factors that are influential in supporting intrapreneurial behaviour within the context of their universities. Despite there being a number of lacking or missing support factors in the universities' internal environment which hinder the enhancement of intrapreneurial behaviour among the academics, the participants were able to identify factors in the internal environment that are counteractive and thereby fostering the academics' intrapreneurial behaviour to a certain degree.

Figure 6.19 on the next page presents the network diagram of the sub-themes and code words for this part of theme five as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

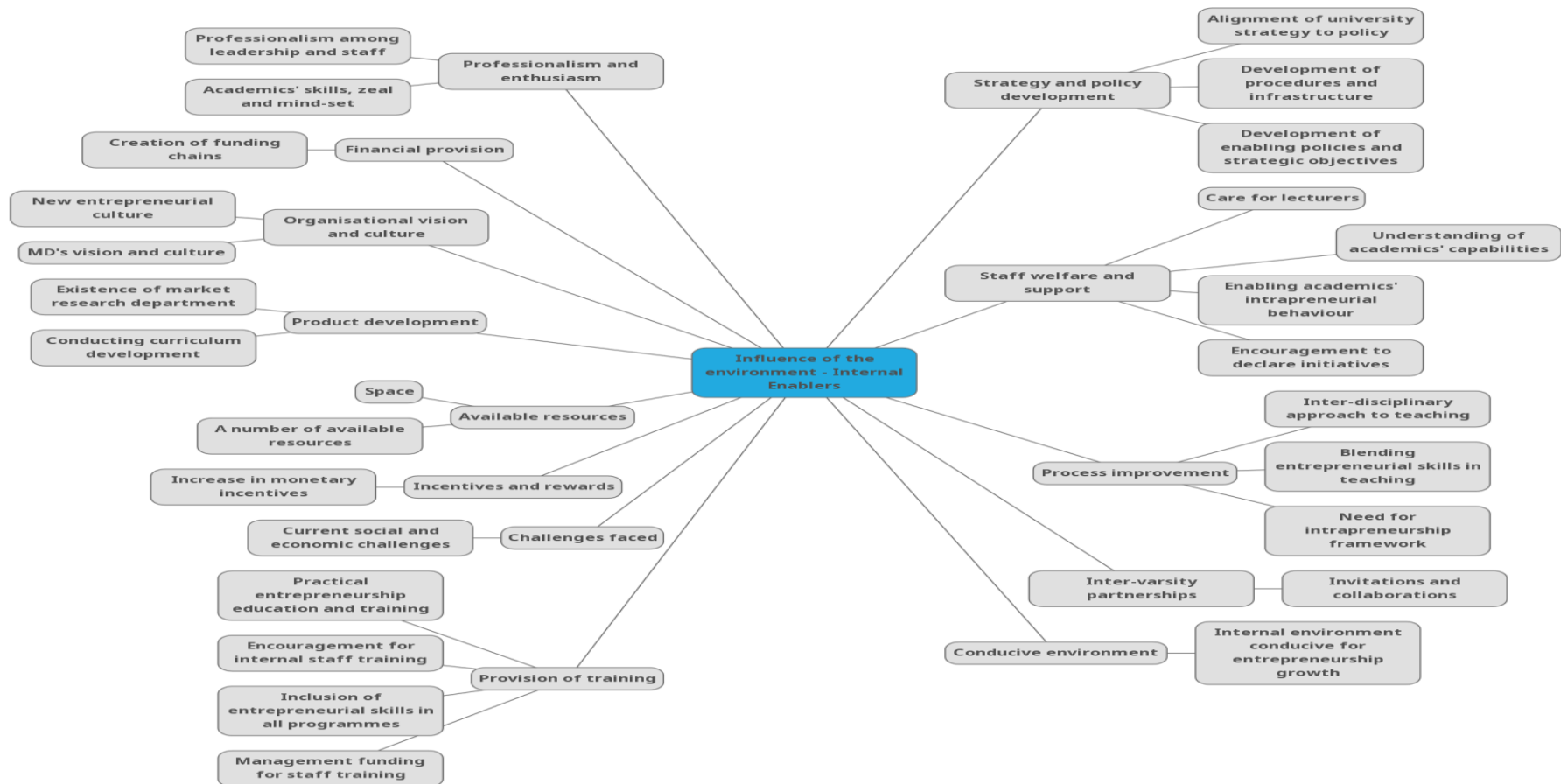
Figure 6.19: Photographic image of influence of the internal environment – theme 5



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.20 below.

Figure 6.20: Systemised network diagram for the influence of the internal environment



A detailed discussion of the sub-themes on the influence of the internal environment is now provided.

6.9.1.1 Strategy and policy development

This sub-theme is presented with three codes: the alignment of university strategy and policy, the development of procedures and infrastructure and the development of enabling policies and strategic objectives. Participant #1 mentioned: *“The alignment of our strategy with the policy of the entrepreneurship context is helping to drive entrepreneurial orientation”*, and Participant #8 added: *“I think really when you look at an internal one really it adds on because it is more what the strategic objective of the University is and because the strategic objective is focusing on the entrepreneurial aspect. creating the enabling policies, the enabling procedures, creating the enabling soft and hard infrastructure.”* It can be seen that entrepreneurial focus is being entrenched in the strategic plans of these universities. This enables institutional introspection that is aimed at fostering an entrepreneurial culture and efficacious processes for identifying problems as well as for decision-making on solutions (Teece, 2018:92-102). This inclusion of specific entrepreneurship strategic objectives that reflect the performance indicators is ideal for influencing intrapreneurial behaviour (OECD, 2012; Stolze & Sailer, 2020; Stolze & Sailer, 2021).

6.9.1.2 Staff welfare and support

The intrapreneurial behaviour of employees is becoming increasingly crucial for the strategic improvement of organisational performance (Neessen *et al.*, 2018:545). However, it is crucial to note that staff welfare and support are key elements in fostering their intrapreneurial behaviour. Staff welfare is an extrinsic reward-related motivation that exists outside the work that employees do. As such, its provision is controlled by managers who determine its size and the possibility of it being granted (Singh, 2016:199). Extrinsic reward-related motivations refer to satisfaction with the nature of the job and include aspects such as organisation characteristics, type of work, work welfare, job security, advancement opportunities, access to capital, or earning a salary above market rates or the wage levels in that industry (Carrier,

1996:12; Godwin, 2020:59). These aspects benefit the employees and improve their standard of living (Agusiom *et al.*, 2019:76-82) which consequently influences their intrapreneurial behaviour.

This sub-theme has been presented with four codes that show how this internal organisational factor influences the intrapreneurial behaviour of academics. These codes reflect staff welfare and support, including care for lecturers, understanding of academics' capabilities, enabling academics' intrapreneurial behaviour and encouragement to declare initiatives. Participant #2 mentioned: *"Maybe we may fear in the beginning that people will leave, but I think as people see that you care about them and that as their pockets get fatter, they actually become more loyal to you than they were before"* while Participant #7 said: *"That means that the Managing Director understands that we can bring ideas into the institution that can help him grow from where we are right now..."* Participant #9 added: *"We are encouraged to do as much as you can but declare what you are doing. And as long as it does not affect the, you know, what is it called? Conflict of interest. If it does, declare, discuss and establish with your Head of Department whether it can go on or not."*

It is clear that the university management is making efforts to meet the needs of their workforce to improve their productive capacity and work loyalty (Godwin, 2020:59). The management can be seen to be using transformational leadership styles to provide these extrinsic rewards that influence the intrapreneurial behaviour of the academics (Moriano *et al.*, 2014:103). This indicates that the academic intrapreneurs in these universities and their motivation to behave entrepreneurially are a result of how they are treated by their managers (Moriano *et al.*, 2014:103). The managers in these universities have a clear sense of the intrapreneurship mission and an aspiration to attain the mission. They view the academics as individuals and have assumed a mentorship role of encouraging the academics to be innovative (Moriano *et al.*, 2014:115).

6.9.1.3 Process improvement

Process improvement is a vital necessity for entrepreneurial universities if they are to successfully achieve their goals and survive in today's intense global competitive

environment (Güven, 2020). The university's role needs to evolve through the inclusion of the third mission in the strategic orientation, in addition to the traditional university's first mission of teaching and the second mission of research (Perkmann *et al.*, 2013; Feola *et al.*, 2020). The entrepreneurial university must improve its processes by systematising a group of activities that combine academic and business requisites through the widening of the inputs to academic knowledge and its application to socio-economic issues (Etzkowitz, 2003a; Etzkowitz *et al.*, 2008; Trencher *et al.*, 2014; Foss & Gibson, 2015; Compagnucci & Spigarelli, 2020).

This process improvement sub-theme has three codes: inter-disciplinary approach to teaching, blending entrepreneurial skills in teaching and the need for a framework for intrapreneurship. Participant #4 mentioned: *"So internally, the courses or the programmes being conducted do speak to each other in some way. They do, or there is an intentional will to interconnect, that is disciplinary. If disciplinary, I guess, is on their own then that would be bad. But if you teach engineering and you inculcate entrepreneurial skills in there, then, of course, things will happen."* In addition, Participant #8 spoke of the need for a framework for intrapreneurship. He said: *"...we need the framework for that to be in place..."* These responses refer to the process improvements that are being carried out in the delivery of the curriculum and the need for process improvement in the execution of intrapreneurial initiatives. It can be deduced that academics are experimenting with new inventions in the form of practices, processes, structures and techniques in carrying out the entrepreneurial university mission of teaching.

Although there is a need for more process improvements, especially regarding intrapreneurship, the existing inventions represent innovations initiated by individual academics at the operational and middle management levels. Participant #4 indicates that attempts are being made to combine academic and business requisites by blending entrepreneurship. This makes his university to be forward-looking, as it can be seen to re-evaluate its core activities and capabilities. It can thus be anticipated that further inventions will extend the application of entrepreneurship training to socio-economic issues (Fitzgerald & Cunningham, 2016; Miller *et al.*, 2016).

6.9.1.4 Inter-varsity partnerships

This sub-theme is presented with one code, which is invitations and collaborations. Participant #5 mentioned that her university has been receiving invitations to collaborate with a professor from an international university. She said: *“Some of the things the visiting professor will be working with us on our case studies, attachment of students to organisations so that when you attached, then you come up with a project.”* This shows that the university is involved in internationalisation, an entrepreneurial university process that involves a number of coordinated activities with universities in other countries (Errasti *et al.*, 2018).

Through internationalisation, this university is embarking on the process of incorporating an international or global perspective into the planning and carrying out of its educational programmes, research and knowledge transfer (Taucean *et al.*, 2018). This promotes change and development within the university through the diverse thinking developed from interacting with the visiting professor from an international university. The academics are obtaining new insights that alter their traditional teaching methods and are also guided on the management of the entrepreneurial university (Taucean *et al.*, 2018).

6.9.1.5 Conducive environment

This sub-theme also has one code, which is that the universities' internal environment is conducive to entrepreneurial growth. Participant #9 made a clear statement: *“The environment is very conducive for growth.”* The internal environment in this university can be said to be conducive to entrepreneurial growth because it supports idea generation and attainment through financial, decentralisation and participative mechanisms that the top management supports as a means to inducing the academics' intrapreneurial behaviour (Hashimoto & Nassif, 2014; Desai, 2015a). Therefore, the top management's visible commitment to intrapreneurship is heralding the university's intrapreneurial activities and the intrapreneurship-friendly environment (Blanka, 2019).

6.9.1.6 Professionalism and enthusiasm

Professionalism and enthusiasm are other factors that influence intrapreneurial behaviour in the participating universities' internal environment. It is presented with two codes: professionalism among the leadership and staff and the academics' skills. Participant #9 said: *"I think there is a lot of professionalism with the University, and it just keeps you on your feet to say I should do the right thing because we work on contracts. If you do not do well, you go. So, if you work against the values of the University, then you are out of this place...the leadership is very professional. And the lecturers are very professional."* On another note, Participant #10 said: *"So, we do have people with skills and the zeal to do the task. I do not know if you get my point. This factor, in considering the context of Botswana, is because a few people who are having, there is interest to say after you get into a job, the mindset to start a business initiative is just growing."*

The professionalism among the leaders and the lecturers that is stated above indicates the high-level workforce in these universities (Macarthy & Yang, 2017:1). As professionals, the top-level managers assume the leading role of developing the university vision and infrastructure that promotes intrapreneurship (Gawke *et al.*, 2019) while the academics are demonstrating proactive efforts that lead to "out-of-the-box" thinking in processes that have a bottom-up set-up (Bosma & Kelley, 2018:32). This can be seen through the skill, zeal and the growing mindset to be intrapreneurial among the academics, as mentioned by Participant #10. This must be a consequence of the academics' individual choice based on their personal decision because intrapreneurship is remotely part of their current standard job description. Therefore, the academics' intrapreneurial behaviour reflects their autonomous behaviour as they generate, determine, and utilise new opportunities to create value for their universities through business initiatives (Blanka, 2018; Ma *et al.*, 2016).

6.9.1.7 Financial provision

According to Markuerkiaga *et al.* (2014) and Fernandez-Nogueira *et al.* (2018), entrepreneurship funding is one of the internal environment factors that support entrepreneurship and is vital for the autonomy and development of universities. This

funding is mainly for research and teaching in entrepreneurship or as seed money for the creation of entrepreneurship projects, companies and organisations (Bezanilla *et al.*, 2020). This internal environment factor, therefore, influences intrapreneurial behaviour. There is one code under this sub-theme: the creation of funding chains. Participant #8 mentioned: *“You know, we are able to create, you know, a funding, you know, funding chains, you know, for such, you know, initiatives, through budgets.”*

The budgets are being funded because this university supports financial mechanisms for intrapreneurial activities (Bysted & Jerspersen, 2014). This empowers the academics to develop or implement novel ideas (Desai, 2015a). The university is willing and able to stimulate intrapreneurial behaviour, obviously guided by the desire to seek out and respond to market signals, trends, and changes with novel innovations (Hughes *et al.*, 2019). This university can be seen to be confidently expanding its entrepreneurial potential by creating funding chains and budgets. The goal is to generate revenue from entrepreneurship activities that involve reinvestments or self-funding initiatives (OECD, 2012). This provides the basis for the importance of financial resources as the linkage between intrapreneurial behaviour and the university's performance (Neessen *et al.*, 2018; Engelen *et al.*, 2014).

6.9.1.8 Organisational vision and culture

This sub-theme has to do with the entrepreneurial orientation of the universities, their faculties and departments, seen through the university vision and policies (the culture) and organisation of the university (Todorovic, 2005; Tatarski *et al.*, 2020). Two codes are under this sub-theme: the new entrepreneurial culture and the Managing Director's vision and culture. Participant #7 said: *“Ok, so the environmental factors here, I would say, which influence intrapreneurial behaviour in our institution is the culture, is our culture. It is a cultural aspect and truly speaking that encourages us, or that influences us to be supportive of Managing Director's vision for the institution and for us to be entrepreneurial in that regard.”* Participant #10 added: *“So, the new entrepreneurship culture in the university has another*

impact, affecting or making it possible to support this kind of system or environment you are asking about.”

These universities can be seen to have adopted the entrepreneurial culture to generate imperative funds, partnerships and facilities from diverse sources (Mariani *et al.*, 2018). It can also be seen that the university's top management has considered entrepreneurship when crafting their strategic vision and organisational architecture to promote intrapreneurial behaviour (Guiri *et al.*, 2019). This plays a key role in influencing the universities' disposition toward actualising the entrepreneurial university concept and fostering an entrepreneurial culture (de Moraes *et al.*, 2020).

6.9.1.9 Product development

Intrapreneurship significantly contributes to the organisational learning processes that reinforce employees' potential to explore markets and develop new products (Zahra, 2015:727). The development of new products is an outcome of an organisation's entrepreneurial orientation, whose main components are innovativeness, proactiveness, and risk-taking (Lumpkin & Dess, 1996). Innovativeness refers to the practice of creativity and experimentation that generates new ideas and creative processes that result in new products, services and processes (Lumpkin & Dess, 1996). On the other hand, proactiveness enables the introduction of new products before competitors do and enables organisations to be pioneers (Reijonen *et al.*, 2014). Risk-taking is an internal organisational element vital for the support of entrepreneurship within organisations, and it refers to an organisation's propensity to willingly and boldly engage and commit necessary resources to opportunities with uncertain outcomes (Lumpkin & Dess, 1996).

This sub-theme on product development has two codes: the existence of a market research department and conducting curriculum development. Participant #1 mentioned: *“I have talked about curriculum development, which can help to support entrepreneurship.”* Participant #7 added: *“We have a department focusing solely on research, talking to the market and understanding what the market needs that can influence our curriculum development.”* Curriculum development is the main product

developed in these universities, whose main entrepreneurial activity is providing entrepreneurial education. The market research contributes to the development of the university curriculum as it provides insight into the prevailing needs and business practices in the industry. This entails that a university must be proactive and take the risk of developing new innovative programmes in its curriculum that other universities do not yet offer. All this is done in order to build a curriculum that will enable students to acquire relevant skills (De Luca *et al.*, 2014). With specific reference to Botswana, this is to produce skills in quality graduates in areas that are critical to the improvement in the performance of the country's economy (ETSSP, 2015; Makwinja, 2017; NDP 11, 2017:70-71, Vision 2016:7; Vision 2036).

6.9.1.10 Available resources

The provision of the required resources is guided by organisational policies and appropriate managerial practices (Alpan *et al.*, 2010; Bloodgood *et al.*, 2015; Banumathi & Samudhararajakumar, 2015:5). It is the available resources that determine the development of novel ideas (Hashimoto & Nassif, 2014; Desai, 2015a). This sub-theme has two codes, which are space and a number of available resources. Participant #10 said: *"Then internally, we have factors like these ones; we have space for starting up projects, say of developing electricals, depending on the ambition. We have the space. So, that is a factor that has had a positive impact on supporting intrapreneurial behaviour. Then there are a number of resources available to influence the support of intrapreneurial behaviour."* This shows that the academics are receiving management support in the provision of resources. This is of great importance to the academics who are willing to undertake intrapreneurial activities (Neessen *et al.*, 2018), and as such, this needs to be made a norm within the universities (Garcia-Morales *et al.*, 2014) as it will extensively influence the academics' intrapreneurial behaviour.

6.9.1.11 Incentives and rewards

This sub-theme has one code, which is an increase in monetary incentives. As already noted, incentives and rewards fall under some of the most influential factors that motivate employees to develop their entrepreneurial competencies, thereby

contributing to organisational performance (Turner & Pennington, 2015). Participant #2 said: *“Maybe we may fear in the beginning that people will leave, but I think as people see that you care about them and that as their pockets get fatter, they actually become more loyal to you than they were before. So I think that element, as we foster it, it may help.”* Monetary incentives are extrinsic rewards (Mazzei *et al.*, 2017:631-663) which are seen to promote innovation. As indirectly mentioned by Participant #2, the provision of monetary rewards has the potential to generate loyalty among academics, thereby promoting their intrapreneurial behaviour. This leads to the execution of challenging work and, consequently, to notable entrepreneurial achievements by satisfied, loyal employees (Kuratko *et al.*, 2014a:40).

6.6.1.12 Challenges faced

This sub-theme is presented with one code: the current social and economic challenges. Participant #3 mentioned: *“Also, the social and economic challenges in today's environment are influencing our intrapreneurial behaviour.”* Although these challenges are elements of the external environment, they play an influencer role in the intrapreneurial behaviour in the internal environment. These environmental challenges affect the innovative approaches that the university is adopting and tend to influence the type of intrapreneurial initiatives embarked on (Baruah & Ward, 2014). Academic intrapreneurs, therefore, use their knowledge of the current and future conditions of the market to ensure that the innovations developed internally are mainly aimed at offering more excellent customer value and satisfaction (Baruah & Ward, 2014).

6.9.1.13 Provision of training

This is a predominant entrepreneurial activity in Botswana's tertiary education institutions, but as an internal environment factor, it refers to the degree to which the university provides training in entrepreneurship to its staff (Errasti *et al.*, 2018). The training may be in the form of knowledge transfer and in the setting up of spin-off companies in order to foster entrepreneurship among the students and academic staff (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019).

This sub-theme on the provision of training has four codes: practical entrepreneurship education and training, encouragement of internal staff training, inclusion of entrepreneurial skills in all programmes and management funding for staff training, all of which are internal organisational factors that influence intrapreneurial behaviour. Participant #3 mentioned: *“There is the education of students and training of lecturers in entrepreneurship.”* Participant #6 added: *“Internal organisational dimensions, I would say training, we get training on how to go about things. Internal training most of the time and seminars.”* On including entrepreneurial skills in all programmes, Participant #5 mentioned: *“I would say that internally, we have courses, as I have said before, that teach students to do entrepreneurship.”* Finally, Participant #9 said: *“I think the institution was paying about P8 million or whatever to this network so that people can train in all that business.”*

It can be seen that university management is aware that the entrepreneurial domain is changing rapidly and that there is a constant need for employee upskilling and knowledge acquisition. As such, these universities have formal policies for developing their employees' careers to keep up with the changes and achieve their goals (OECD, 2012). The universities are providing entrepreneurship education and training as a necessary tool for the development of human capital, which will lead to local developments (Šmídová *et al.*, 2017), especially since it includes continuous learning (Bae *et al.*, 2014; de la Torre *et al.*, 2017).

In summary, the internal environmental factors that were identified as influencing intrapreneurial behaviour in the context of the universities include strategy and policy development, staff welfare and support, process improvement, inter-varsity partnerships, conducive environment, professionalism and enthusiasm, financial provision, organisational vision and culture, product development, available resources, incentives and rewards, challenges faced and provision of training. These internal environmental factors are crucial in the universities' business planning and decision-making processes. They have evidently enhanced the entrepreneurial activities within the universities and influenced the universities' dispositions toward actualising the entrepreneurial university concept. These factors have also fostered an entrepreneurial culture in the universities, so they play a unique and significant

role in enhancing intrapreneurial behaviour and, conversely, the performance of these universities.

6.9.2 Part 2: Influence of the external environment

This second part of theme 5 presents findings on the influence of the external environment. This environment is not under the control of the managers and their organisations. The external environment is important because it is the source of the opportunities organisations exploit and the resources needed to pursue them (Otache & Mahmood, 2015:527). The availability of opportunities and resources in the external environment determines an organisation's success or failure (Otache & Mahmood, 2015:527). Table 6.14 on the following page presents an overview and quotations directly from the participants to explain the influence of the external environment on intrapreneurial behaviour in the universities.

Table 6.14: Influence of the external environment

Theme	Sub-themes	Codes and Quotations from participants
Influence of the external environment	Conducive business environment	Instilling an entrepreneurial mindset: Participant #3: <i>“So because of that unemployment factor, we need to instil in our students a mindset of creating your own employment rather than you want to be employed.”</i> Fruitful, successful initiatives: Participant #10: <i>“So, in that aspect, to come up with something from scratch that will be fruitful is really a possible task, and that is another factor that is influencing the support of intrapreneurial behaviour in the context of the University.”</i>
	Process improvement activities	Bench-marking exercises: Participant #7: <i>“We have also gone on many bench-marking exercises around African countries and in Botswana to learn about their approach to education and their approach to training, so what we get from Rwanda, from Kenya and all these other nations that we went to, it’s how we can, how imperative is it for the institution to be...”</i>
	Provision of training	External seminars and public lectures: Participant #6: <i>“...external we have had seminars that we, I forgot the name of the company which was presenting, but we do get seminars and public lectures.”</i> Training from government regulatory bodies: Participant #6: <i>“We also go for, under external, we get, I think it falls under training because we get experts from Botswana Qualifications Authority, from Human Resource Development Council...”</i>
	Industry and government funding	Government funding: Participant #10: <i>“There is funding that is given to universities to encourage and support these initiatives, but as the situation stands in Botswana, there is quite a bit that is being done which is likely to affect the intrapreneurial behaviour in the context of the university.”</i> Funding collaborations with industry stakeholders: Participant #5: <i>“They are part of the projects that we had expected that people would be individually, maybe in one or two districts, we can look at two projects and students, and we would be working or write reports on what came out of that..”</i> Access to potential investors and finance: Participant #8: <i>“...you know, obviously access to the potential investors towards research or innovation orientated output that can be commercialised.”</i>
	Government vision and	State president’s fourth industrial revolution mandate: Participant #7: <i>“The President of Botswana who took the seat in 2018, his biggest mandate was the fourth industrial revolution.”</i>

	strategic direction	<i>Moving from a knowledge-based to now a skill-based nation, so our curriculum, our approach, our thought process is encouraged by those factors."</i> State president's mantra, nationalisation agenda, ministers and Botswana's vision 2036: Participant #7: <i>"Externally we are influenced by the president, we are influenced by his ministers, we are influenced by Vision 2036, we are influenced by the president's mantra, we are influenced by such initiatives like nationalisation of government portfolio that will make us as the University to become intrapreneurial in our behaviour."</i>
	Implementation of the sustainable development goals	Application of sustainable development goals: Participant #3: <i>"So how do we solve that poverty? We can probably link it with the Sustainable Development Goals, right, SDGs, where they talk about poverty, hunger and other things, you know."</i> Participant #5: <i>"The Sustainable Development project, one of the aims was for it to ensure that we are going to look at graduates who have left the university, but they do not have work and part of that was that we are going to take our own students who are inside the University to work with us so that they also learn when others are doing the project."</i>
	Environmental factors	Political and socio-economic factors: Participant #1: <i>"Yes, there are a number of factors: political factors, economic factors and social factors. They can help too."</i> Challenging economic prices and inflation: Participant #3: <i>"The environment we are living in is a challenge in terms of economic prices, inflation is also coming up and so forth. So, in terms of society, there is poverty. We may not see it, especially in the urban areas, but there is poverty in the society. So how do we solve that poverty..."</i>
	Technological environment	Available technological infrastructure: Participant #10: <i>So, technology is also an influencing factor like, you know, everything you do nowadays is supported by technology, and when you look at the technological infrastructure in the country, it is quite sufficient."</i>
	Stakeholder engagement and support	Industry support and demand: Participant #4: <i>"So, I think the environment outside the employers, the industry, are demanding that graduates coming out must have the intrapreneurial skills in them."</i> Industry contributions: Participant #7: <i>"When it comes to the industry's influence, I will give a lot of needs assessment before we can develop anything or before we can grow in any way. So, I think our engagement with the industry is through these needs assessments. We are able to figure and find out areas, you know, of improvement, of growth as a university. So, a lot of our work or a lot of our curriculum is developed by the industry, what the industry is saying about our graduates and</i>

		<i>how the programme should be altered and adjusted for it to be, you know, for it to produce graduates that are employable and ready for the market.”</i>

Source: Compiled by the researcher

Figure 6.21 on the following page presents the matrix indicating the participants who provided a specific code on this part of the theme.

Figure 6.21: Matrix for the influence of the external environment

Theme 5: Influence of the environment - External Enablers		Participants									
Sub- themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Conducive business environment	Instilling entrepreneurial mindset							X			
	Fruitful successful initiatives		X					X			X
Process improvement activities	Bench-making exercises										X
Provision of training	External seminars and public lectures					X					
	Training from government regulatory bodies						X				
Industry and government funding	Government funding	X				X			X	X	X
	Funding collaborations with industry stakeholders		X								
	Access to potential investors and finance				X						
Government vision and strategic direction	President's fourth industrial revolution mandate							X			
	President's mantra, nationalisation agenda, ministers, government regulations and vision 2036							X			X
Implementation of sustainable development goals	Application of sustainable development goals			X		X					
Environmental factors	Political and socio-economic factors	X		X							
	Challenging economic prices and inflation			X							
Technological environment	Available technological infrastructure										X
Stakeholder engagement and support	Industry support and demand				X			X		X	X
	Industry contributions							X	X		
	Stakeholder engagement and collaboration	X	X			X			X		X
	Corporate social responsibility		X								

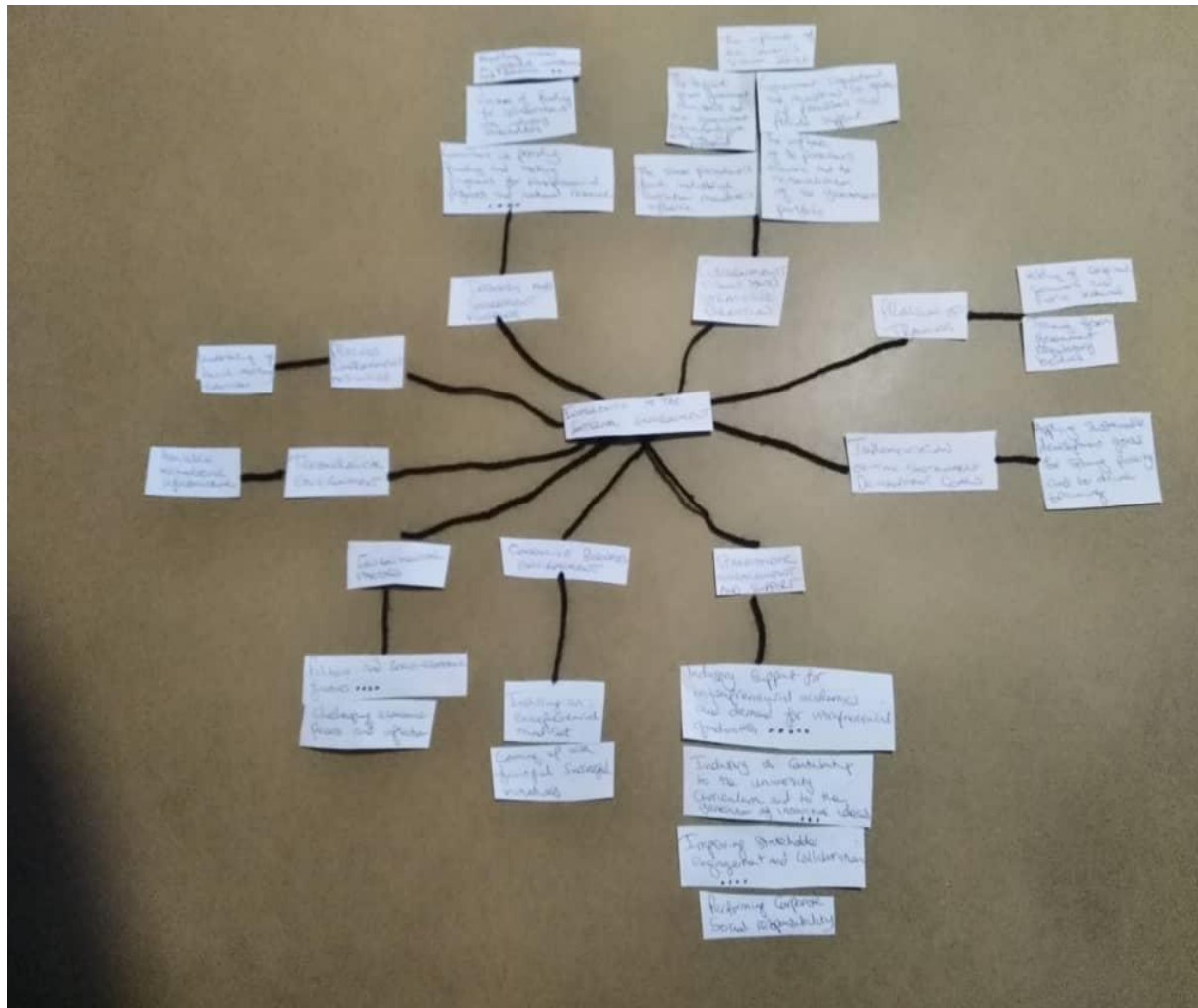
Source: Compiled by the researcher

It has been proven and must be restated that intrapreneurship's influence on business performance greatly depends on the external environment because it provides the opportunities and resources needed to undertake intrapreneurial initiatives. Therefore, external environmental conditions are seen as moderators of intrapreneurship's influence on business performance (Otache & Mahmood, 2015). This environment is crucial to intrapreneurship's impact on organisational performance, and its conditions are specifically considered essential factors that influence intrapreneurial initiatives within an organisation. This is even though organisational leaders have minimum control or none towards these environmental conditions (Kasturi *et al.*, 2019; Otache & Mahmood, 2015:525). Therefore, the external environment comprises forces outside the organisation that have an uncontrollable impact on business activities and performance through diverse dimensions that are ideal for developing and implementing intrapreneurial initiatives (Bradley *et al.*, 2011).

The external environmental factors are classified as political, economic, social and technologically advanced environments (Kasturi *et al.*, 2019; Behram & Ozdemirci, 2014). However, there are other complex, hostile and volatile external environmental factors that can potentially affect organisational operations (Behram & Ozdemirci, 2014). These environmental complexities comprise diverse and complex information organisations need to survive an environment (Otache & Mahmood, 2015:527). All these factors are vital for the growth and success of intrapreneurial initiatives (Baruah & Ward, 2014).

The analysis of this second part of theme five generated nine critical sub-themes that present the research participants' identification of the external environmental factors that are influential in supporting intrapreneurial behaviour within the context of their universities. Figure 6.22 on the next page presents the network diagram of the sub-themes and code words for this part of theme five as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

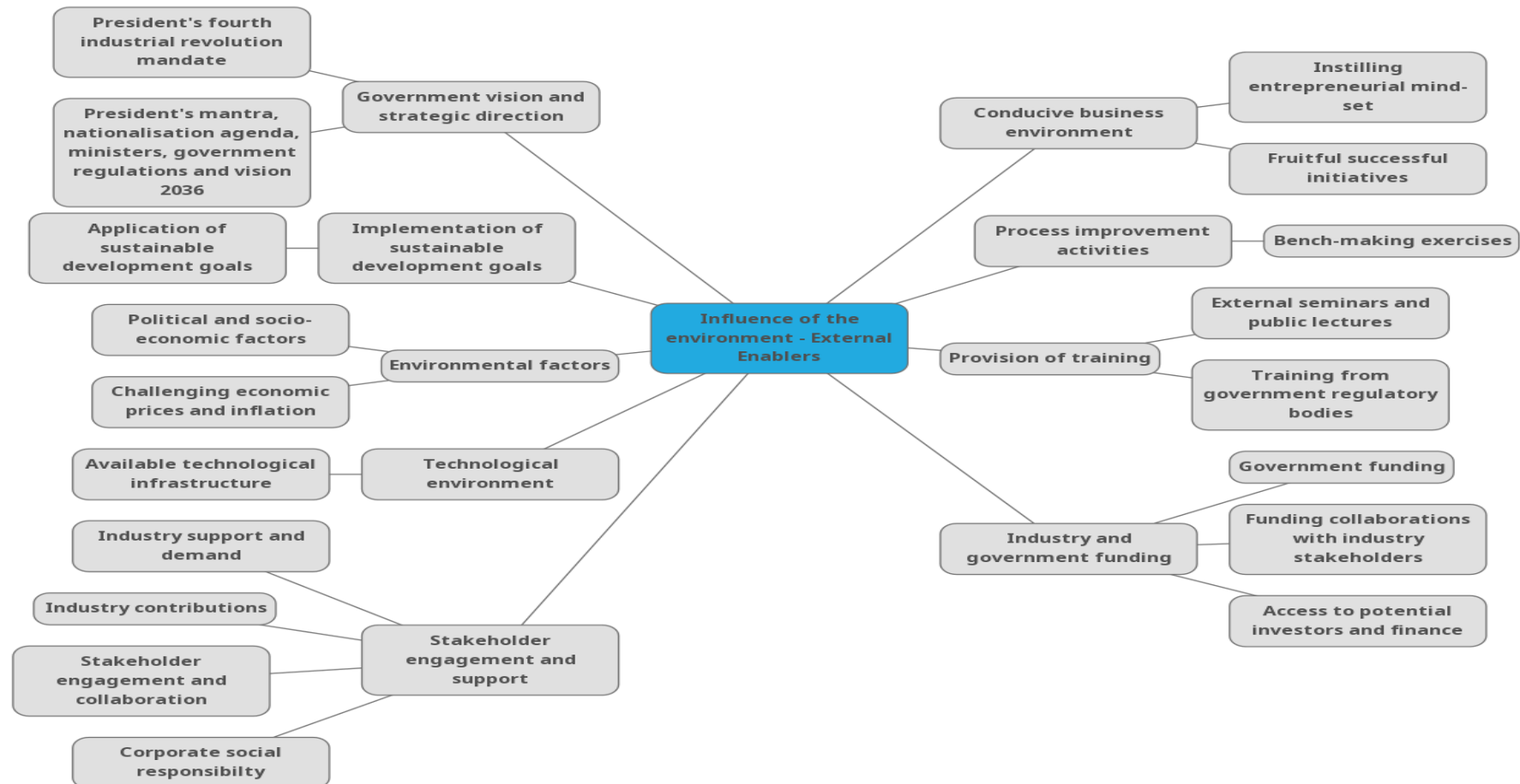
Figure 6.22: Photographic image of the influence of the external environment – theme 5



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.23 below.

Figure 6.23: Systemised network diagram for the influence of the external environment



A detailed discussion of the sub-themes on the influence of the external environment is now provided.

6.9.2.1 Conducive business environment

A conducive business environment is synonymous with positive external environmental factors that are seen to influence intrapreneurial initiatives in an organisation. Four positive external environmental factors have been identified: dynamism, munificence, organisational growth and technological opportunities (Behram & Ozdemirci, 2014). Dynamism refers to all the unforeseeable changes that result from a change in political, economic, social and technological factors (Kasturi *et al.*, 2019). On the other hand, environmental munificence refers to the availability of opportunities in the environment and the availability of the resources needed to pursue the identified opportunities (Rosenbusch *et al.*, 2011). Organisational growth provides intrapreneurial opportunities which drive the organisation into escalated intrapreneurial activities that include new ventures, new product/service innovations or new markets, while technological changes also significantly influence the organisations that assume an intrapreneurial pose and increase intrapreneurial initiatives (Kasturi *et al.*, 2019; Behram & Ozdemirci, 2014).

This sub-theme has two codes: instilling an entrepreneurial mindset and fruitful, successful initiatives. Regarding instilling an entrepreneurial mindset, participant #3 said: *“So because of that unemployment factor, we need to instil in our students a mindset of creating your own employment rather than you wanting to be employed.”* Unemployment is an economic factor and, therefore, falls under the positive external environmental factor of dynamism. Dynamism, in terms of unemployment in this case, represents the unpredictability of the environment due to frequent changes (Otahe & Mahmood, 2015:527). The increasing unemployment level in Botswana promotes intrapreneurial activities in the universities. The universities are assuming an entrepreneurial orientation in their business processes, such as including entrepreneurship in all their programmes and providing entrepreneurial education to deal with the dynamic environment (Farrukh *et al.*, 2019). The dynamism is, therefore, providing increased opportunities for the universities and their employees

to exploit by engaging in proactive and risk-taking academic entrepreneurship activities.

Participant #10 spoke on fruitful and successful initiatives. He mentioned: *“So, in that aspect, to come up with something from scratch that will be fruitful is really a possible task, and that is another factor that is influencing the support of intrapreneurial behaviour in the context of the University.”* A conducive business environment provides opportunities and resources that enable academics to pursue the identified opportunities (Rosenbusch *et al.*, 2011). This significantly enables the universities to execute fruitful and successful intrapreneurial activities and consequently enhances the intrapreneurial behaviour of the academics as well as improves university performance (Otache & Mahmood, 2015:527).

6.9.2.2 Process improvement activities

Universities have to adapt to the role of promoting entrepreneurial thinking, activating the formation of business activities and capitalising on societal ideas (Taucean *et al.*, 2018). Universities today are viewed as organisations that integrate collegial professional values and management approaches to achieve the desired change (Seeber *et al.*, 2015). This demands a radical change in the internal environment as influenced by forces in the external environment. This influences changes that improve how activities are conducted by academic institutions (Etzkowitz *et al.*, 2019). This sub-theme on process improvement is presented with one code: benchmarking activities. Participant #7 said: *“We have also gone on many benchmarking exercises around African countries and in Botswana to learn about their approach to education and their approach to training, so what we get from Rwanda, from Kenya and all these other nations that we went to, it’s how we can improve, how imperative is it for the institution to be.”*

The benchmarking supplies the university with knowledge and reinforcement for improving entrepreneurial efforts and creating an atmosphere that lessens the risks inherent in operationalising the entrepreneurial university concept (Cunningham *et al.*, 2019). This can be seen through individual and organisational learning that

happens through the bench-marking exercises that are undertaken. The academics learn from the university's external environment, which comprises universities in the local and regional environment, and then they use the acquired knowledge to undertake intrapreneurial activities that influence organisational learning and performance in their universities (Hisrich, 1990; Pinchot & Pellman, 1999).

6.9.2.3 Provision of training

There are two codes under this sub-theme, namely external seminars and public lectures, and training from government regulatory bodies. Participant # 6 mentioned: *"Externally we have had seminars that we, I forgot the name of the company which was presenting, but we do get seminars and public lectures."* He went on to say: *"We also go for, under external, we get, I think its falls under training because we get experts from Botswana Qualifications Authority, from Human Resource Development Council."* It can be seen that extra-curricular activities are taking place in this university. These activities include initiatives involving external stakeholders to encourage collaborations that yield benefits for staff and students from a diversity of learning network opportunities and informal learning practices (Secundo *et al.*, 2015:276–298). These extra-curricular activities comprise training activities that are not part of the curriculum (Errasti *et al.*, 2018), as observed in Participant #6's response.

The training activities can include workshops on building awareness of entrepreneurship, coaching for start-ups, the exploration and identification of opportunities, the execution of innovative projects, the production of business plans and the launching of spin-offs in the form of incubation initiatives, technology transfer and venture capital funds (Errasti *et al.*, 2018). The activities can further include the exchange of knowledge through holiday schools, conferences, clubs, venture camps, boot camps, business simulation and competitions, science parks, focus groups, seminars and forums (Fayolle *et al.*, 2006; Włodarczyk *et al.*, 2015; Knutsson *et al.*, 2017). It can be deduced that external experts provide much of this kind of training in the universities to foster the academics' intrapreneurial behaviour.

6.9.2.4 Industry and government funding

This sub-theme comprises three codes: government funding, funding collaborations with industry stakeholders and access to potential investors and finance. Participant #9 said: *“Externally, the government is saying get money, get money for research. There is a national research fund that is out there”*, while Participant #5 said: *“Externally, as I said, we worked with other organisations where possible to get funding for projects that we can include our students.”* On another note, Participant #10 said: *“The industry participation being a key external factor, also talks to, you know, obviously access to the potential investors towards research or innovation orientated output that can be commercialised.”* These responses refer to the Triple Helix model that emphasises university, industry and government cooperation through systematic activities that involve the bringing together of facilities for the performance of tasks that the three institutions would not be able to carry out alone (Moradi & Noori, 2020).

This collaboration between the university, the government and the industry aims to create a social environment that enables access to technologies and removes border knowledge. The collaboration also fosters the sharing of knowledge and ideas, the increase of financial resources and the use of the universities’ innovative potential (Lin, 2017) that benefits all these three helices. Most importantly, these strategic interactions among these institutional spheres are vital for enhancing innovation and developing the knowledge economy (Dalmarco *et al.*, 2018).

6.9.2.5 Government vision and strategic direction

Two codes are presented under this sub-theme: the state president’s fourth industrial revolution mandate and the president’s mantra, nationalisation agenda, ministers, government regulations and vision 2036. All these are aspects of the political environment’s effect on intrapreneurial behaviour in the universities. Participant #7 said: *“The President of Botswana took seat in 2018. His biggest mandate was the fourth industrial revolution. Moving from a knowledge-based to a skill-based nation, our curriculum, our approach, and our thought processes are encouraged by those factors. So, externally, we are influenced by the president, his ministers influence us,*

we are influenced by Vision 2036, the president's mantra influences us, we are influenced by such initiatives like nationalisation of government portfolio that will make us as the University to become intrapreneurial in our behaviour.”

Participant #10 added: *“And another factor is also the political factors. As I said, we almost have five years of working on this idea, and it is getting fruitful because of the political stability in the country. We are sitting in the time of Covid 19, not really good interaction, but the government tried very hard to continue paying universities and put up regulations for no retrenchment, which helped to support the intrapreneurial initiatives to continue among academics in Botswana. Then, despite that aspect, we also have the legal framework. We have some ministries that speak in the same language as you are asking.”*

These statements refer to the environmental factor that is classified as political (Kasturi et al., 2019), which is characterised by complex and volatile conditions (Behram & Ozdemirci, 2014). The universities are, however, using diverse and complex information from the political environment to survive (Otache & Mahmood, 2015:527). It can be seen that the management in these universities has had to assume a strategic posture of obtaining political information and aligning university activities to it as a vital means for the growth and success of intrapreneurial initiatives (Baruah & Ward, 2014).

6.9.2.6 Implementation of sustainable development goals

This sub-theme has one code, which is the application of the sustainable development goals. Participant #3 said: *“So how do we solve that poverty? Probably we can also link it with the Sustainable Development Goals, right, SDGs, where they talk about poverty, hunger and other things, you know.”* This shows that the universities are attempting to prioritise their relevance and responsiveness to stakeholder needs through the enhancement of national, regional and international economic growth goals (Etzkowitz & Leydesdorff, 2000). Through the application of the sustainable development goals to its intrapreneurial initiatives, this university is moving its focus from mainly teaching and conducting research to the added third

mission of contributing to society (Abreu *et al.*, 2016; Urdari *et al.*, 2017). Through this engagement with society, this university is becoming a driving force for social, economic and cultural development in its region of operation (De Jong *et al.*, 2014; Secundo *et al.*, 2017a; Agasisti *et al.*, 2019).

6.9.2.7 Environmental factors

This sub-theme is specific to the key external environment factors, as can be seen from the two codes that present it: political and socio-economic factors and challenging economic prices and inflation. Participant #1 mentioned: *“Yes, there are a number of factors: political factors, economic factors and social factors. They can help too in enhancing intrapreneurship.”* Participant #3 mentioned: *“Also, the social and economic challenges in today’s environment are influencing our intrapreneurial activities.”* These responses confirm that the unforeseeable changes resulting from political, economic and social factors can potentially promote intrapreneurial behaviour in the universities (Kasturi *et al.*, 2019). This dynamism is necessary for the identification and execution of intrapreneurial initiatives as it drives the universities to identify entrepreneurial solutions to the challenges being experienced (Farrukh *et al.*, 2019).

6.9.2.8 Technological environment

This sub-theme has one code, which is available technological infrastructure. Participant #10 said: *“So, technology is also an influencing factor like, you know, everything that you do nowadays is supported by technology, and when you look at the technological infrastructure in the country, it is quite sufficient.”* The technological factor is a positive external environment factor that falls under dynamism. Technology represents the unpredictability of the external environment due to its frequent changes (Otache & Mahmood, 2015:527). According to Kasturi *et al.* (2019:56-57), technological changes significantly influence organisations that assume an intrapreneurial pose and increase intrapreneurial initiatives. The increasing and sufficient access to technology in Botswana enables this university to

become creative and innovative in its adoption of intrapreneurial activities (Behram & Ozdemirci, 2014).

6.9.2.9 Stakeholder engagement and support

The measurement of the entrepreneurial orientation of universities and their faculties and departments includes university cooperation with industry (Todorovic, 2005; Tatarski *et al.*, 2020). This sub-theme focuses on the university-industry collaboration aspect and has four codes which have the highest frequency of mention. These codes are industry support and demand, industry contribution, stakeholder engagement and collaboration and corporate social responsibility.

Participant #4 said: *“So, I think the environment outside the employers, the industry, are demanding that graduates coming out must have the intrapreneurial skills in them”*, while Participant #7 explained: *“When it comes to the industry's influence, I will give a lot of needs assessment before we can develop anything or before we can grow in any way. So, I think our engagement with the industry is through these needs assessments. So, a lot of our work or a lot of our curriculum is developed by the industry, what the industry is saying about our graduates and how the programme should be altered and adjusted for it to be, you know, for it to produce graduates that are employable and ready for the market.”* Participant #2 said: *“Because sometimes when we deal with many of these stakeholders, they always want us to give out as corporate social responsibility, even our skills.”*

All these responses indicate increasing stakeholder engagement and support for the universities. This fostering of partnerships between academics and external stakeholders is said to be pivotal to universities' ability to attain their third mission initiatives (Mora *et al.*, 2015; Secundo *et al.*, 2016; Pinheiro *et al.*, 2017). As can be observed in Participant #4 and Participant #7's responses, there is the participation of industry professionals in the design, development and delivery of the curriculum (Errasti *et al.*, 2018; Compagnucci & Spigarelli, 2020). The professionals contribute to the university's curriculum by advising on the prevailing needs and business practices in the industry so as to enable students to acquire the relevant skills (De Luca *et al.*, 2014). Participant #2's contribution indicates that his university also

promotes social welfare in its stakeholder engagement initiatives. This is one of the activities under the third mission (Etzkowitz *et al.*, 2000; Guerrero *et al.*, 2015).

In summary, the external environmental factors identified as influential in supporting intrapreneurial behaviour within the context of the universities include conducive business environment, process improvement activities, provision of training, industry and government funding, government vision and strategic direction, implementation of sustainable development goals, environmental factors, technological environment and stakeholder engagement and support. All these factors positively influence intrapreneurial behaviour in the universities that took part in this study. This is because these factors in the external environment provide the opportunities that the universities are exploiting and the resources they use to successfully exploit the identified opportunities.

The findings on the internal and external environmental factors collectively indicate that university management is putting a lot of effort into promoting the dimensions that influence intrapreneurial behaviour in these environments. It can be seen that management understands that internal and external environmental factors can significantly contribute to nurturing intrapreneurship and affect business activities and performance. There is, however, a need for more effort to bring about congruence among the main internal and external environmental factors if optimum entrepreneurial performance is to be achieved in the universities. The internal and external environmental factors identified need to be further understood and suitably aligned so that business objectives can be effectively and efficiently achieved.

6.10 THEME SIX: IMPACT OF THE ENVIRONMENT

This theme also addresses the empirical objective of exploring how the internal and external environment dimensions that influence intrapreneurial behaviour are promoted in Botswana's large tertiary education organisations. While theme five focused on identifying the environmental factors (internal and external) that are influential in supporting intrapreneurial behaviour within the context of the universities, theme six takes it further by focusing on the descriptions of how and to what extent the identified internal and external organisational factors impact the

intrapreneurial behaviour within the universities. It has already been stated that internal and external environmental factors significantly contribute to nurturing intrapreneurship (Behram & Ozdemirci, 2014), and they affect business activities and performance (Nasiripour *et al.*, 2012; Ting *et al.*, 2012).

This theme is also presented in two parts: the impact of the internal organisational dimensions and the impact of the external organisational dimensions. Each part of this theme has different codes, which can be organised into these different sub-categories, namely:

- Impact of the internal organisational dimensions
 - Staff turnover with one code, mentioned once.
 - Staff enthusiasm with two codes, mentioned four times.
 - Project funding, with two codes, was mentioned twice.
 - Development of entrepreneurial capabilities with three codes, mentioned seven times.
 - Training and continuous professional development with one code were mentioned once.
 - Participatory leadership with one code, mentioned once.
 - Product development and improvement with one code, mentioned once.
 - Profitability with one code, mentioned once.
- Impact of the external organisational dimensions
 - Product development and improvement with two codes, mentioned three times.
 - Alignment to government regulations with one code, mentioned once.
 - Industry partnerships, collaborations and funding with three codes are mentioned six times.
 - Informed decision-making with one code, mentioned once.
 - Training of stakeholders with one code, mentioned once.
 - Increased student placement and enrolment with two codes, mentioned twice.
 - Increased dissemination of information with one code, mentioned once.
 - Changing of stakeholder perceptions – with one code, mentioned once.
 - Intrapreneurial initiatives and growth with one code were mentioned once.

6.10.1 Part 1: Impact of the internal organisational dimensions

The first part of theme six presents the findings on the impact of the internal organisational dimensions. Table 6.15 on the following page presents an overview and quotations directly from the participants to explain the impact of the internal organisational dimensions on intrapreneurial behaviour in the universities.

Table 6.15: Impact of the internal organisational dimensions

Theme	Sub-themes	Codes and Quotations from participants
Impact of the internal organisational dimensions	Staff turnover	High staff turnover: Participant #7: <i>"Also, internally, the pressure of work is very high, leading to high staff turnover. We have employees working for two weeks and leaving because they cannot cope with the targets."</i>
	Staff enthusiasm	Staff support and positive attitude: Participant #2: <i>"Our Managing Director, seeing that he is a Motswana from Botswana, doing this kind of business, running this, being impactful in terms of being an entrepreneur, so that gives us the courage, that gives us encouragement as employees to help him support his vision and come up with entrepreneurial ideas or have that kind of intrapreneurial behaviour because of his approach to business.."</i> Participant #10: <i>"I also mentioned the issue of available financing, which is making some of the academics have a positive attitude towards intrapreneurial initiatives. Student's attitudes are also becoming positive because they see that entrepreneurship is for people who desire to make it in the job market. So, the will for both academics and students that will is there, and so students have high participation. You find that for every entrepreneurial module, there is high participation."</i> Staff free sharing of skills: Participant #10: <i>"So, getting people who just come and they share their skills without payment is a big impact on the support of intrapreneurial behaviour in the university. "</i>
	Project funding	Set up of project revolving fund: Participant #5: <i>"And they can even open up an account because within our university, when you have a project, that money goes to the university, and that money, part of it, goes to what we call, it is not an exact name, but a fund where a revolving fund where money will put there for further research. With that type of money, then normally the people who would have contributed can access it at some point and start to do new projects that can involve students."</i> Industry stakeholder sponsorship: Participant #6: <i>"We have had ABSA Botswana sponsoring us, and for them to get to agreeing to sponsor us, it is because they were part of, I want to believe that, it was because we had had a public lecture before."</i>
	Development of entrepreneurial capabilities	Lecturer-student collaborations: Participant #5: <i>"Let me give the example of a project which involved students. That is the way to ensure that internally, the organisation gets some funds that they can use."</i> Impact of reward system: Participant #2: <i>"I think to a very large extent, especially the issue of the reward system. It really affects intrapreneurial behaviour. Whenever one sees that they are being rewarded for their skill, for their performance, then they put in more effort and do more than the ordinary, the normal. So I think,</i>

		<i>to a very large extent, this factor improves the entrepreneurial spirit..”</i>
	Training and continuous professional development	Training improving skill sets: Participant #10: <i>“If they say who wants to provide mentorship skills, they are willing to participate, thereby helping the university to have staff with enhanced skills.”</i>
	Participatory leadership	Policy and strategy for participatory leadership: Participant #3: <i>“We are also now having a Student Representative Council (SRC). Like we said this is part of strategy or part of our policy. They actually assist management. Leadership for SRC is involved in instilling this skill set in the students as well. They also train the new students that are coming in.”</i>
	Product development and improvement	Conducting of programme reviews and restructuring: Participant #4: <i>“I think we now have, at New Era, are trying and consciously restructuring our programmes as necessary in order to be able to include such things. So, as we review our programmes, we are always looking for a change that, you know, positive change.”</i>
	Profitability	Some financial gain: Participant #10: <i>“If they say who wants to provide mentorship skills, they are willing to participate, thereby helping the university to have staff with enhanced skills and to attain financial resources.”</i>

Source: Compiled by the researcher

Figure 6.24 on the next page presents the matrix indicating the participants who provided a specific code on this part of the theme.

Figure 6.24: Matrix for the impact of the internal organisational dimensions

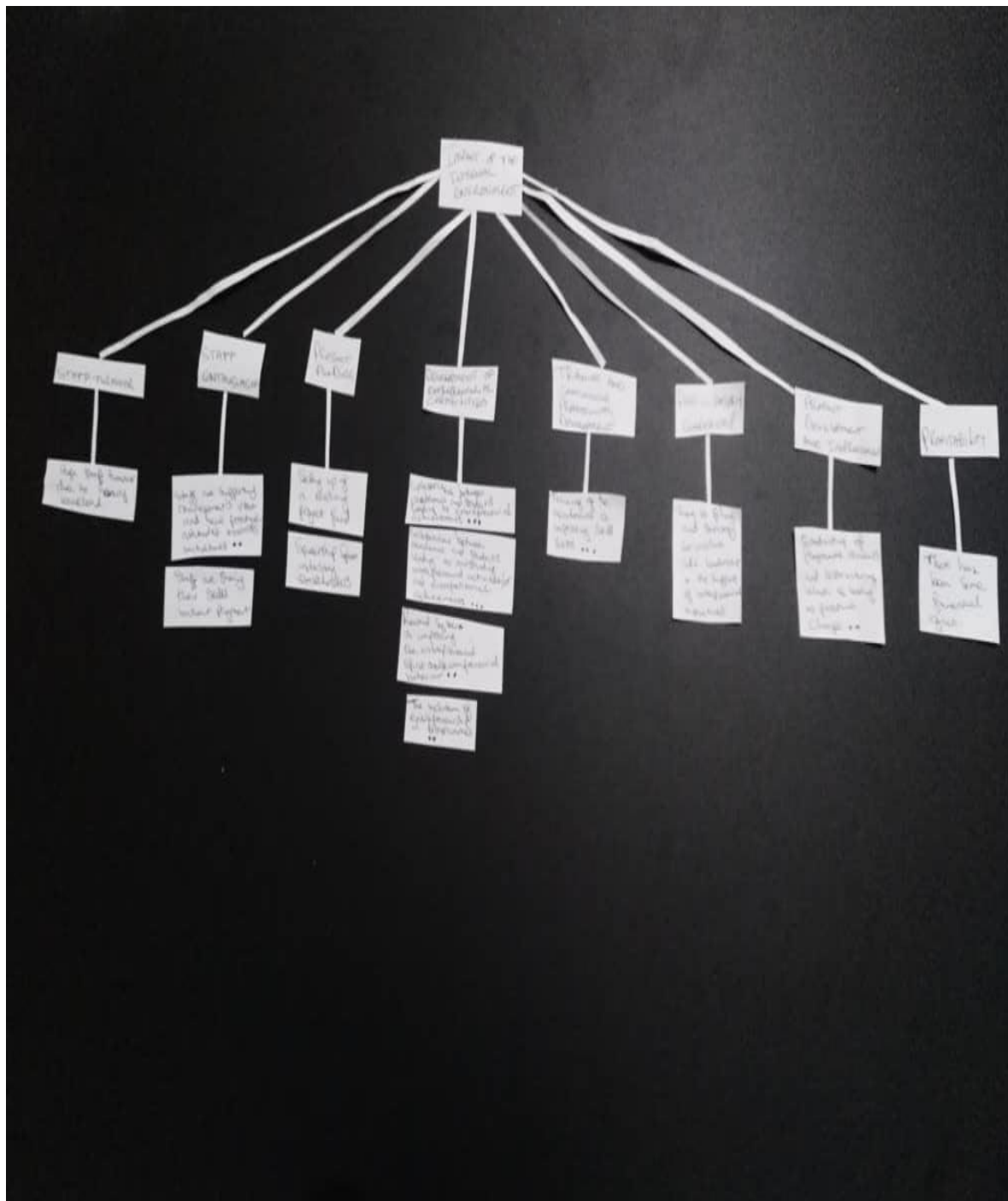
Theme 6: Impact of the environment - internal		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Staff turnover	High staff turnover							X			
Staff enthusiasm	Staff support and positive attitude		X					X			X
	Staff free sharing of skills										X
Project funding	Set up of project revolving fund					X					
	Industry stakeholder sponsorship						X				
Development of entrepreneurial capabilities	Lecturer-student collaborations	X				X			X	X	X
	Impact of reward system		X								
	Inclusion of entrepreneurship in programmes				X						
Training and continuous professional development	Training improving skill sets										X
Participatory leadership	Policy and strategy for participatory leadership			X							
Product development and improvement	Conducting of programme reviews and restructuring				X						
Profitability	Some financial gain										X

Source: Compiled by the researcher

The internal organisational dimensions represent the organisational context in which employees operate and include organisational support or the support of the top management team; the organisational structure and culture; reward and reinforcement systems for employees; a transparent promotional system for the intrapreneurs; work discretion; time availability; organisational boundaries and resource availability (Hornsby *et al.*, 2013; Rekha *et al.*, 2014; Kuratko *et al.*, 2014a; Hughes & Mustafa, 2017). These dimensions demand a radical shift in the internal way of working in an organisation because they are considered the main elements in an organisation's intrapreneurial efforts. These must be assessed in order to determine an organisation's level of preparedness to stimulate intrapreneurial behaviour (Hornsby *et al.*, 2013; Croneen *et al.*, 2016).

The analysis of this first part of theme six generated eight critical sub-themes that present the research participants' descriptions of how and to what extent the internal environment factors impact intrapreneurial behaviour in their respective universities. Figure 6.25 on the next page presents the network diagram of the sub-themes and code words for this part of theme six as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

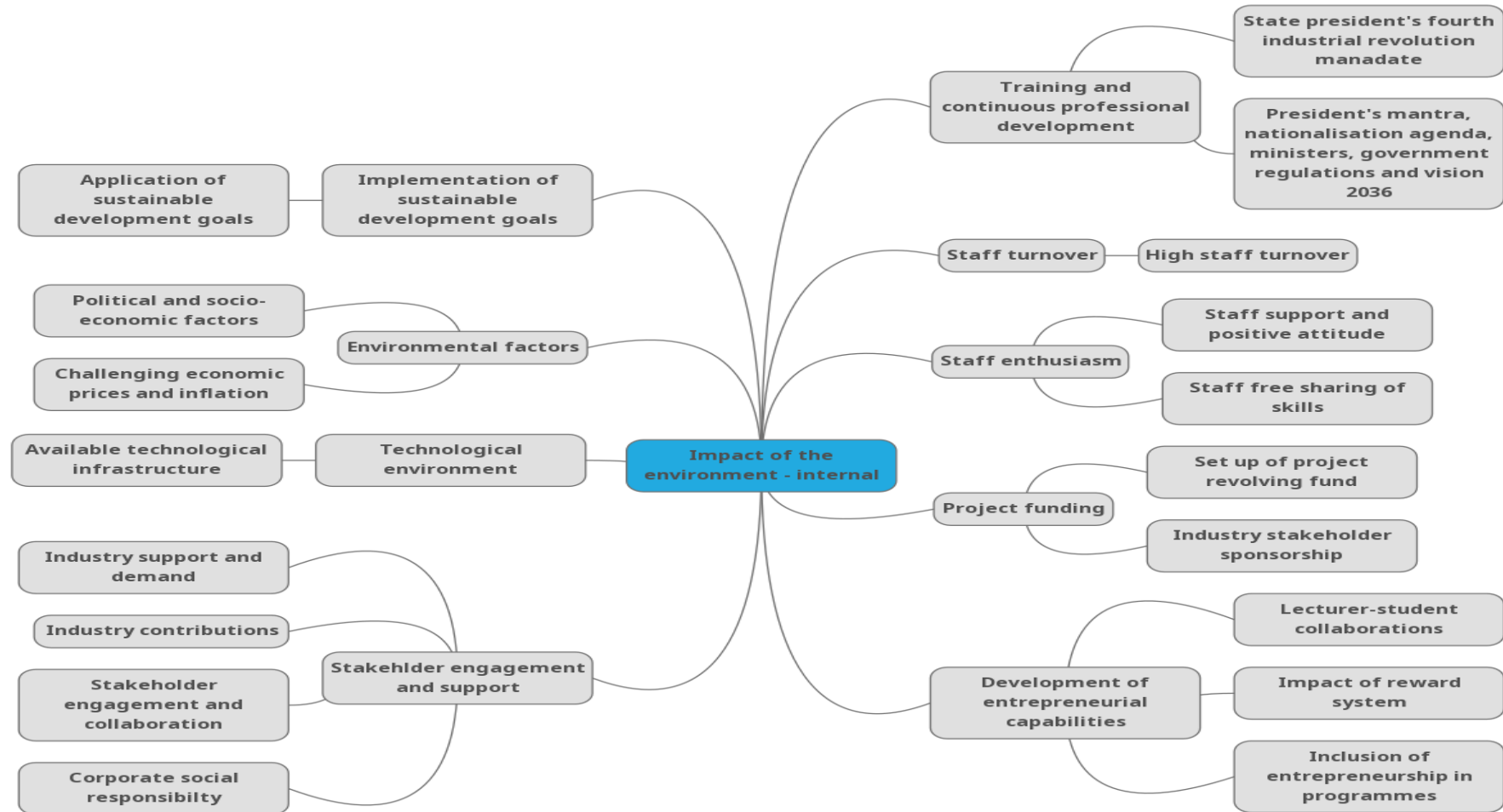
Figure 6.25: Photographic image of the impact of the internal organisational dimensions – theme 6



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.26 below.

Figure 6.26: Systemised network diagram for the impact of the internal organisational dimensions



A detailed discussion of the sub-themes on the impact of the internal environment is now provided.

6.10.1.1 Staff turnover

This sub-theme is represented with one code being high staff turnover. Participant #7 explained: *“Also, internally, the pressure of work is very high, leading to high staff turnover. We have employees working for two weeks and leaving because they cannot cope with the targets. There is also very little induction given to employees to prepare them for the amount of work that they are expected to do.”* This finding indicates a negative impact of the internal environment factors on intrapreneurial behaviour in this university, which can be understood from the perspective of the changing context that universities have to adapt to. According to Rubens *et al.* (2017), it has become deep-rooted in the minds of policymakers that universities must become more entrepreneurial through the promotion of intrapreneurial initiatives (Farrukh *et al.*, 2019). As a result, universities face many challenges in operationalising the entrepreneurial university concept and developing university competencies in entrepreneurial activities (Etzkowitz, 2003b; Volkodavova *et al.*, 2019). This leaves the academics feeling overloaded with work, and many opt to leave, especially when there is a lack of meaningful incentives and rewards.

Further, the incorporation of the third mission tends to clash with traditional academic activities, thereby causing identity crises among academics (de la Torre *et al.*, 2017). According to Tatarski *et al.* (2020), it is burdensome for employees to merge their principal jobs with the accompanying administration, and as a result, they tend to be resistant, and as in this case, they opt to leave. Therefore, universities need to identify the academic intrapreneurs among the academics. These are those who possess an entrepreneurial orientation that enables them to thrive in demanding working conditions without experiencing burnout (Kattenbach & Fietze, 2018).

6.10.1.2 Staff enthusiasm

This sub-theme presents a positive impact of the internal environmental factors on intrapreneurial behaviour in the universities. It has two codes, namely: staff support and positive attitude and staff free sharing of skills. Participant #2 mentioned: *“Whenever one sees that they are being rewarded for their skill, for their performance, then they put in more effort and do more than the ordinary, the normal. So I think, to a very large extent, these factors improve the entrepreneurial spirit.”* Participant #10 added: *“So, getting people who just come and they share their skills without payment is a big impact on the support of intrapreneurial behaviour in the university. And I also mentioned the aspect of the space. I also mentioned the issue of available financing, which is making some of the academics have a positive attitude towards intrapreneurial initiatives.”*

It can be seen that the internal environment dimensions of rewards and the provision of resources such as space and finances for intrapreneurial activities are positively impacting the intrapreneurial behaviour in these universities. This can be seen through the increasing enthusiasm for intrapreneurial initiatives among staff, as highlighted by Participant #10. It has already been noted that rewards and resources fall under some of the most influential factors that motivate employees to develop their entrepreneurial competencies (Turner & Pennington, 2015) and that rewards determine significant performance at work (Manam, 2016) as they are believed to be linked to motivation. On the other hand, the high availability of the right resources, such as the available space, results in higher levels of intrapreneurial behaviour (Rigtering & Weitzel, 2013). This is because intrapreneurial activities are resource-intensive, and their success depends on the availability and commitment of resources (Hughes *et al.*, 2019).

6.10.1.3 Project funding

This sub-theme is presented with two codes, which are the setup of a project revolving fund and industry stakeholder partnerships. Participant #5 mentioned: *“And they can even open up an account because within our university, when you have a project, that money goes to the university, and that money, part of it, goes to what*

we call, it is not an exact name, but a fund where a revolving fund where money will put there for further research.” Participant #6 went on to say: “We have had ABSA Botswana sponsoring us, and for them to get to agreeing to sponsor us, it is because they were part of, I want to believe that, it was because we had had a public lecture before.”

According to Markuerkiaga *et al.* (2014) and Fernandez-Nogueira *et al.* (2018), entrepreneurship funding is one of the internal environment factors that support intrapreneurial behaviour and is vital for the autonomy and development of universities. As can be seen from Participant #5’s contribution, this funding is mainly for research and teaching in entrepreneurship or as seed money for the creation of entrepreneurship projects, companies and organisations (Bezanilla *et al.*, 2020). It is, therefore, evident that the universities are adopting sustainable internal financial strategies that enable them to invest in entrepreneurial activities. These universities are going further to expand their potential through access to a wide range of funding sources, such as industry and stakeholder sponsorships, among other internal services, for the generation of revenue from entrepreneurship activities such as the public lecture that was held by Participant #6’s university (OECD, 2012).

6.10.1.4 Development of entrepreneurial capabilities

There are three codes under this sub-theme: lecturer-student collaborations, the impact of the reward system and the inclusion of entrepreneurship in programmes. Participant #5 mentioned the lecturer-student collaborations: *“Let me say the example of a project which involved students. That is the way to ensure that internally, the organisation gets some funds that they can use.”* On the impact of the reward system, Participant #2 said: *“I think to a very large extent, especially the issue of the reward system. It really affects intrapreneurial behaviour. Whenever one sees that they are being rewarded for their skill and performance, they put in more effort and do more than the ordinary, the normal. So I think, to a very large extent, this factor improves the entrepreneurial spirit.”* Participant #4 spoke on the inclusion of entrepreneurship in programmes: *“I think, knowing that they have such a will to inculcate, to embed entrepreneurial skills into the programmes, knowing the effects of that, I think we now have,…”*

The impact of these internal environment factors is also positive as there is a significant development of both the staff and students' entrepreneurial skills and capabilities. Through collaborations, rewards and entrepreneurship training, the intrapreneurial behaviour of academics and their students is being induced and enhanced (Hashimoto & Nassif, 2014; Desai, 2015a). Consequently, these factors are also heralding intrapreneurial activities and an intrapreneurship-friendly environment in the universities (Blanka, 2019). The training in entrepreneurship, which is based on the offering of formal education through academic curricula or programmes and research in entrepreneurship (de la Torre *et al.*, 2018), refines capabilities in the academics and students' behaviours, knowledge, skills and attitudes (de la Torre *et al.*, 2018). Therefore, these universities are working on fostering an entrepreneurial mindset through a unified culture across academia and among academic staff and their students (Sá *et al.*, 2018).

6.10.1.5 Training and continuous professional development

This sub-theme has one code, which is training and improving skill sets. Participant #10 mentioned: *"If they say who wants to provide mentorship skills, they are willing to participate, thereby helping the university to have staff with enhanced skills."* The mentorship training here indicates a form of knowledge transfer and the setting up of spin-off companies which aims at fostering intrapreneurial behaviour among students and academic staff in this university (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019). The training is seen as having the potential to develop capabilities in behaviours, attitudes, knowledge and skills that are specific to an individual within the research and academic curricula (Errasti *et al.*, 2018). This finding also indicates that this tertiary educational institution is undertaking activities that comprise lifelong learning, which has a direct impact on the academics' views on self-efficacy and their intention to establish new businesses, among other intrapreneurial initiatives (Bergmann *et al.*, 2016; Saeed *et al.*, 2015).

6.10.1.6 Participatory leadership

This sub-theme is also presented with one code: policies and strategies for participatory leadership. Participant #3 said: *"We are also now having a Student*

Representative Council (SRC). As we said, this is part of our strategy or part of our policy. They actually assist management. Leadership for SRC is also involved in instilling this skill set in the students. They also train the new students that are coming in. According to Fernandez-Nogueira *et al.* (2018), a university's policies, practices and procedures must be evaluated to determine their existence and influence on its academic entrepreneurship activities. It can be seen under this sub-theme that policies and strategies exist in this university to influence intrapreneurial behaviour through participatory leadership.

The policies and strategies on participatory leadership clearly indicate that collaborations and co-creation exist among this university's internal stakeholders (Stolze & Sailer, 2021). This university's policies and strategies are aimed at the provision of a learning environment that will ensure that students graduate with the requisite skills needed by the industry and society (Gokhberg *et al.*, 2014; Fayolle & Gailly, 2015; Jaekel *et al.*, 2015). The policies and strategies also extend to the professional development of the tertiary education institution's leaders at both university management and student leadership levels. This is aimed at enhancing these leaders' business skills, relationship management and change-oriented leadership or transformational leadership capabilities (Tran & Nghia, 2020). The appointment of student entrepreneurship ambassadors is also being implemented through the involvement of the Student Representative Council leadership, and this successfully fosters intrapreneurial behaviour among the students (Wakkee *et al.*, 2019).

6.10.1.7 Product development and improvement

There is one code under this sub-theme, which is the conducting of programme reviews and restructuring. As already established, the main entrepreneurial aspect that manifests in the tertiary education institutions that took part in this study is the provision of entrepreneurship education. As a result, product development is mainly in the design of programmes and courses. As explained by Participant #4: *"I think we now are trying and consciously restructuring our programmes as necessary in order to be able to include such things. So, as we review our programmes, we are always looking for change that, you know, positive change. One of which is then to say, well,*

you know, here is an element missing, entrepreneurial skills, so we include that in our programme reviews. Yes, the impact is, therefore, that to a greater extent, we are endeavouring to keep changing the course content to align to what is missing.”

This indicates that this university is obtaining intelligence on the prevailing needs and business practices in the industry, which are incorporated into the university curriculum so as to enable students to acquire the relevant skills (De Luca *et al.*, 2014:1–21). The reviews and restructuring of the curriculum enable the transfer of fundamental skills to upcoming entrepreneurs in the university. (De Luca *et al.*, 2014; Compagnucci & Spigarelli, 2020). Further, these efforts will continue to enhance the internal environment dimensions, which are conducive to promoting intrapreneurial behaviour given this particular university's context (Arz, 2017).

6.10.1.8 Profitability

This sub-theme has one code, which is some financial gain. Participant #10 mentioned: *“They (academics) are willing to participate, thereby helping the university to have staff with enhanced skills and to attain financial resources.* The insight being derived here is that this university, through its staff's skills, is improving its financial performance and that of its faculties (Etzkowitz & Leydesdorff, 2000). This university is adopting an entrepreneurial culture to generate imperative funds from diverse sources (Mariani *et al.*, 2018). It can be observed that this university is profiting from the knowledge that the academics obtain in the entrepreneurial environment especially as they closely interact with the business sector (Etzkowitz, 2013a).

In summary, the impact of the internal organisational dimensions on intrapreneurial behaviour within the universities is both negative and positive. The impact is, however, largely positive, as the only negative impact described is that of high staff turnover due to the pressure of work as the universities implement the entrepreneurial university concept. Other than that, the rest of the impacts described by the participants have enhanced the intrapreneurial behaviour within the universities, and these impacts include staff enthusiasm, project funding, development of entrepreneurial capabilities, training and continuous professional

development, participatory leadership, product development and improvement and finally the profitability being experienced from the academics' intrapreneurial behaviour.

6.10.2 Part 2: Impact of the external organisational dimensions

This second part of the theme presents the findings on the impact of the external organisational dimensions. Table 6.16 on the following page presents an overview and quotations directly from the participants to explain the impact of the external organisational dimensions on intrapreneurial behaviour in the universities.

Table 6.16: Impact of the external organisational dimensions

Theme	Sub-themes	Codes and Quotations from participants
Impact of the external organisational dimensions	Product development and improvement	Government and industry contributions: Participant #7: <i>“With the help of the government and industry, we have to overhaul the curriculum because we want to become entrepreneurial, without this, we cannot.”</i> The commercialisation of entrepreneurial outputs: Participant #8: <i>“With respect to such developments and a couple of commercialisations that have come on board have been a result of an address of such factors, a creation of an environment that leads to these factors, that brings industry on board and from those we have seen commercialisation outcomes hence I will say those factors have been positive so far, and we hope they continue.”</i>
	Alignment to government regulations	Universities moulded by government regulations: Participant #6: <i>“I believe it was of the external intrapreneurial aspect. The external stakeholders, such as the Botswana Qualification Authority and other bodies, mould the university. They mould management. They mould the lecturers or the academics who work on these programmes that we would later on we then share.”</i>
	Industry partnerships, collaborations and funding	Increase in stakeholder partnerships and collaborations: Participant #5: <i>“In terms of the external environment, partnerships work very well. If the university were to get some partnerships with organisations where they attach students and students, come back and write a report on what they do. The students take that and turn it into either a company or some entrepreneurial venture that they can start. You will see that now our external people, they have really helped our students because it happens, students sometimes get ideas from working with our external partners.”</i> Participant #4: <i>“Externally, once the communication of the intrapreneurial initiatives reaches the external environment, collaborations with the external stakeholders result.”</i> Attracting investors: Participant #6: <i>“I remember in 2020 we had the CEO for Human Resource Development Council as our guest speaker for our faculty research conference. So that on its own, because we ended up taking it out to Mmegi newspaper, it can pull a crowd, one or two people who could be saying, here is the University, maybe we could invest at the University. So, I do believe that it has a positive impact.”</i>
	Informed decision-making	Emphasis on monitoring and decision-making: Participant #1: <i>“Yes, we can just combine both of them. They can have a direct or indirect influence on entrepreneurial orientation, so it is just very important to monitor what is happening and see how one can take the decision forward.”</i>

	Training of stakeholders	Staff training external stakeholder: Participant #2: <i>“Again, we have had cases where staff members go out there and train the external stakeholders. So already it is motivating the staff members to see the worth of being intrapreneurial.”</i>
	Increased student placement and enrolment	Increased absorption of interns: Participant #3: <i>“Yes. In terms of unemployment that I talked about, by virtue of imparting these skills to our students, when they go out there for internship, employers they actually, some, because, it is not allowed but some they will not come back, or they will have, you know, a fixed timetable where they are employed and going to school.”</i> Increased university enrolment: Participant #6: <i>“So that on its own, because we ended up taking it out to Mmegi newspaper, it can pull a crowd, one or two people who could be saying ok here is the University, maybe... we even go and be students at the University.”</i>
	Increased dissemination of information	Increased public relations activities: Participant #4: <i>“And perhaps as we do all these changes, also we would make a big noise out of, I mean, that is already done, we are making a big noise out to the public, in terms of public relations, we talk about all, you know, this thing happening in New Era.”</i>
	Changing stakeholder perceptions	Stakeholders’ change of perceptions about universities: Participant #4: <i>“And perhaps as we do all these changes, also we would make a big noise out of, I mean, that is already done, we are making a big noise out to the public, in terms of public relations, we talk about all, you know, this thing happening in New Era and then the job market is getting to know about it, and that is how we are influencing again the external feel of all these things so when we do internal changes and these our internal changes are then affecting the external perceptions, perhaps then that catalyses, you know the whole process of entrepreneurial skills culture.”</i>
	Intrapreneurial initiatives and growth	Tangible intrapreneurial initiatives and growth: Participant #10: <i>“These external factors also have largely positively affected the intrapreneurial behaviour in the university; that is why we do have quite a number of tangible intrapreneurial initiatives that are helping the university grow.”</i>

Source: Compiled by the researcher

Figure 6.27 on the following page presents the matrix indicating the participants who provided a specific code on this part of the theme.

Figure 6.27: Matrix for the impact of the external organisational dimensions

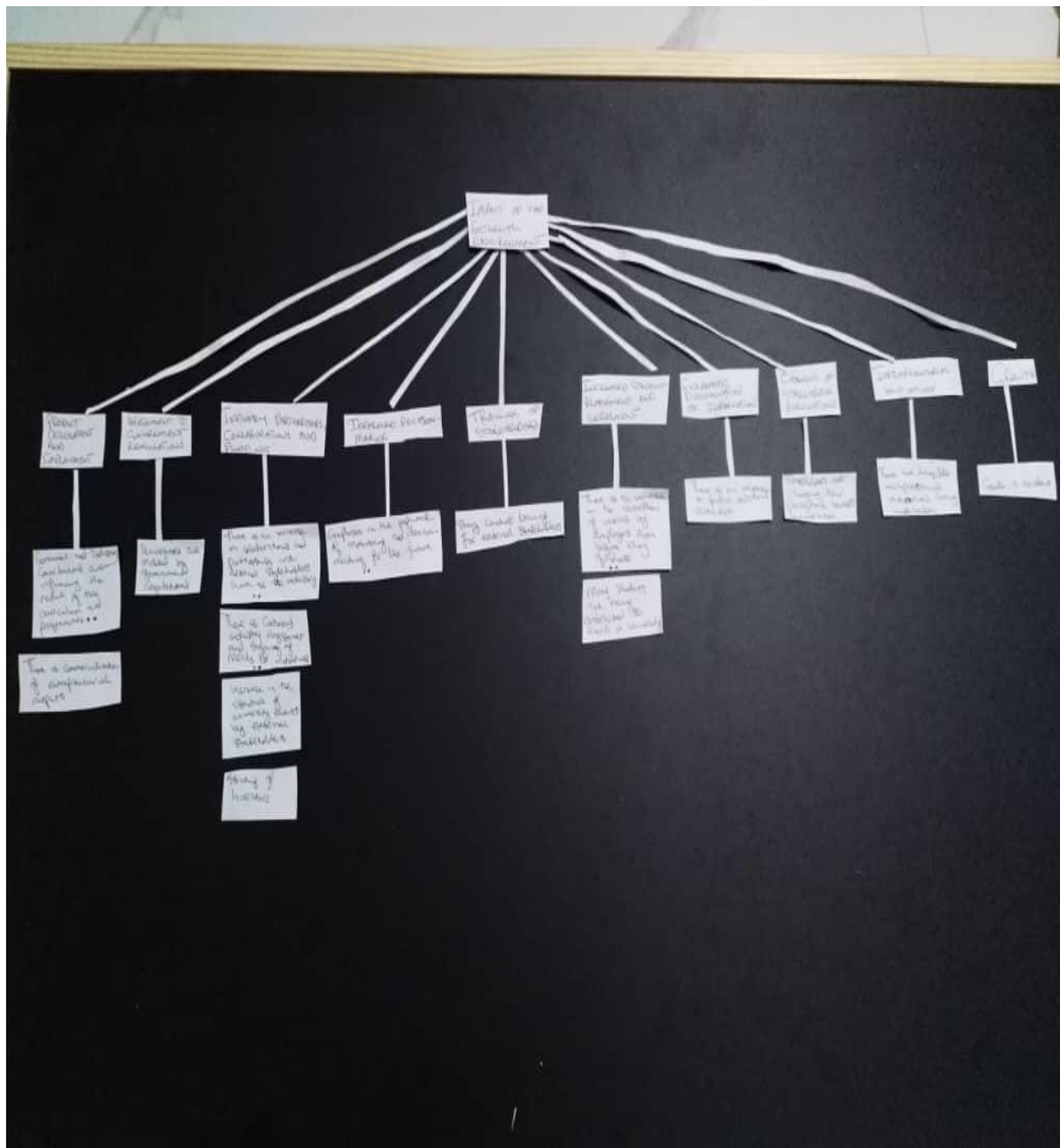
Theme 6: Impact of the external orgnnisational dimensions		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Product development and improvement	Government and industry contributions							X		X	
	Commercialisation of entrepreneurial outputs								X		
Alignment to government regulations	Universities molded by government regulations						X				
Industry partnerships, collaborations and funding	Increase in industry partnerships and collaborations				X	X	X		X		
	Continuous industry engagement								X		
	Attracting of investors						X				
Informed decision-making	Emphasis on monitoring and decision-making	X									
Training of stakeholders	Staff training external stakeholders		X								
Increased student placement and enrolmen	Increased absorption of interns			X							
	Increased university enrolment						X				
Increased information dissemination	Increased public relations activities				X						
Changing of stakeholder perceptions	Stakeholders' change of perceptions about universities				X						
Intrapreneurial initiatives and growth	Tangible intrapreneurial initiatives and growth										X

Source: Compiled by the researcher

The external organisational dimensions represent forces outside the organisation that have an uncontrollable impact on business activities and performance through diverse dimensions that are ideal for developing and implementing intrapreneurial initiatives (Bradley *et al.*, 2011). According to Ireland *et al.* (2009), top-level managers in organisations should demonstrate a strategic posture toward entrepreneurial activities in order for their organisations to compete successfully in these environments. Baruah and Ward (2014) emphasise the importance for intrapreneurial organisations to understand the effects of the various external environmental factors. The analysis of this second part of theme six generated nine critical sub-themes that present the research participants' descriptions of how and to what extent the external organisational dimensions impact intrapreneurial behaviour in their respective universities. The findings indicate that university management has assumed a strategic posture for harnessing positive impacts from the external organisational dimensions, and as such, they have endeavoured to understand these effects.

Figure 6.28 on the following page presents the network diagram of the sub-themes and code words for this part of theme six as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

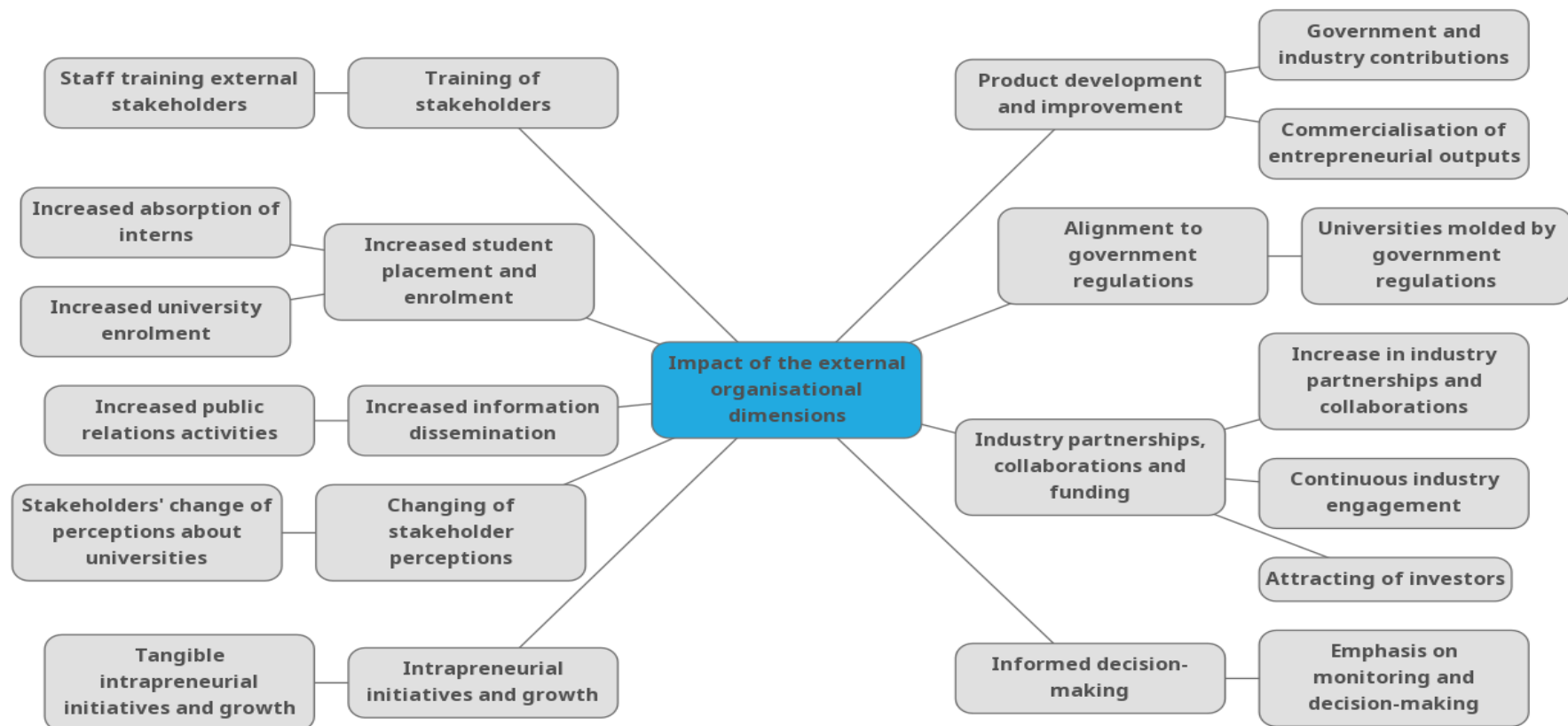
Figure 6.28: Photographic image of the impact of the external organisational dimensions – theme 6



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.29 below.

Figure 6.29: Systemised network diagram for the impact of the external organisational dimensions



A detailed discussion of the sub-themes on the impact of the external environment is now provided.

6.10.2.1 Product development and improvement

This sub-theme is presented with two codes: government and industry contributions and commercialisation of entrepreneurial outputs. Participant #7 explained the government and industry contributions: *“I had mentioned that these factors or these attributes that were suggested by our government and our industry, they form part of our curriculum in the sense that if we identify or if we see a certain property not in the curriculum, we are going to implement it, or we are going to include it in our programmes, or it is going to be seen through our training, as we do in my department. And that is our impact.”* This response indicates that this university is fostering partnerships between academics and external stakeholders, including the government and the industry. These partnerships are pivotal to designing and developing the university's curriculum (Errasti et al., 2018; Compagnucci & Spigarelli, 2020). This is what comprises product development and improvement in the university.

On the commercialisation of entrepreneurial outputs, Participant #8 explained: *“Obviously, the external factors are quite key; hence, we have seen the University continuously engage with industry, signing memorandum of understanding with respect to such developments and a couple of commercialisations that have come on board have been a result of an address of such factors, a creation of an environment that leads to these factors, that brings industry on board and from those we have seen commercialisation outcomes hence I will say those factors have been positive so far...”* From this contribution, it can be said that this higher education institution does fit into the definition of an entrepreneurial university. This concept is defined as a higher education institution that protects knowledge, its transfer and the commercialisation of innovative business activities between universities and various stakeholders, including the government, based on financial and organisational economic standards (Kalenyuk & Dyachenko, 2016:59-74).

What this university is doing is reflective of the definition of the entrepreneurial university as it can be seen to be expanding the traditional university missions of teaching and research to include the third mission activities that are built on commercialising newly created knowledge through entrepreneurial initiatives (Cunningham *et al.*, 2022).

6.10.2.2 Alignment to government regulations

This sub-theme has one code, which is universities moulded by government regulations. Participant #6 mentioned: *“I believe it was of the external intrapreneurial aspect. The external stakeholders, such as the Botswana Qualification Authority and other bodies, they mould the university. They mould management. They mould the lecturers or the academics who work on these programmes...”* This external environment context includes forces and elements that affect the university from outside its boundaries (Fernandez-Nogueira *et al.*, 2018). It refers to the government’s role in the development of national legislature, science and technology (S&T) policies that create a favourable environment for the encouragement of entrepreneurial activities in universities (Obaji & Olugu, 2014; Budyldina, 2018).

This university, among others, is therefore being moulded by the government and policymakers in Botswana, who are placing a demand on the country’s tertiary education institutions to promote and encourage entrepreneurship among staff and students. This is aimed at turning the universities into the main drivers of socio-economic development in Botswana (Ebewo *et al.*, 2017). According to Lekoko (2011), Botswana’s universities need to be transformed into entrepreneurial educational centres and activity hubs. This need for transformation is urgent, especially because the government policy for regulating entrepreneurial activities forms the core of Botswana’s path to industrialisation (Obaji & Olugu, 2014), specifically through the fourth industrial revolution.

6.10.2.3 Industry partnerships, collaborations and funding

There are three codes under this sub-theme: increase in industry partnerships and collaborations, continuous industry engagement and attracting of investors.

Participant #4 mentioned: *“Externally, once the communication of the intrapreneurial initiatives reaches the external environment, collaborations with the external stakeholders result.”* In addition, Participant #5 explained: *“In terms of the external environment, partnerships work very well. If the university were to get some partnerships with organisations where they attach students and students come back and write a report on what they do, and the students take that and turn it into either a company or some entrepreneurial venture that they can start, then you will see that now our external people, they have really helped our students because it happens, students sometimes they get ideas from working with our external partners.”*

Participant #8 went on to mention: *“Obviously, the external factors are quite key; hence, we have seen the University continuously engage with industry, signing a memorandum of understanding with respect to such developments”,* while Participant #6 said: *“So that on its own, because we ended up taking it out to Mmegi newspaper, it can pull a crowd, one or two people who could be saying ok here is the University, maybe we could invest.”*

These responses show that these universities are constantly cooperating with the industry through systematic activities that involve the bringing together of facilities for the performance of tasks that the two institutions would not be able to carry out alone (Moradi & Noori, 2020). As already discussed, this collaboration between the university and the industry aims to create a social environment that enables access to technologies and removes border knowledge. The collaboration also fosters the sharing of knowledge and ideas, the increase of financial resources and the use of the universities’ innovative potential, thereby fostering intrapreneurial behaviour (Lin, 2017).

6.10.2.4 Informed decision-making

This sub-theme has one code: emphasis on monitoring and decision-making. Participant #1 mentioned: *“Yes, we can just combine both of them. They can have a direct or indirect influence on entrepreneurial orientation, so it is just very important to monitor what is happening and see how one can take the decision forward.”* This response shows that this university is placing emphasis on the making of strategic

choices as they decide on the entrepreneurial pathways to implement, which can include knowledge transfer, university-business collaborations, entrepreneurship and social responsibility, as well as the monitoring and evaluation of desired outcomes for problem-solving (Klofsten *et al.*, 2019). This, in turn, is providing increased support for intrapreneurial behaviour in this university.

6.10.2.5 Training of stakeholders

This sub-theme also has one code, which is staff training external stakeholders. Participant #2 mentioned: *“Again, we have had cases where staff members go out there and train the external stakeholders. So already it is motivating the staff members to see the worth of being intrapreneurial.”* This further indicates the implementation of the third mission in this university. It can be seen that this university is creating, using, implementing and exploiting university knowledge, assets and competencies with external stakeholders as well as the general society (Calcagnini *et al.*, 2016; Secundo *et al.*, 2017b; Meoli *et al.*, 2018). This is being done through the training of external stakeholders. This is one of the third mission activities, which involves the development of human capital (Etzkowitz *et al.*, 2000; Guerrero *et al.*, 2015). The fact that the academics are taking up both formal and informal teaching roles further indicates the high-level impact of external organisational factors on the intrapreneurial behaviour in this university.

6.10.2.6 Increased student placement and enrolment

Two codes fall under this sub-theme: increased adsorption of interns and increased university enrolment. Participant #3 mentioned: *“Some of our students from different programmes, before they even finish, they actually will be offered employment, which means there is actually an impact in what we are doing especially when we send students for internship, and they are absorbed”* while Participant #6 added: *“...because we ended up taking it out to Mmegi newspaper, it can pull a crowd, one or two people who could be saying ok here is the University, maybe we could invest or could we even go and be students at the University. So, I do believe that it has a positive impact.”* These responses indicate the faith that exists in the potential of

these higher education institutions as the main supply of the skills and knowledge needed for innovation and economic growth in Botswana (Kruss *et al.*, 2015).

It can further be observed that these universities are becoming a driving force for social, economic and cultural development in Botswana through knowledge and technology transfers to industry and to the wider society through their development of human capital that meets the skill needs in the industry (HRDC, 2015; Secundo *et al.*, 2017a; Agasisti *et al.*, 2019; Etzkowitz, 2003a; Di Berardino & Corsi, 2018). All this entails that the external environment factors are enhancing the intrapreneurial behaviour in the universities.

6.10.2.7 Increased information dissemination

This sub-theme is presented with one code being the increased public relations activities. Participant #4 explained: *“And perhaps as we do all these changes, also we would make a big noise out of, I mean, that is already done, we are making a big noise out to the public, in terms of public relations, we talk about all, you know, this thing happening in New Era and then the job market is getting to know about it.”* This finding reflects the continuing discourse between universities, industry, government and society on the third mission (Giuri *et al.*, 2019). This university, through the execution of the third mission, is responding to the increasing expectations for its contribution to finding solutions to socio-economic problems. And so as the intrapreneurial behaviour in the university is enhanced through the transfer of research findings and other third-party mission activities that benefit the economic and social systems (Feola *et al.*, 2020), the university is increasing its discourse or communication with the government, the industry and the society at large.

6.10.2.8 Changing of stakeholder perceptions

This sub-theme also has one code: stakeholders' change of perceptions about universities. Participant #4 mentioned: *“We are influencing the external feel of all these things again, so when we do internal changes, and these internal changes are then affecting the external perceptions, perhaps then that catalyses, you know, the whole process of entrepreneurial skills culture.”* This response shows that the

increasing pressure on universities to alter their role and move their focus from mainly teaching and conducting research to the added mission of contributing to society (Abreu *et al.*, 2016; Urdari *et al.*, 2017) is clearly starting to gain results. The change in stakeholder perceptions results from the transformation that this specific university is going through as it implements the entrepreneurial university concept and supports intrapreneurial behaviour. As discussed in the preceding point, this university has actively engaged the business sector and stakeholders in general, thereby generating social and economic benefits from university research (Etzkowitz, 2012). This has resulted in positive changes in the stakeholders' perceptions.

6.10.2.9 Intrapreneurial initiatives and growth

There is one code under this sub-theme as well, which is tangible intrapreneurial initiatives and growth. Participant #10 explained: *"These external factors also have largely positively affected the intrapreneurial behaviour in the university. That is why we have many tangible intrapreneurial initiatives that are helping the university grow."* It can be seen that this university has adapted to the changing context by becoming more entrepreneurial through the promotion of intrapreneurial initiatives (Farrukh *et al.*, 2019). Consequently, this university is experiencing developments that enhance the university's structures and financial status (Ivanova & Leydesdorff, 2014; Etzkowitz *et al.*, 2000:313), thereby attaining some level of growth.

In summary, the external organisational dimensions discussed above include product development and improvement, alignment to government regulations, industry partnerships, collaborations and funding, informed decision-making, training of stakeholders, increased student placement and enrolment, increased information dissemination, changing of stakeholder perceptions and lastly intrapreneurial initiatives and growth. Each of these dimensions has been described to have positively impacted intrapreneurial behaviour in the university. This affirms that the external environment is crucial to fostering intrapreneurship and organisational performance as it is the source of the opportunities and resources for intrapreneurial initiatives.

It can also be seen that both the internal and external organisational dimensions positively impact the intrapreneurial behaviour in the universities. Therefore, it can be said that the internal and external environment dimensions that influence intrapreneurial behaviour are promoted in these large tertiary education institutions that participated in this study. However, there is still room for the university's top management to maximise these dimensions' positive impact on intrapreneurial behaviour. This is critical for increasing the rate at which these universities are transforming into entrepreneurial universities.

6.11 THEME SEVEN: CHALLENGES IN SUPPORTING INTRAPRENEURIAL BEHAVIOUR

This theme addresses the empirical objective, which describes the significant challenges experienced in supporting intrapreneurial behaviour in Botswana's large tertiary education organisations. While theme six focused on how and to what extent the identified internal and external organisational dimensions impact intrapreneurial behaviour within the universities, theme seven takes a different angle by highlighting the challenges faced in supporting intrapreneurial behaviour. According to Tatarski *et al.* (2020), universities face many challenges in becoming entrepreneurial. To be specific, projects to activate intrapreneurship tend to fail due to several challenges in the organisation's internal and external environment (Buekens, 2014:580-586). Intrapreneurial projects are said to have a failure rate of between 70% and 90% (Altringer, 2013). This is because there are scientific management techniques that tend to work against the innovative power in organisations. The abstract analytic techniques employed in centralising decision-making are not aligned with the way people in organisations think and do not help with deciding on new ideas, thereby working against the concept of intrapreneurship (Buekens, 2014).

This theme is also presented in two parts: the impact of internal and external organisational support challenges. Each part of this theme has different codes, which can be organised into these different sub-categories, namely:

- Internal organisational support challenges
 - Limited access to resources with three codes, mentioned seven times.
 - Lack of rewards with two codes, mentioned three times.

- Covid with one codes, mentioned twice.
- No work discretion with one code, mentioned once.
- Delayed change with two codes, mentioned twice.
- Low idea generation with one code, mentioned once.
- Insufficient knowledge of entrepreneurial university with one code, mentioned once.
- Low university capability with four codes, mentioned four times.
- Poor human resource management with three codes, mentioned three times.
- Staff and student resistance with five codes, mentioned eight times.
- Low levels of industry collaborations with one code, mentioned once.
- Heavy workload and staff turnover with two codes, mentioned five times.
- Low staff intrapreneurial behaviour with five codes, mentioned eight times.
- External organisational support challenges
 - Lack of external stakeholder support with five codes, mentioned seven times.
 - Small economy and market in Botswana with three codes, mentioned three times
 - Failure of industry partnerships with one code, mentioned once.
 - Academia not meeting industry expectations with one code, mentioned once.
 - Unemployment with one code, mentioned once.
 - Corruption and theft in funding with one code, mentioned once.
 - Low entrepreneurial behaviour in Botswana with two codes, mentioned twice.
 - Financial challenges with one code, mentioned once.
 - Poor digital marketing with one code, mentioned once.
 - Legal challenges with one code, mentioned once.
 - Technological challenges with one code, mentioned once.
 - Dependence on government support with one code, mentioned once.
 - No/too few industry collaborations with three codes, mentioned four times.
 - Academics not seen as entrepreneurial with three codes, mentioned three times.

6.11.1 Part 1: Internal organisational support challenges

This first part of theme seven presents the findings on the internal organisational support challenges. Table 6.17 on the next page presents an overview and quotations directly from the participants to explain the major challenges the universities experienced in supporting intrapreneurial behaviour.

Table 6.17: Internal organisational support challenges

Theme	Sub-themes	Codes and Quotations from participants
Internal organisational support challenges	Limited access to resources	Insufficient financial resources: Participant #3: <i>"So it is the internal resources, especially finance, may be a challenge or snag in terms of development."</i> Participant #6: <i>"I think that internal, the overall challenge is money. Yes, financial support is quite crucial and if we do not have enough resources or if we do not have enough revenue..."</i> Limited space: Participant #10: <i>"... the space needs to be expanded for intrapreneurial projects."</i>
	Lack of rewards	No reward system: Participant #3: <i>"Maybe there are also issues of the reward system..."</i> Participant #10: <i>"The lack of rewards for intrapreneurial initiatives."</i> Rewards only as management recognition: Participant #3: <i>"The rewards for now are just recognition, not really in terms the monetary terms."</i>
	Covid	Covid pandemic: Participant #1: <i>"Yes, the major challenge would be especially the issue of Covid, you know."</i> Participant #5: <i>"Survival, it is a challenge. I am going to tell you the truth. If we take the context of Covid, you know with Covid a lot of things almost stopped. We have had challenges."</i>
	No work discretion	Work discretion not practised: Participant #3: <i>"Maybe there are also issues of ... work discretion."</i>
	Delayed change	Delayed adoption of new programmes: Participant #4: <i>"...you know, new programmes cannot be adopted very quickly. I think this is a challenge in that once you have had a culture of students coming in, you have literally signed a contract for four years until they graduate, so they can't think that between then, you can push in the years of entrepreneurial skills..."</i> Changes take very long: Participant #4: <i>"So, I think change is only after so many years because you need to have these ones come out of the system before the new thing comes, you know, comes in. That is probably the challenge internally."</i>

	Low idea generation	No opportunities and time: Participant #3: <i>"Maybe there are also issues of...the lecturers being given the opportunity to think and suggest business ideas. It may be the issue of time as well because you need a lot of time to focus on that."</i>
	Insufficient knowledge on entrepreneurial university	No reference point: Participant #7: <i>"I think the biggest challenge is that we do not. We are the first academic institution to be working around this kind of thinking. So, we do not know who to benchmark with or which law to reference or which policy to reference for an academic environment."</i>
	Low university capabilities	Lack of human resources: Participant #8: <i>"...there is a need to create the human resource aspect that will actually, you know, talk to that as we drive towards bringing an acceptable or rather a targeted balance of entrepreneurship and academics. That really is a challenge, but it is not a challenge that cannot be addressed."</i> Universities being largely academic: Participant #8: <i>"We have been largely, we are largely an academic institution and therefore that, you know, strategic transformative view towards bringing in the entrepreneurial aspect of it, is not just going to be an easy, you know, task not because the appetite is not there but because the whole university has been initially structured on the premise of an academic entity and hence it takes time to therefore bring in that element of entrepreneurship as within the context of what we do in terms of, you know, the curriculum aspect, in terms of the staff aspect itself."</i>
	Poor human resource management	Lack of appreciation and acknowledgement: Participant #6: <i>"...yes if you do not have enough support, financially maybe or just a word from your supervisors, it could be a challenge."</i> Very little induction: Participant #7: <i>"There is also very little induction given to employees to prepare them for the amount of work that they are expected to do..."</i>
	Staff and student resistance	Negative attitudes: Participant #9: <i>"The negative is in our attitude, the way we think. Giving excuses, the laziness, the lack of motivation is there maybe because of the economic environment that we live in."</i> Poor understanding of and concern for university vision: Participant #7: <i>"So internally, challenges that we are experiencing the challenge of the manager being entrepreneurial and he/she has fewer staff that are entrepreneurial and understand the vision and thinking of the institution while the majority are not."</i>
	Low levels of industry collaboration	Effects of Botswana's small economy: Participant #8: <i>"Obviously, industry, its engagement has been key, but it is always a bit of a challenge because we are a small economy ourselves and convincing industry to engage is not always an easy thing, has not been an easy thing."</i>

	Heavy work load and staff turnover	The pressure of work: Participant #6: <i>“And also internally, you would realise that the pressure of work at times it is a challenge. Yes, the pressure of work.”</i> High staff turnover: Participant #7: <i>“Also, internally, the pressure of work is very high, leading to high staff turnover. We have employees working for two weeks and leaving because they cannot cope with the targets.”</i>
	Low staff intrapreneurial behaviour	No entrepreneurial thinking and wrong perceptions: Participant #2: <i>“I think academics generally think that well ours is to teach. We cannot make a business out of this.”</i> No transformation from training: Participant #9: <i>“Maybe you know, I do not know if training works because we are always taken for training, on team building and, but we come back, you know, we do the same thing.”</i>

Source: Compiled by the researcher

Figure 6.30 on the following page presents the matrix indicating the participants who provided a specific code on this part of the theme.

Figure 6.30: Matrix for the internal organisational support challenges

Theme 7: Support challenges - Internal		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Limited access to resources	Insufficient financial resources	x		x			x	x			
	Lack or required resources	x									x
	Limited space										x
Lack of rewards	No reward system			x							x
	Rewards only as management recognition			x							
Covid	Covid pandemic	x				x					
No work discretion	Work discretion not practiced			x							
Delayed change	Delayed adoption of new programmes				x						
	Change takes very long				x						
Low idea generation	No opportunities and time			x							
Insufficient knowledge on entrepreneurial university	No reference point							x			
	Lack of human resources								x		
Low university capabilities	Limited time								x		
	University infancy and transformational phase					x					
	Universities being largely academic								x		
Poor human resource management	Lack of appreciation and acknowledgement						x				
	No employee wellness programmes							x			
	Very little induction							x			
Staff and student resistance	Negative attitudes									x	x
	Poor understanding of and concern for university vision							x			
	Poor support for intrapreneurial behaviour							x		x	
	Excuses and laziness									x	
	Staff focus on income and incentives									x	x
Low levels of industry collaborations	Effects of Botswana's small economy								x		
Heavy work load and staff turnover	Pressure of work			x			x	x			x
	High staff turnover							x			
Low intrapreneurial behaviour	No entrepreneurial thinking and wrong perceptions		x					x		x	x
	Theoretical approach to entrepreneurship									x	
	No transformation from training									x	
	No motivation for intrapreneurship									x	
	Poor leadership										x

Source: Compiled by the researcher

Stimulating employees' intrapreneurial behaviour is a complicated process that demands an internal climate that encourages generating and realising ideas through financial, participative and decentralisation mechanisms (Bysted & Jespersen, 2014). Intrapreneurship, therefore, requires a total modification of the internal work methods as the structure and processes in an organisation affect the innovative capabilities. However, most organisations, especially tertiary education institutions, tend to be inert, bureaucratic and resistant to change in their climates and cultures. This renders them unable to identify and benefit from new business opportunities (Baruah & Ward, 2014:8). Further when organisations focus mainly on the process, the exploratory activities that lead to increased radical innovations are impeded (Benner & Tushman, 2015). This is made worse because organisations also tend to lack the ability to strategically identify and develop intrapreneurs (Parker, 2011).

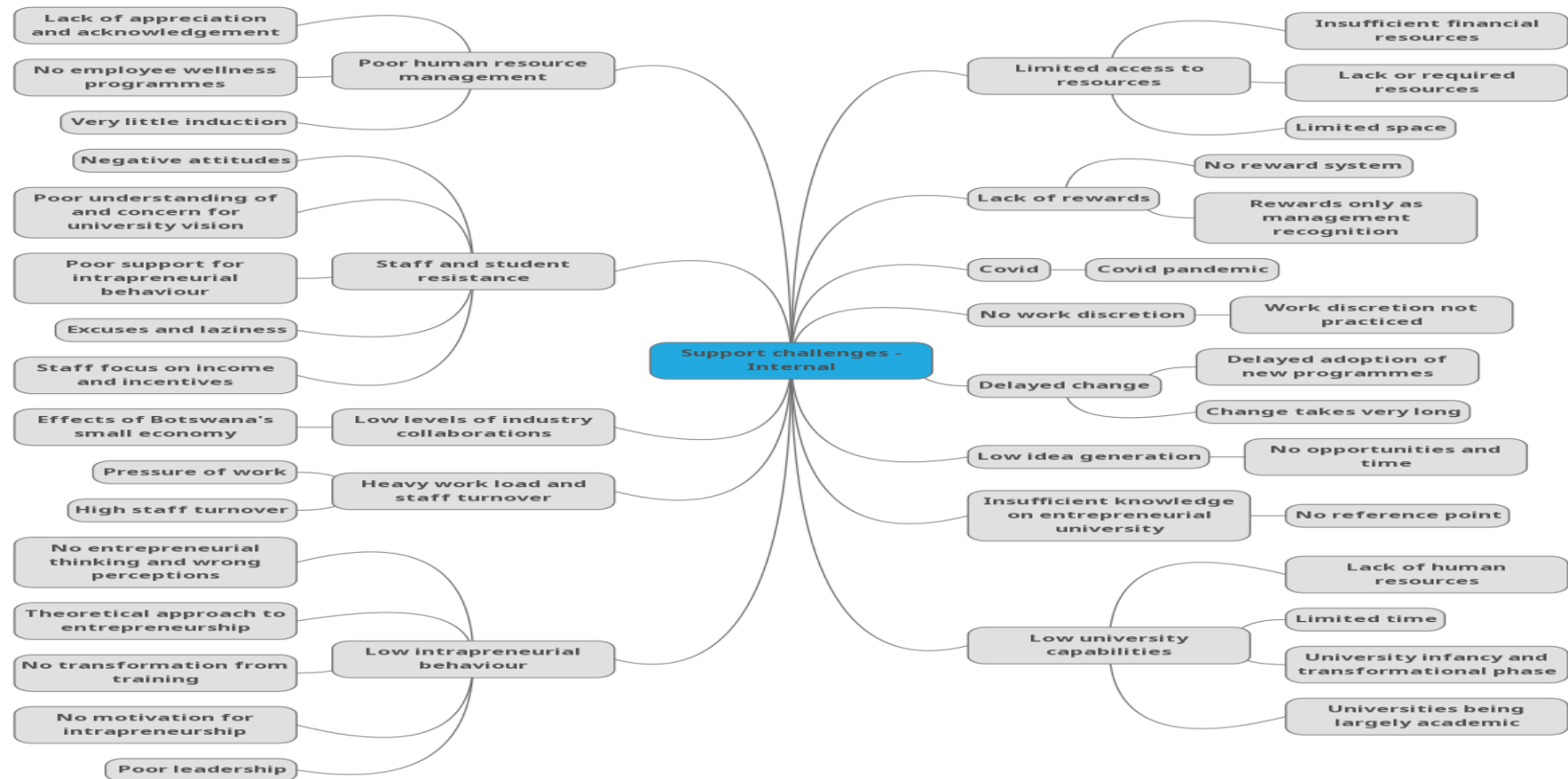
The analysis of this first part of theme seven generated 13 critical sub-themes that present what the research participants consider to be the major internal challenges experienced by their respective universities in the support for intrapreneurial behaviour. Figure 6.31 on the following page presents the network diagram of the sub-themes and code words for this part of theme seven as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

[illegible]

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As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.32 below.

Figure 6.32: Systemised network diagram for the internal organisational support challenges



A detailed discussion of the sub-themes on the internal organisational support challenges is now provided.

6.11.1.1 Limited access to resources

There are three codes under this sub-theme: insufficient financial resources, lack of required resources and limited space. Participant #3 explained: *“Internal, it may be resources, right? So resources may be a challenge, you know. We may be wanting because there are a lot of ideas that are on the drawing board, but probably if the resources now, to use, you know, to come up with these internal businesses that I talked about, that enhance skills for students. It may be a challenge, you know. So it is the internal resources, especially finance, maybe a challenge or snag in terms of development.”* Participant #10 also mentioned: *“The major challenges are the lack of all the required resources... the space needs to be expanded for intrapreneurial projects.* It is evident from these responses that these universities cannot effectively engage in entrepreneurial activities due to insufficient resources (Tatarski *et al.*, 2020:1-15). This is a challenge because Botswana, like many other developing countries, has inadequate resources to foster entrepreneurial orientation in its universities (Foss & Gibson, 2015).

6.11.1.2 Lack of rewards

Based on the expectancy theory, employees are highly motivated to perform well following a reward system (Baskaran *et al.*, 2018). Rewards may be monetary or non-monetary (Mustafa *et al.*, 2018), but whichever the case, a reward system should be designed in line with clear goals, responses, outcomes and feedback, emphasising the responsibility of employees as well as performance-based incentives so as to encourage intrapreneurial activities (Kuratko *et al.*, 2014a:40). As such, reward systems can increase or decrease intrapreneurial activities (Madu & Urban, 2014a). This sub-theme has two codes: no reward system and rewards only as management recognition. Participant #3 provided both codes and said: *“Maybe there are also issues with the reward system...the rewards for now are just recognition, not really in terms the monetary terms.”* In view of this response, the lack of a properly designed reward system in this university poses a challenge in

supporting intrapreneurial behaviour. Also, the fact that the rewards are just in the form of recognition does not provide adequate motivation for the academics to demonstrate their intrapreneurial behaviour. The expectancy theory explains that people are motivated for better work performance when the job promises worthy rewards (Malik *et al.*, 2015).

6.11.1.3 Covid

This sub-theme only has one code, which is covid pandemic. Participant #1 mentioned: *“Yes, the major challenge would be especially the issue of Covid, you know, finding some students not having access to the internet and you know.”* Participant #5 also mentioned: *“Survival, it is a challenge. I am going to tell you the truth. If we take the context of Covid, you know, with Covid, a lot of things almost stopped.”* The Covid pandemic led to severe lockdowns and social distancing measures in Botswana, which forced universities to resort to online classes. However, not all students can afford internet services from their homes. Secondly, organisations suffered great losses in business activities and consequently in income. The Covid pandemic, therefore, has contributed to the insufficient financial resources in the universities. The social distancing measures further created an uncondusive environment for intrapreneurship. Covid thus, became a global environmental turbulence that has led to the rise of organisational complexity, presenting another challenge faced by intrapreneurs (Morris & Lewis, 1995; Baruah & Ward, 2014).

6.11.1.4 No work discretion and low idea generation

This sub-theme also has one code, which is work discretion not practised. Work discretion refers to the degree to which one views the organisation as tolerating failure, providing decision-making latitude and freedom from excessive oversight and delegating authority and responsibility to lower-level managers and workers (Kuratko *et al.*, 2014a:39). This type of autonomy is further considered vital for employees in higher managerial positions (Hornsby *et al.*, 2009). Giving employees significant decision-making latitude is seen explicitly as an essential means of encouraging their intrapreneurial behaviour (De Jong *et al.*, 2015; Kuratko *et al.*, 2005b). Participant #3

mentioned: *“Maybe there are also issues of work discretion and the lecturers not being given the opportunity to think and suggest business ideas. It may also be the issue of time because you need a lot of time to focus on that.”*

This situation, highlighted in Participant #3’s contribution, discourages intrapreneurial behaviour among academics. The key activities in intrapreneurship can only flourish in an internal environment that offers work discretion through the right to decide on preferred actions within defined limits (Stea *et al.*, 2015). Academics have no time and autonomy to experiment with distinctive methods and approaches to develop novel work methods that inhibit their individual innovative behaviour (De Spiegelare *et al.*, 2014).

6.11.1.5 Delayed change

There are two codes under this sub-theme: delayed adoption of new programmes, and change takes very long. The findings so far have provided the insight that the main entrepreneurial aspect that manifests in the universities is the provision of entrepreneurial education. As such, the main products that academics innovatively develop are new programmes and courses. Participant #4 explained: *“You know, new programmes cannot be adopted very quickly. I think this is a challenge in that once you have had a culture of students coming in, you have literally signed a contract for four years until they graduate, so they can’t think that between then, you can push in the years of entrepreneurial skills. So, I think change is only after so many years because you need to have these come out of the system before the new thing comes, you know, comes in. That is probably the challenge internally.”*

This contribution confirms that although the entrepreneurial university phenomenon is gaining recognition in emerging economies like Botswana, the actual changes are happening slowly (Czerniachowicz & Wieczorek-szymańska, 2019). This is even though these countries have promoted academic entrepreneurship at the top of their political programs (Tatarski *et al.*, 2020). As can be observed from Participant #4’s response, new programmes cannot be adopted quickly for delivery in the universities because of the requirements of the tertiary education regulatory bodies such as the Botswana Qualifications Authority. This is because there are still no clear national

policies or structures for implementing the entrepreneurial university aspects (Czerniachowicz & Wieczorek-szymańska, 2019).

6.11.1.6 Insufficient knowledge of entrepreneurial university

Only one code was provided under this sub-theme, and this is no reference point. Participant #7 mentioned: *"I think the biggest challenge is that we do not. We are the first academic institution to be working around this kind of thinking. So, we do not know who to benchmark with, which law to reference, or which policy to reference for an academic environment."* This challenge arises from the fact that entrepreneurship in existing organisations requires the promotion of an intrapreneurial mindset and intrapreneurship culture that expedites organisational change marked with trial and error through experimentation and continuous refinement (Hagedorn & Jamieson, 2014). However, many tertiary educational institutions do not have the cultural ability to support this kind of radical innovations (Blanka, 2018), which makes identifying universities to benchmark complex.

Further, the need to pay more attention to the identification and analysis of the strategies universities apply in implementing third mission initiatives (Giuri *et al.*, 2019) means that a "one-size-fits-all" perspective to the implementation of the third mission in different universities is not effective and sustainable. This is because universities in different countries do not have homogeneous capacities (Kitagawa *et al.*, 2016; Secundo *et al.*, 2018). As such, as Participant #7 mentioned, finding a reference point for the implementation of the third mission initiatives, which are a major part of the entrepreneurial university aspects, is a challenge for universities, especially in developing countries like Botswana. The challenge is compounded by there also being no clear national policies for facilitating the implementation of the entrepreneurial university aspects (Czerniachowicz & Wieczorek-szymańska, 2019).

6.11.1.7 Low university capabilities

This sub-theme is presented with four codes: lack of human resources, limited time, university infancy and transformational phase, and universities being largely academic. Participant #8 mentioned: *"That also talks to obviously, you know, the*

time-related aspects. When we bring in additional strategy or a strategic, focused area, there is a need to create the human resource aspect that will actually, you know, talk to that as we drive towards bringing an acceptable or rather targeted balance of entrepreneurship and academics. That really is a challenge.” She went on to say: *“I think the challenges really some, you know, evolve from what the University as a higher education institution has been. We have been largely, we are largely an academic institution and therefore, that, you know, strategic transformative view towards bringing in the entrepreneurial aspect of it, is not just going to be easy.* On another note, Participant #5 said: *“The challenge is that the university, as I have said, is a young university which started in 2018. It was approved in December 2017 but only started working in 2018. And we actually are, we were in a transition mode, and that transition mode, a major exercise was to transform from a college to a university, but we still maintained all the projects that we needed to do.*

All the challenges shared above refer to the need for the managerial reorganisation of university resources (time, human, finance) and structures so as to create capabilities that support intrapreneurial behaviour (Etkowitz, 2016b; Tatarski *et al.*, 2020). The main challenge actually emanates from the need for these universities to have appropriate formal organisational structures that address the academic intrapreneurs’ actual needs through the distinct stages of entrepreneurship, namely latent, emergent, launch, and growth (Caiazza *et al.*, 2020). The challenge in supporting intrapreneurial behaviour, specifically the entrepreneurial university model generally, is in these universities ensuring their entrepreneurial organisational architecture is aligned to the changing “strategy-environment” context (Parakhina *et al.*, 2017).

6.11.1.8 Poor human resource management

Human resource management is critical in support of intrapreneurial behaviour because entrepreneurial employees and their human capital are vital to the success of intrapreneurial initiatives (Blanka, 2019). Further, intrapreneurial behaviour is mainly a result of employees’ individual and personal decisions (Rigtering & Weitzel, 2013:342). As such, properly managing human resources requires that academic intrapreneurs be viewed as the needed human capital that forms the foundation for

innovation and the resultant competitive advantage for the universities (Guerrero & Pena-Legazkue, 2013; Parker, 2011). This sub-theme is presented with three codes: lack of appreciation and acknowledgement, no employee wellness programmes and very little induction.

Participant #6 mentioned: *“You know, it could be tasking. At the same time, you have to work on these other extracurricular activities for the university, and yes, if you do not have enough support, financially maybe or just a word from your supervisors, it could be a challenge.”* Participant #7 added: *“There is also very little induction given to employees to prepare them for the amount of work that they are expected to do, as well as there being no wellness programmes to soothe the pain from the pressure of work.”* The circumstances referred to in these responses are those that pose a challenge in the recruitment and development of the academics’ confidence in their entrepreneurial skills (Miller *et al.*, 2018). This is how easily the individual level of intrapreneurship can be hampered (Hecker, 2017).

It can further be observed from the contributions that the management in these universities does not fully value their academics and support their self-determination and wellness (Gürsoy & Güven, 2016:156). The insufficient financial support, the lack of acknowledgement or encouragement for the academics’ efforts, and the lack of induction highlighted by Participants # 6 and #7 are proof of this. Management support is vital for the creation of an ideal setting, resources, conditions and motivation that enhance intrapreneurial behaviour among employees (Kuratko & Montagno, 1989; Urban & Nikolov, 2013; Garcia-Morales *et al.*, 2014; Globoenik & Salomo, 2015; Puech & Durand, 2017).

6.11.1.9 Staff and student resistance

This sub-theme has five codes, namely: negative attitudes, poor understanding of and concern for university vision, poor support for intrapreneurial behaviour, excuses and laziness, and lastly, staff focus on income and incentives. Participant #9 mentioned: *“The academics do not put effort ...the negative is our attitude, the way we think. Giving excuses, the laziness, the lack of motivation is there maybe because of the economic environment that we live in.”* Participant #7 said: *“So*

internally, challenges that we are experiencing is the challenge of the manager being entrepreneurial and he/she has few staff that are entrepreneurial and understand the vision and thinking of the institution while the majority are not.” Participant #10 went on to add: *“There is a lot of work, and so people do not want to offer themselves to do extra work for nothing or no incentive.”*

These contributions confirm that the adoption of the entrepreneurial university model involves risks and challenges for the management of higher education institutions. The challenges result from the fact that the process calls for faculty members to make exchanges between the amounts of time devoted to improving teaching, conducting research and performing the required activities to comply with the third mission (Siegel & Wright, 2015; Tatarski *et al.*, 2020). According to Tatarski *et al.* (2020), it is burdensome for employees to merge their principal jobs with the accompanying administration, and as a result, they tend to be resistant, thereby hindering the process of transforming their universities into entrepreneurial entities (Kalar & Antoncic, 2015). As can be seen in the responses provided under this sub-theme, the majority of the academic employees and their students have not generally accepted the ideals and growth of an entrepreneurial culture within their universities and are therefore resistant or do not fully apply themselves to their universities’ entrepreneurial vision and activities (Etzkowitz, 2003b; Sá *et al.*, 2018).

6.11.1.10 Low levels of industry collaborations

This sub-theme has one code, which is the effect of Botswana’s small economy. Participant #8 mentioned: *“And being a small economy as well, the creation of entrepreneurship, through, for example, through, let's say, adaptive innovations is not always straightforward.* Internally, this challenge has to do with the efforts and capabilities of this university to establish and enhance collaborations with the industry as they operate within the larger Botswana economy. The third mission calls for a wide range of activities that tertiary educational institutions must perform through the transfer of knowledge to society at large and to industry. According to Compagnucci and Spigarelli (2020), universities are supposed to attain an entrepreneurial focus through the committing of funds for the development of services for the industry. Universities should have an innovative approximation

involving research units' services through the formation of companies, consultancies for governments, research conferences, and development and innovation partnerships with other industries and entrepreneurs.

However, because Botswana is a small economy with few industries, this becomes a challenge for this university and others, to establish and enhance collaborations with the industry. This consequently limits the ability of the tertiary education sector to act as a catalyst in the country's transition from a factor-driven economy to a knowledge-based economy (ETSSP, 2015; Makwinja, 2017; NDP 11, 2017, Vision 2016; Vision 2036).

6.11.1.11 Heavy workload and staff turnover

This sub-theme has two codes, which are pressure of work and high staff turnover. Participant #3 mentioned: *"So based on the workload, it may be a challenge to come up with some case studies or projects similar to this."* Participant #7 added: *"Also, internally, the pressure of work is very high, leading to high staff turnover. We have employees working for two weeks and leaving because they cannot cope with the targets."* Participant #10 also said: *"There is a lot of work."* This heavy workload creates an uncondusive EO environment in these universities, making it challenging for the intrapreneurial academics there to pursue ideas from within their job positions. The academics become burdened by the heavy workload (Kalar & Antoncic, 2015), and as such, most of them opt to leave to become entrepreneurs (Govindarajan & Desai, 2013; Thulin, 2018). The universities end up losing the excellence that exists in such academics (Buekens, 2014).

6.11.1.12 Low levels of intrapreneurial behaviour

This sub-theme is presented with five codes: no entrepreneurial thinking and wrong perceptions, theoretical approach to entrepreneurship, no transformation from training, no motivation for intrapreneurship and poor leadership. Participant #2 mentioned: *"So I think the major challenge is to instil the entrepreneurial mindset among academics. I think academics generally think that, well, ours is to teach. We cannot make business out of this."* Participant #9 added: *"But for me, just to change*

our attitude and perceptions of what we perceive entrepreneurship to be. The academics do not put effort in, and we talk entrepreneurship, but we do not know what it means.” Participant #9 also said. “The lack of motivation is there maybe because of the economic environment that we live in. I am still going back to our methods of trying to raise entrepreneurship in the midst of theory. Maybe you know, I do not know if training works because we are always taken for training, on team building and, but we come back, you know, we do the same thing.” Participant #10 added: “Another challenge is that some leaders are not active and practical. They just talk and do not act honourable to walk the talk.”

These responses confirm that large tertiary education institutions, like many large organisations, do not typically behave entrepreneurially and struggle to promote intrapreneurial activities (Sambo, 2018:193). The majority of academic professionals are convinced that if they adopted entrepreneurial initiatives, their more fundamental university qualities, such as critical inquiry, intellectual integrity and commitment to learning and understanding, would be lost (Rizk & Azzazy, 2016:98). It can be seen from the responses above that the academic professionals do not see themselves as entrepreneurs but as teachers and researchers. Further, most academic managers are more concerned about having their key staff involved in entrepreneurial activities and the possible negative effects this may have on the research performance of their institutions (Hadidi & Kirby, 2016:141). The outcome is the low levels of intrapreneurial behaviour among academics.

The universities are experiencing several internal organisational challenges in supporting intrapreneurial behaviour. The major challenges outlined by the participants include limited access to resources, lack of rewards, Covid, no work discretion, low idea generation, delayed change, insufficient knowledge of the entrepreneurial university, low university capabilities, poor human resource management, staff and student resistance, low levels of industry collaborations, heavy workload and staff turnover and low intrapreneurial behaviour. It can also be observed that intrapreneurship orientation in these universities is affected by a wide range of barriers, such as organisational structures, policies and procedures, established control systems, management, leadership and organisational culture. All these internal organisational factors determine the nature of the prevailing support

for intrapreneurship. The university managers are striving to establish an internal environment conducive to employee entrepreneurial activities. However, there is a need for more management commitment to enhancing the academics' intrapreneurial behaviours. One way is to conduct a proper assessment of the internal organisational support challenges outlined here so as to identify appropriate mitigations.

6.11.2 Part 2: External organisational support challenges

This second part of theme seven presents the findings on the external organisational support challenges. Table 6.18 on the following page presents an overview and quotations directly from the participants to explain the external organisational support challenges for intrapreneurial behaviour in the universities.

Table 6.18: External organisational support challenges

Theme	Sub-themes	Codes and Quotations from participants
External organisational support challenges	Lack of external stakeholder support	Very few NGOs providing support: Participant #3: <i>“And probably the other challenge is maybe very few Non-Governmental organisations, now called Not-for-Profit institutions. There are very few which can actually assist maybe in terms of financing some of these projects.”</i> The industry not placing demand on universities: Participant #9: <i>“I have not seen the industry coming up with ideas to say, you know, here is what we as a particular industry or a network industry, we would like institutions, like tertiary institutions to do this for us, they do not.”</i>
	Small market and economy in Botswana	Difficult adaptive innovations: Participant #8: <i>“And being a small economy as well, the creation of entrepreneurship, through, for example, through let's say adaptive innovations is not always very easy because once a service, you know, a product is already out there in the market, it requires, you know, more of new innovations than adaptive because being a small economy itself you can only have so many sort of entrepreneurs in a particular business area.”</i>
	Failure of industry partnerships	Failure of stakeholder partnerships: Participant #5: <i>“You know sometimes you work with some people, and the partnership that does not go well the way you had expected. And if that is the case, then the project that was intended could fail.”</i>
	Unemployment	Lack of employment: Participant #1: <i>“Yes, unemployment, lack of support can be the external problems.”</i>
	Academia not meeting industry expectations	Industry expects faster change: Participant #4: <i>“So yes, I think the challenge there is time because the industry expects faster changes than the system allows.”</i>
	Corruption and theft in funding	Corruption and theft in issuing of funds: Participant #9: <i>“Maybe externally would be not getting enough information on whatever, you want to do or externally would be maybe political issues or economic factors like corruption and other things that can affect who gets money for research. You know, research can be done if people do not steal the money and use it for other things, that could be an external problem.”</i>

	Low entrepreneurial behaviour in Botswana	Batswana are not entrepreneurial: Participant #7: “So, the biggest challenge that I see, let me start from externally, socially, from the family structure as Batswana, becoming or having entrepreneurial skills or intrapreneurial behaviour is not something that we were taught growing up or we have seen our parents do growing up. Most of us have only seen our parents in the work environment, working your 8 to 5. So, the biggest challenge that I am seeing is that we have never seen entrepreneurship work and make sense in front of us and see that this is the road I am going to take. Entrepreneurship is new in Botswana: Participant #7: “So, they have challenges externally, hee it is hard to explain, in Botswana, as a whole. But entrepreneurship only started in 2011, 2010 so we are only 12 years into working entrepreneurially in Botswana.”
	Financial challenges	Overall money challenges: Participant #6: “I think that externally, the overall challenge is also money. I think money surpasses all of them, even externally.”
	Poor digital marketing	Poor social media presence: Participant #10: “...finally we can also say the social media impact, you know. If you are not being, if you are not visible enough, it may hinder the intrapreneurial component of the university or the goal of the intrapreneurial concept at the University.”
	Legal challenges	Limited legal framework coverage: Participant #10: “...there is not enough legal framework to support or create an environment for entrepreneurship in universities.”
	Technological challenges	Insufficient technological infrastructure: Participant #10: “There is also insufficient technological infrastructure for all innovative projects...”
	Dependence on government support	Academics dependency of government support: Participant #3: “So that is where we have a challenge externally. And we, colleagues, just want to talk about government, but we should move away from this issue of wanting everything from government because we are actually supposed to give to the government, the way I see it.”
	No/too few industry collaborations	Little collaborations from government ministries: Participant #8: “Externally is the insufficient government support for entrepreneurship in the tertiary institutions and the many more of the ministries to work hand in hand with the universities.” Few industries value collaboration: Participant #8: “You will find a few industry sectors who can see direct value in such an entrepreneurship venture because there are certain, you know, solutions or products or services that they are looking for and then those can be provided by, you know, by the University .”

	Academics not seen as entrepreneurial	University perceived too high: Participant #9: <i>“Because universities are termed to be in the highest rank. Who wants to be here and be a plumber, be seen working, they do not. It is not prestigious.”</i> Negative reputation for vocational education: Participant #9: <i>“The problem with African universities is vocational education was set aside for the poor performers, and then it had a bad reputation that nowadays if you try to encourage a child to go to a vocational institution, they think you are crazy, but that is where we get skills from.”</i>

Source: Compiled by the researcher

Figure 6.33 on the next page presents the matrix indicating the participants who provided a specific code on this part of the theme.

Figure 6.33: Matrix for external organisational support challenges

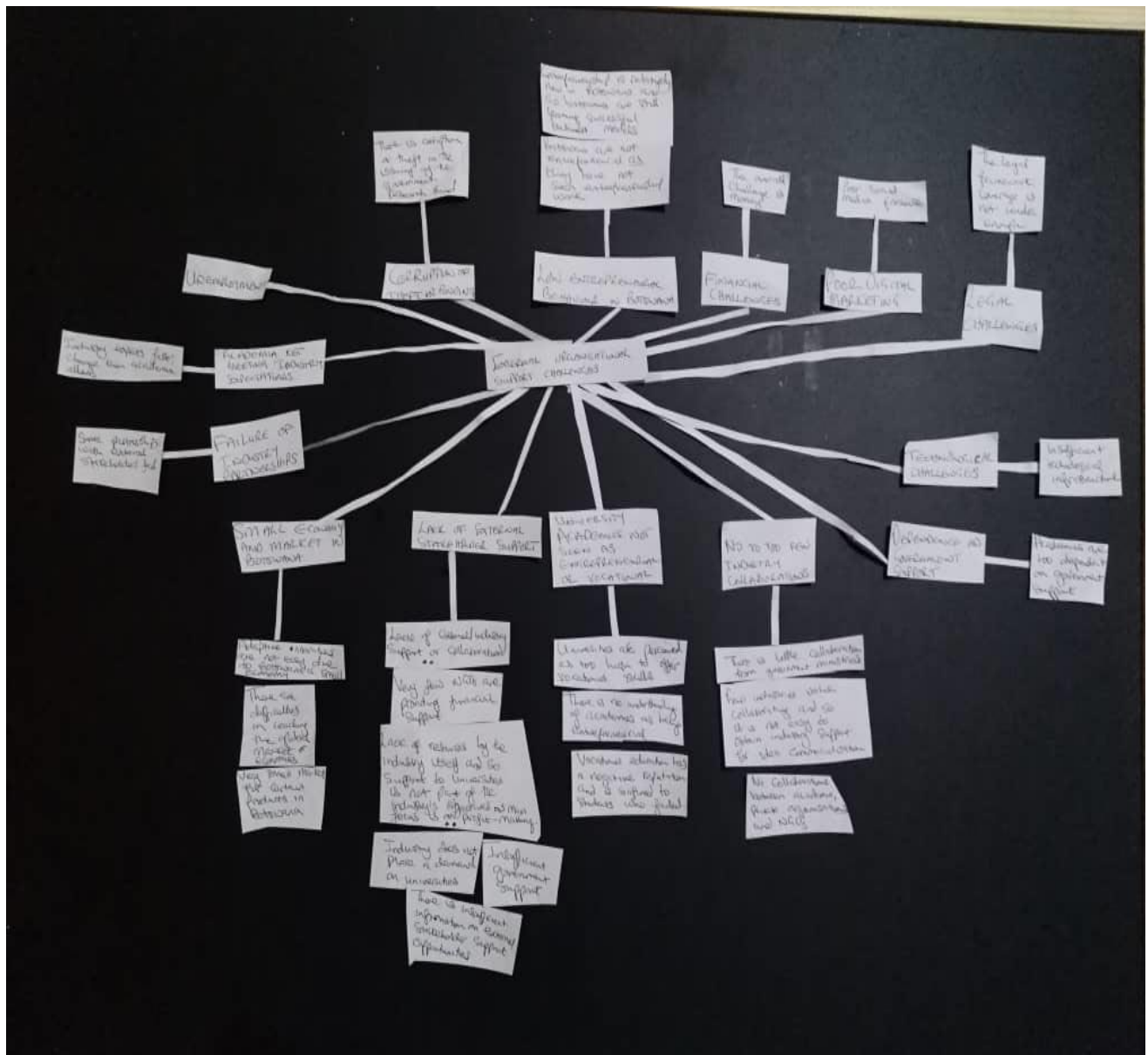
Theme 7: Support challenges - External		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Lack of external stakeholder support	Very few NGOs providing support			X							
	Industry's lack of resources			X						X	
	Industry not placing demand on universities									X	
	Insufficient government support	X									X
Small market and economy in Botswana	Limited information on stakeholder support opportunities									X	
	Difficult adaptive innovations								X		
	Difficulty in reaching global markets								X		
	Small product markets								X		
Failure of industry partnerships	Failure of stakeholder partnerships					X					
Unemployment	Effects of unemployment	X									
Academia not meeting industry expectations	Industry expects faster change				X						
Corruption and theft in funding	Corruption or theft in issuing of funds									X	
Low entrepreneurial behaviour in Botswana	Batswana are not entrepreneurial							X			
	Entrepreneurship new in Botswana							X			
Financial challenges	Overall money challenge						X				
Poor digital marketing	Poor social media presence						X				
Legal challenges	Limited legal framework coverage										X
Technological challenges	Insufficient technological infrastructure										X
Dependence of government support	Academics' dependence on government support			X							
No/too few industry collaborations	Little collaborations from government ministries										X
	Few industries value collaboration								X		X
	No collaborations between academia, private organisations and NGOs			X							
Academics not seen as entrepreneurial	Universities perceived too high									X	
	No understanding of entrepreneurial academics		X								
	Negative reputation for vocational education									X	

Source: Compiled by the researcher

Outside the organisation or in the external environment exist forces and elements that challenge an organisation's intrapreneurial capabilities outside its boundaries. These elements make up the institutional, legal and administrative context (Fernandez-Nogueira *et al.*, 2018). They include government and public administrations' facilitation of and participation in entrepreneurial activities through legislation, financing, and the provision of public infrastructures (Bezanilla *et al.*, 2020:1-19). For instance, the government's role is to create financing procedures for entrepreneurship education, forming university spin-offs and developing entrepreneurial programmes, activities and initiatives (Errasti *et al.*, 2018). For such reasons, these external environmental forces and elements are considered essential factors that influence intrapreneurial initiatives within an organisation. Intrapreneurship's influence on business performance actually depends on these external environmental factors (Otache & Mahmood, 2015:525).

Figure 6.34 on the next page presents the network diagram of the sub-themes and code words for this part of theme seven as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

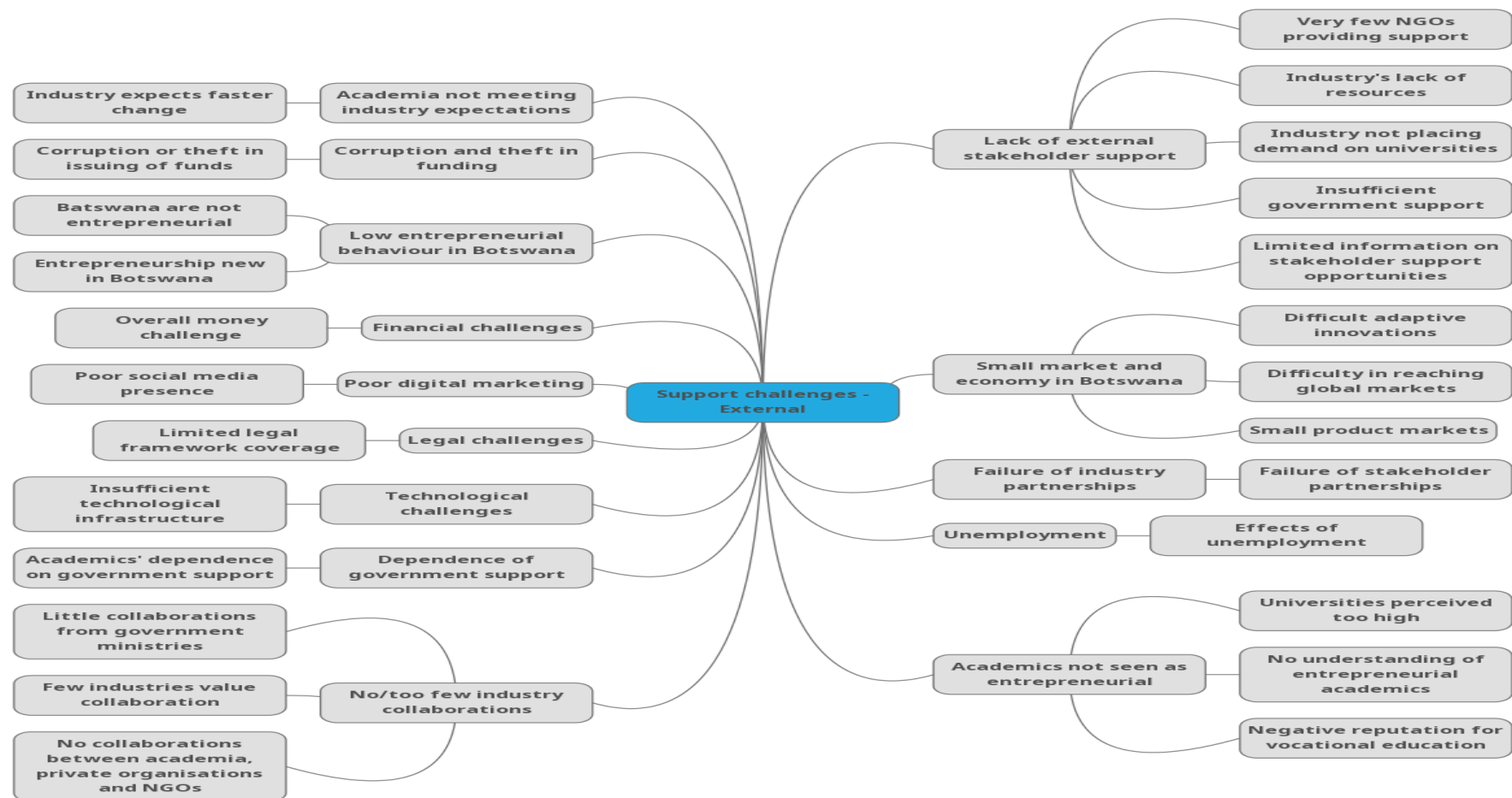
Figure 6.34: Photographic image of the external organisational support challenges – theme 7



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.35 below.

Figure 6.35: Systemised network diagram for the external organisational support challenges



A detailed discussion of the sub-themes on the external organisational support challenges is now provided.

6.11.2.1 Lack of external stakeholder support

As entrepreneurial universities, these higher education institutions aim to protect knowledge, transfer, and commercialise innovative business activities between themselves and various stakeholders, including the government (Kalenyuk & Dyachenko, 2016). These universities must actively engage the business sector and stakeholders to generate social and economic benefits for the business sector from university research (Etzkowitz, 2012). For this to be successful, stakeholder support is required. This is the hybrid or balanced Triple Helix position in the Triple Helix model, which is seen as being essential for the growth of innovation strategies as well as the attainment of common long-term strategic goals in the 21st century (Abd Razak & White, 2015). This position provides a clear understanding of innovation because the best conditions for innovation are believed to be established at the points where the strategic and dynamic interactions happen between the university, government and industry (Ranga & Etzkowitz, 2013).

This sub-theme is presented with five codes, namely: *very few NGOs providing support, industry's lack of resources, industry not placing demand on universities, insufficient government support* and lastly, *limited information on stakeholder support*.

Participant #3 mentioned: *"And probably the other challenge is maybe very few Non-Governmental organisations, now called Not-for-Profit institutions. There are very few which can actually assist in terms of financing some of these projects. So there is a need for collaboration between academia, the private sector and the NGOs."* He stated how the industry lacks resources for providing the support: *"Or to help those small businesses, you know, beef them up. They can actually sponsor them and so forth. But, you know, the industry also maybe lacks, it may resist, you know, at times because this may not be part of their objectives, and I agree with them. So that is where we have a challenge externally."* On another form of stakeholder support, Participant #9 added: *"I have not seen the industry coming up with ideas to say, you*

know, here is what we as a particular industry or a network industry, we would like institutions like tertiary institutions to do this for us, they do not." Yet university research is available to meet these stakeholder needs (Compagnucci & Spigarelli, 2020).

Participant #10 mentioned: *"Externally is insufficient government support for entrepreneurship in the tertiary institutions, and the many more of the ministries need to work hand in hand with the universities."* Participant #9 said: *"Maybe externally would be not getting enough information on whatever you want to do or externally would be maybe political issues or economic factors like corruption and other things that can affect who gets money for research."* All these responses indicate the lack of support from stakeholders in the external environment, which challenges the support for intrapreneurial behaviour in these universities. The support for intrapreneurial behaviour can only happen at the points at which the universities, the government and the various industry stakeholders take up or exchange each other's roles where one or the other is unable to act (Etzkowitz & Dzisah, 2008; Champenois & Etzkowitz, 2018). Therefore, external stakeholder support for the intrapreneurial behaviour and initiatives in the universities is very critical.

6.11.2.2 Small market and economy in Botswana

This sub-theme has three codes: Difficult adaptive innovations, difficulty in reaching global markets and small product markets. Participant #8 provided all these codes. He explained: *"And being a small economy as well, the creation of entrepreneurship, through, for example, through, let's say adaptive innovations is not always very easy because once a service, you know, a product is already out there in the market, it requires, you know, more of new innovations than adaptive because being a small economy itself you can only have so many sort of entrepreneurs in a particular business area. And the fact that we also rely a lot on products and services from, you know, our surrounding countries, South Africa as such, it actually results in a very small market, you know, for certain services and hence the challenge now has been to find ways of reaching the global economy rather than the local, you know, economy."* As already discussed, Botswana is a small economy with a small population of 2.4 million in 2021 (International Finance Corporation, 2022). This

presents the challenge of the small product markets, as highlighted by Participant #8.

Further, Botswana's economy has been built using a diamond sector-led development model. This has made the country's GDP to be dependent on one sector. As a result, the economy has an inadequate production base (Bank of Botswana, 2021). In line with Participant #8's contribution, the government is calling for urgently improving the research and innovation capacity in the universities to build an entrepreneurial and prosperous society (Vision 2036, 2016). Such a society is critical for diversifying the economy and ensuring growth through innovations with local, regional and global economic benefits (HRDC, 2015).

6.11.2.3 Failure of stakeholder partnerships

The fostering of partnerships between academics and external stakeholders is pivotal to universities' ability to attain their third mission initiatives (Mora *et al.*, 2015:29-40). However, concerning universities in Botswana, it has been noted that there is very little collaboration with the industry (NDP 11, 2016). This sub-theme has one code, which is the failure of stakeholder partnerships. Participant #5 mentioned: *"Sometimes you work with some people, and the partnership does not go as expected. And if that is the case, then the project that was intended could fail."* This response shows that the partnerships between this university and stakeholders, among the few collaborations, fail to yield the desired results.

The reason for such failures is the fact that there remains a need for policies on the professional development of university leaders in areas such as business and relationship management (Tran & Nghia, 2020). There is also a critical need for collaborative investment initiatives between various stakeholders and academic institutions in the commercialisation of academic research output (Budyldina, 2018). Government, as a key stakeholder, has a significant role in developing national legislature and science and technology (S&T) policies that create a favourable environment for the encouragement of entrepreneurial activities in universities as well as synergy-based interactions with stakeholders (Obaji & Olugu, 2014; Budyldina, 2018).

6.11.2.4 Unemployment

This sub-theme also has one code, which is the effects of unemployment. Participant #1 mentioned: *“Yes, unemployment and lack of support can be external problems.”* Unemployment in Botswana is caused by a number of factors, which include the mismatch between the supply and demand of skills in the economy, the insufficient development of human resources and the lack of specialised skills; the declining performance of students and the low levels of productivity among the labour force (NDP 11, 2016). These factors that cause unemployment in Botswana can also be said to create a labour market without support for intrapreneurial behaviour. This is reflected in the government’s development of the Education and Training Sector Strategic Plan (ETSSP, 2015-2020) in May 2015, which aims to reform the human development landscape and address poor performance issues in the tertiary education sector (NDP 11, 2016:54)

The government, therefore, expects improvements in the quality of education (NDP 11, 2016:68) and is placing a demand on tertiary education institutions to become more entrepreneurial in providing education and training services by creating organisational environments where entrepreneurs and intrapreneurs can thrive (Pablos, 2013:108; Nicholson *et al.*, 2016). For this reason, Botswana’s Vision 2036 advocates for organisational competitiveness, productivity and efficiency and the unleashing of the entrepreneurial spirit of the people through education and training (Vision 2036, 2016).

6.11.2.5 Academia not meeting industry expectations

There is one code under this sub-theme: the industry expects faster change. Participant #4 stated: *“So yes, I think the challenge there is time because the industry expects faster changes than the system allows.”* This contribution confirms that although there is an urgent need for intensive service and product (programme) innovations or intrapreneurial activities among the tertiary education institutions that lead to economic developments (Guerrero *et al.*, 2016), the actual changes happen at very slow rates (Czerniachowicz & Wieczorek-szymańska, 2019; Tatarski *et al.*, 2020). This is also because there are still no clear policies or structures for

facilitating the effective transfer of academic knowledge, the setting up of incubations for new businesses and also how all these are to contribute to socio-economic development (Czerniachowicz & Wieczorek-szymańska, 2019). Further, the universities cannot effectively engage in these entrepreneurial activities due to insufficient resources (Tatarski *et al.*, 2020). All these challenges make it difficult for academia to address and meet industry expectations effectively and efficiently.

6.11.2.6 Corruption and theft in funding

This sub-theme also has one code, being corruption and theft in the issuing of funds. Participant #9 explained: *“You want to do or externally would be maybe political issues or economic factors like corruption and other things that can affect who gets money for research. You know, research can be done if people do not steal the money and use it for other things that could be an external problem. The money disappears, and we do not know where it goes. People have been making money disappear into thin air and claim they do not know where it is when they took it. That is the problem, corruption out there. Maybe using the money like nepotism where they give money to people who do not deserve it and then, you know, you have the research failing because people do not have the skills in that.”* This is referring to the research funding provided by the government.

The Triple Helix Model assigns the government the responsibility of initiating projects and making resources available for new initiatives (Cai & Etzkowitz, 2020). The government, therefore, assumes the role of public venture capitalists to enhance innovation and economic development (Schmitz *et al.* 2017). This is achieved by applying the Triple Helix model, as it guides the government in enabling universities to commercialise their research output (Budyldina, 2018). However, the response above indicates an abuse of this critical role of the government through corruption and theft of the research funds provided. Corruption and theft can be considered external environmental factors classified under the political, economic and social factors (Kasturi *et al.*, 2019). These forces have an uncontrollable impact on the universities’ business activities that are ideal for developing and implementing intrapreneurial initiatives (Bradley *et al.*, 2011; Baruah & Ward, 2014). This is the situation that Participant #9 described. Corruption and theft are affecting social

values and norms extensively such that the growth and success of intrapreneurial in universities are hindered.

6.11.2.7 Low entrepreneurial behaviour in Botswana

This sub-theme is presented with two codes: Batswana are not entrepreneurial, and entrepreneurship is new in Botswana. Both codes were provided by Participant #7, who explained: *“So, the biggest challenge that I see, let me start from externally, socially, from the family structure as Batswana, becoming or having entrepreneurial skills or intrapreneurial behaviour is not something that we were taught growing up or we have seen our parents do growing up. Most of us have only seen our parents in the work environment, working your 8 to 5. So, the biggest challenge I am seeing is that we have never seen entrepreneurship work and make sense in front of us and see that this is the road I will take. So, they have challenges externally, here, it is hard to explain in Botswana as a whole. But entrepreneurship only started in 2011, 2010, so we are only 12 years into working entrepreneurially in Botswana. As a government, we are still learning, as Batswana, to start thinking about successful business models or plans.”*

This response confirms Botswana’s need to unleash the entrepreneurial spirit of the people through education and training (Vision 2036, 2016). It is for this reason that the government and policymakers in Botswana are placing a demand on the country’s tertiary educational institutions to promote and encourage entrepreneurship among students with the view that these universities are the drivers of the country’s socio-economic development (Ebewo et al., 2017).

6.11.2.8 Financial challenges

This sub-theme has one code, which is the overall money challenge. Participant #6 mentioned: *“I think that externally, the overall challenge is also money. I think money surpasses all of them, even externally. So external also I still say money.”* Therefore, It can be seen that the lack of capability to effectively engage in entrepreneurial activities is caused by the inadequate resources to foster entrepreneurial orientation in the country and its universities. This is the situation in emerging economies like

Botswana (Foss & Gibson, 2015; Tatarski *et al.*, 2020). The availability of financial resources in the external environment determines an organisation's success or failure in intrapreneurship (Otache & Mahmood, 2015:527).

6.11.2.9 Poor digital marketing

Intrapreneurial practices are believed to be how higher education institutions can cultivate closer connections with markets (Dalmarco *et al.*, 2018; Doin & Rosa, 2019). As such, the use of digital marketing tools to establish these close connections with markets is imperative. This sub-theme has one code, which is poor social media presence. Participant #6 mentioned: *"...finally we can also say the social media impact, you know. If you are not being, if you are not visible enough, it may hinder the intrapreneurial component of the university or the goal of the intrapreneurial concept at the University."* This response on the impact of the use of social media supports the enhancement of these universities' connections with markets as they transform into entrepreneurial universities. The connections aim to bring about 'waves' of development that affect organisational structures and lead to advancements (Ivanova & Leydesdorff, 2014). Digital marketing, such as social media, can equip these universities with the potential to attain the anticipated widespread effects on the facets of entrepreneurship emerging from the academic spheres (Volkodavova *et al.*, 2019).

6.11.2.10 Legal challenges

The legal context refers to the external environment in which the government and public administrations facilitate and participate in entrepreneurial activities through legislation (Bezanilla *et al.*, 2020). This sub-theme has one code being limited legal framework coverage. Participant #10 mentioned: *"There is not enough legal framework to support or create an environment for entrepreneurship in universities."* This response helps to emphasise the need for the Botswana government to actively play its role of developing national legislature as well as science and technology (S&T) policies that create a favourable environment for the encouragement of entrepreneurial activities in the universities (Obaji & Olugu, 2014; Budyldina, 2018).

This will also assist in the regulation of entrepreneurial activities, which form the core of a country's path to industrialisation (Obaji & Olugu, 2014).

6.11.2.11 Technological challenges

Technology transfer is one of the activities in an entrepreneurial university (Errasti *et al.*, 2018). The entrepreneurial university's contact with the industry is actually affected by the set-up of technology transfer centres for problem-solving activities, case study evaluations, gamification and service learning as active methodologies for the enhancement of academic entrepreneurship (Errasti *et al.*, 2018; Boldureanu *et al.*, 2020). There is one code under this sub-theme, which is insufficient technological infrastructure. Participant #10 stated: *"There is also insufficient technological infrastructure for all innovative projects."* This means that this university's capabilities to perform technology transfer activities or to set up technology transfer centres are hindered. As such, this university is facing challenges in becoming the driving force for social, economic and cultural development through technology transfers to industry and the wider society in Botswana (De Jong *et al.*, 2014; Secundo *et al.*, 2017a; Agasisti *et al.*, 2019).

6.11.2.12 Dependence on government support

One code under this sub-theme is academics' dependency on government support. Participant #3 mentioned: *"So that is where we have a challenge externally. And we, colleagues, just want to talk about government, but we should move away from this issue of wanting everything from government because we are actually supposed to give to the government, the way I see it."* This response adds to the body of knowledge on university expectations. These institutions are expected to prioritise their relevance through improved financial performance for themselves and their faculties (Etzkowitz & Leydesdorff, 2000). Therefore, these universities need to adopt the entrepreneurial culture as a new means of generating imperative funds from diverse sources (Mariani *et al.*, 2018) besides government or public sources.

6.11.2.13 No/too few industry collaborations

This sub-theme has three codes: few collaborations from government ministries, few industries value collaboration and no collaborations between academia, private organisations and NGOs. Participant #10 mentioned: *“Externally is the insufficient government support for entrepreneurship in the tertiary institutions and the many more of the ministries to work hand in hand with the universities.”* Participant #8 said: *“It is never easy to get that investment from industry. You will find a few industry sectors who can see direct value in such an entrepreneurship venture”,* while Participant #3 explained: *“So I want to talk about the private sector, more of the private sector to assist and so forth. And probably the other challenge is maybe very few Non-Governmental organisations, now called Not-for-Profit institutions. There are very few which can actually assist in terms of financing some of these projects. So there is a need for collaboration between academia, the private sector and the NGOs.”*

The above responses emphasise the need for more collaboration between the university, government and industry because the strategic interactions among these institutional spheres are vital for enhancing innovation. This is in line with the propositions of the Triple Helix model, a revolutionary model that awards the university the principal position in the knowledge-based society. This model presents various types and levels of synergy-based interactions between the government, university and industry. These three are considered the key helices or actors in promoting innovation and entrepreneurship (Abd Razak & White, 2015; Cai & Etzkowitz, 2020). Their supportive interactions can enable these universities to effectively perform their role in developing Botswana’s knowledge economy through enhanced intrapreneurial behaviour among academics (Dalmarco *et al.*, 2018). The few university-industry collaborations are clearly challenging the universities’ ability to perform this role.

6.11.2.14 Academics not seen as entrepreneurial

This sub-theme has three codes: universities perceived as too high, no understanding of entrepreneurial academics and negative reputation for vocational

education. Participant #9 explained: *“The problem with African universities is vocational education was set aside for the poor performers, and then it had a bad reputation... when you send a child to university, and you try to teach them vocational skills, they do not want to. Because universities are termed to be in the highest rank. Who wants to be here and be a plumber, be seen working? They do not. It is not prestigious.”* This response contributes to the body of knowledge that addresses the need for universities to abandon their ‘ivory towers’ in which the focus is predominantly on teaching and research. The universities can do this by responding to external economic and social drivers as well as policy demands to become more entrepreneurial (Kapetaniou & Lee, 2017). A vocational-oriented curriculum can enhance this entrepreneurial nature. This will enable the universities to transform knowledge into actual innovative products (Volkodavova *et al.*, 2019) and lead to faster innovative results for economic development (Etzkowitz, 2004).

On the no understanding of the entrepreneurial academics code, Participant #2 said: *“I think they also do not all understand that academics can actually be entrepreneurs. They think that because we were trained and we acquired this, and the government-sponsored this or that, all we have to do is give it back to the society for free, and no value may be achieved by the one performing those duties.”* This contribution indicates that the support for intrapreneurial behaviour from stakeholders in the external environment is hindered by the lack of understanding and evidence that an academic entrepreneur can conduct commercialisations through the exploitation of specific opportunities in the market (Alexander *et al.*, 2015; Miller *et al.* (2018). The academic is not seen as an entrepreneur for several reasons.

Universities face a challenge in recruiting and developing the academics’ confidence in their entrepreneurial skills (Miller *et al.*, 2018). This is because universities do not typically behave entrepreneurially and struggle to promote intrapreneurial activities (Sambo, 2018:193). Further, academic professionals do not see themselves as entrepreneurs, and their managers tend to be more concerned about having them involved in enhancing the research performance of their institutions (Hadidi & Kirby, 2016:141).

In summary, the external organisational support challenges identified by the participants include lack of external stakeholder support, small market and economy in Botswana, failure of industry partnerships, unemployment, academia not meeting industry expectations, corruption and theft in funding, low entrepreneurial behaviour in Botswana, financial, legal and technological challenges, poor digital marketing, dependence on government support, no/too few industry collaborations and lastly academics not seen as entrepreneurial. All these external environmental factors have provided insight into the significant challenges experienced in supporting intrapreneurial behaviour in Botswana's large tertiary education organisations. University management needs to critically address these challenges to reduce their effectiveness in enhancing the academics' intrapreneurial behaviour.

6.12 THEME EIGHT: INTRAPRENEURIAL BEHAVIOUR'S CONTRIBUTIONS TO UNIVERSITY PERFORMANCE

This theme addresses the empirical objective, which explores intrapreneurial behaviour's contribution to improving performance in Botswana's large tertiary education organisations. While theme seven focused on bringing out the internal and external organisational support challenges, this theme looks into one of the key aspects of this study, which is to provide empirical evidence that the support for intrapreneurial behaviour improves the performance of Botswana's large tertiary education institutions. Intrapreneurial behaviour (IB) is defined as voluntary employee behaviour involving identifying opportunities, producing ideas, creating new products and new business lines as well and creating economic value within an existing organisation (Antoncic & Zorn, 2004; De Jong *et al.*, 2011; Bau & Wagner (2015) Through their intrapreneurial behaviour, employees demonstrate their skills and competencies, which are of great importance to organisational performance.

According to Özbozkurt (2019:1087), intrapreneurial behaviour intentionally and perpetually renovates an organisation by framing its range of business ventures by recognising and exploiting entrepreneurial possibilities. Intrapreneurial behaviour suggests that employees' corporate entrepreneurial skills and competencies take on a new significance (Blanka, 2018:2) in that their abilities as intrapreneurs lead to the

development of innovative ideas and products, which ultimately improves organisational performance and growth (Ogidi, 2014:19).

Based on this body of knowledge, academics have engaged in activities to turn research output into technological development, establish new businesses, and encourage change in social and governmental practices (Wadhwani *et al.*, 2017). Universities have had to adapt to this changing context by becoming more entrepreneurial by promoting intrapreneurial initiatives (Farrukh *et al.*, 2019). According to Etzkowitz *et al.* (2000:313), the entrepreneurial activities undertaken have enhanced the universities' performance by raising their financial status and that of their faculties. Further, universities have had to continue building on their capabilities to stimulate economic growth, innovation capabilities, and regional competitiveness and to improve entrepreneurship capital (Guerrero *et al.*, 2016; Audretsch, 2014).

This theme has different codes, which can be organised into these different sub-categories, namely:

- Brand promotion and positioning with four codes, mentioned 18 times.
- Consultancies with two codes are mentioned twice.
- University entrepreneurship strategy with one code, mentioned once.
- Technology development with one code, mentioned once.
- Collaborative partnerships with one code were mentioned once.
- Entrepreneurship education with one code mentioned once.
- Financial gain and survival with two codes were mentioned four times.
- Improved performance and growth with four codes, mentioned seven times.
- Student placement with one code was mentioned once.
- Winning of research funding with one code, mentioned once.
- Inter-varsity collaborations with one code are mentioned twice.
- Generation of spin-offs with one code, mentioned once.
- Gaining of competitive advantage and distinctiveness with two codes, mentioned seven times.

Table 6.19 on the next page presents an overview and quotations directly from the participants that describe the contributions made by intrapreneurial behaviour to their respective universities' performance.

Table 6.19: Intrapreneurial behaviour's contributions to university performance

Theme	Sub-themes	Codes and Quotations from participants
Intrapreneurial behaviour's contributions to university performance	Brand promotion and positioning	Raised university status: Participant #2: <i>"So the status of the university as a research university is raised by such intrapreneurial behaviour."</i> Brand promotion: Participant #6: <i>"I think we have set ourselves apart from other private university institutions in the sense that, well, we are visible. We are visible because we are, we have integrity, and we are really authentic."</i>
	Consultancies	Earning of consultancy revenue: Participant #2: <i>"I also have colleagues who applied for some consultancy, and the money that comes from the consultancy, the university gets a certain percentage, and by so doing, the university is gaining, is benefiting out of an intrapreneurial behaviour within its staff members."</i>
	University entrepreneurship strategy	Inclusion of entrepreneurship in strategy: Participant #10: <i>"We are using entrepreneurship in our strategy to distinguish ourselves from competitors."</i>
	Technology development	Designing of electronic vehicle: Participant #2: <i>"I know we have a project in the Faculty of Engineering where one Professor, together with students, has designed an electronic vehicle, and It is all over the press."</i>
	Collaborative partnerships	Surviving through collaborative partnerships: Participant #5: <i>"...but the university survived a lot because they were able to work with other people to get the systems running so that the university can run."</i>
	Entrepreneurship education	Inclusion of Corporate Entrepreneurship in programmes: Participant #10: <i>"Yes, I do agree to say it has contributed positively, and it is tangible on the ground that the university is thriving, and I think that the university is trying to include corporate entrepreneurship in all its programmes."</i>
	Financial gain and survival	Indirect financial gain: Participant #3: <i>"The financial gain comes but indirectly. We then have more students coming in, you know, from different countries. We have students, especially in our blended and distance learning environment. We have students from different countries because they know now who the University is, and the students all over the shore advertise the University. So it comes with financial gain through our fees and our running of our business."</i>

		Achieved diversified financial gain: Participant #7: "...in terms of the contribution that it has right now brought in our institution, we are experiencing increased revenue generation because of the different intrapreneurial ideas that we brought to the institution. Maybe let me not say increase. Let me say diversified income generation."
	Improved performance and growth	Improved organisational and staff performance: Participant #4: "Well, I think the performance is actually benefiting from these ideas, these new ideas, being intrapreneurial, yes, because everybody is driving to do things differently, and I think that is positive...you know, supports the performance or improves the performance of staff generally. Even the college in general improves." Evidence of entrepreneurship growth: Participant #10: "There is visible evidence on the ground that the university is moving towards entrepreneurship in order to achieve growth."
	Student placement	Industry absorption of students: Participant #9: "I think our students have been absorbed into the industry more than any other university, especially for our School of Computing and SBL (the School of Business and Leisure). You find that they are absorbed a lot. Even when there are no jobs, you find that most of our graduates find jobs. People believe that we teach better."
	Winning research funding	Earning of grants: Participant #2: "Since I have managed to collaborate with a German university and managed to get some substantial amount as a grant."
	Inter-varsity collaborations	Increased inter-varsity collaborations: Participant #3: "A lot of international and local, national but mostly regional and international universities, they want now to collaborate with the University."
	Generation of spin-offs	Development of business start-ups: Participant #8: "I would say the contribution that has quite been visible, it has been more from the business start-ups that have actually emerged from our alumni, as a result of the entrepreneurial enabling environment that the University has been creating."
	Gaining competitiveness and distinctiveness	Gaining of competitive advantage: Participant #7: "...we have got programmes which, as the University, no other university can offer, or no other university can talk about." Gaining of distinctiveness: Participant #10: "We are using entrepreneurship in our strategy to distinguish ourselves from competitors."

Source: Compiled by the researcher

Figure 6.36 below presents the matrix indicating the participants who provided a specific code on this part of the theme.

Figure 6.36: Matrix for Intrapreneurial behaviour's contributions to university performance

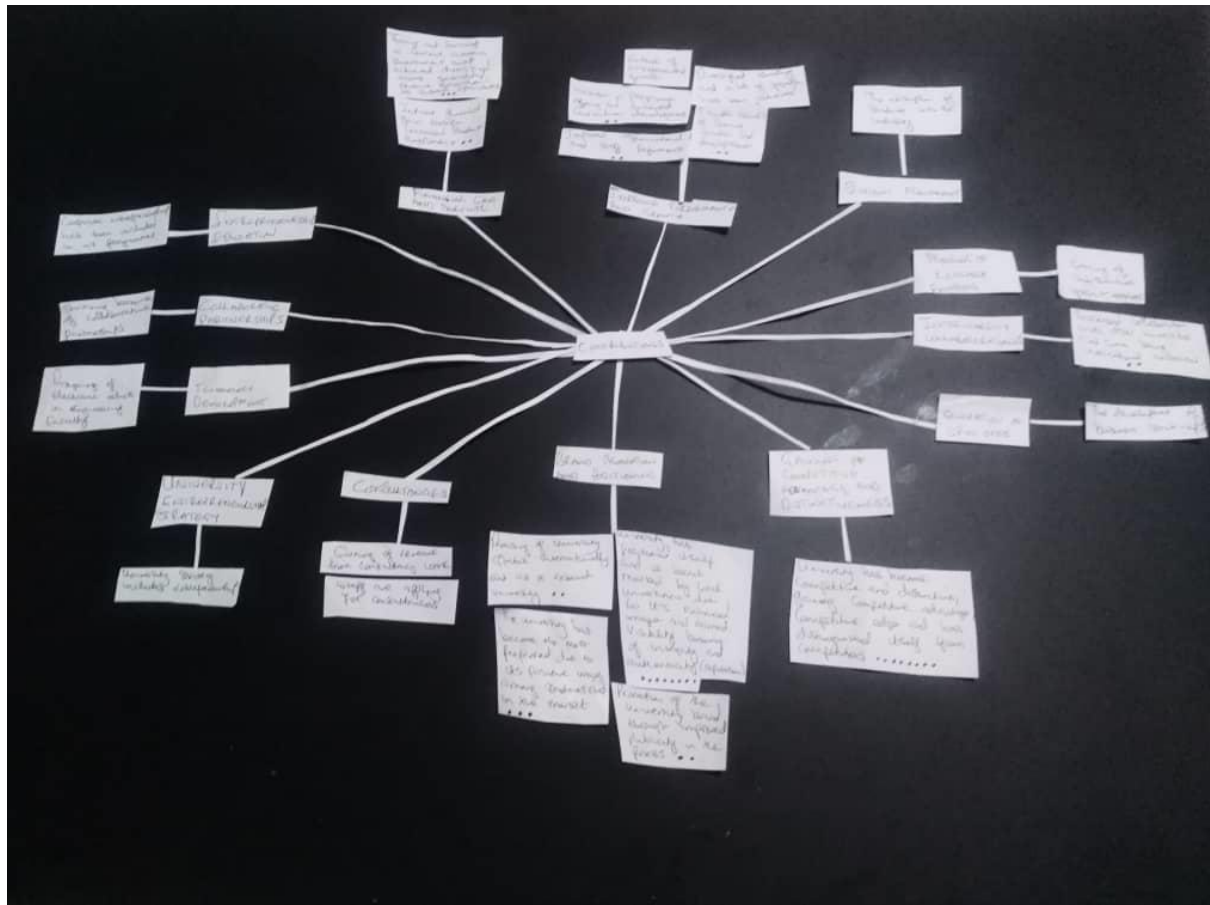
Theme 8: Intrapreneurial behaviour's contribution to university performance		Participants									
Sub- themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Brand promotion and positioning	Raised university status		X	X			X	X			
	University positioned			X			X	X	X		
	Earned positive image			X			X	X		X	X
	Brand promotion	X	X	X			X	X			
Consultancies	Earning of consultancy revenue		X								
	Staff applying for consultancies		X								
University entrepreneurship strategy	Inclusion of entrepreneurship in strategy										X
Technology development	Designing of electronic vehicle		X								
Collaborative partnerships	Surviving through collaborative partnerships					X					
Entrepreneurship education	Inclusion of corporate entrepreneurship in programmes										X
Financial gain and survival	Financial gain			X				X		X	
	Thriving in current economic environment			X							
Improved performance and growth	Improved organisational and staff performance				X						X
	Increased programme offering						X	X			
	Diversified thinking and growth achieved							X			X
	Evidence of entrepreneurship growth										X
Student placement	Industry absorption of students									X	
Winning of research funding	Earning of grants		X								
Inter-varsity collaborations	Increased inter-varsity collaborations		X	X							
Generation of spin-offs	Development of business start-ups								X		
Gaining of competitiveness and distinctiveness	Gaining of competitive advantage			X			X	X	X		X
	Gaining Distinctiveness						X				X

Source: Compiled by the researcher

Both practitioners and academics accept intrapreneurship as the genuine way to improve organisational performance and competitive strategy (Hayton *et al.*, 2013:381; Hadad, 2015). As such, intrapreneurship's potential for organisational growth and survival has drawn organisations not traditionally known as being entrepreneurial, such as education institutions, to orient themselves towards it (Cantaragiu & Hadad, 2014:833). These educational institutions seek to adjust to today's rapidly changing markets, consumer tastes, competition, and technologies that require them to support an innovative culture. This culture will enable the educational institutions to respond quickly to attain objectives and adapt faster than competitors (Gursory & Guven, 2016:152; Olughor, 2014:9). This will further result in improving growth and profitability over time, depending on the universities' competitive environment (Farrukh *et al.*, 2016:598).

The analysis of theme eight generated 13 critical sub-themes that present the research participants' descriptions of the contributions made by intrapreneurial behaviour on their respective universities' performance. Figure 6.37 on the next page presents the network diagram of the sub-themes and code words for theme eight as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

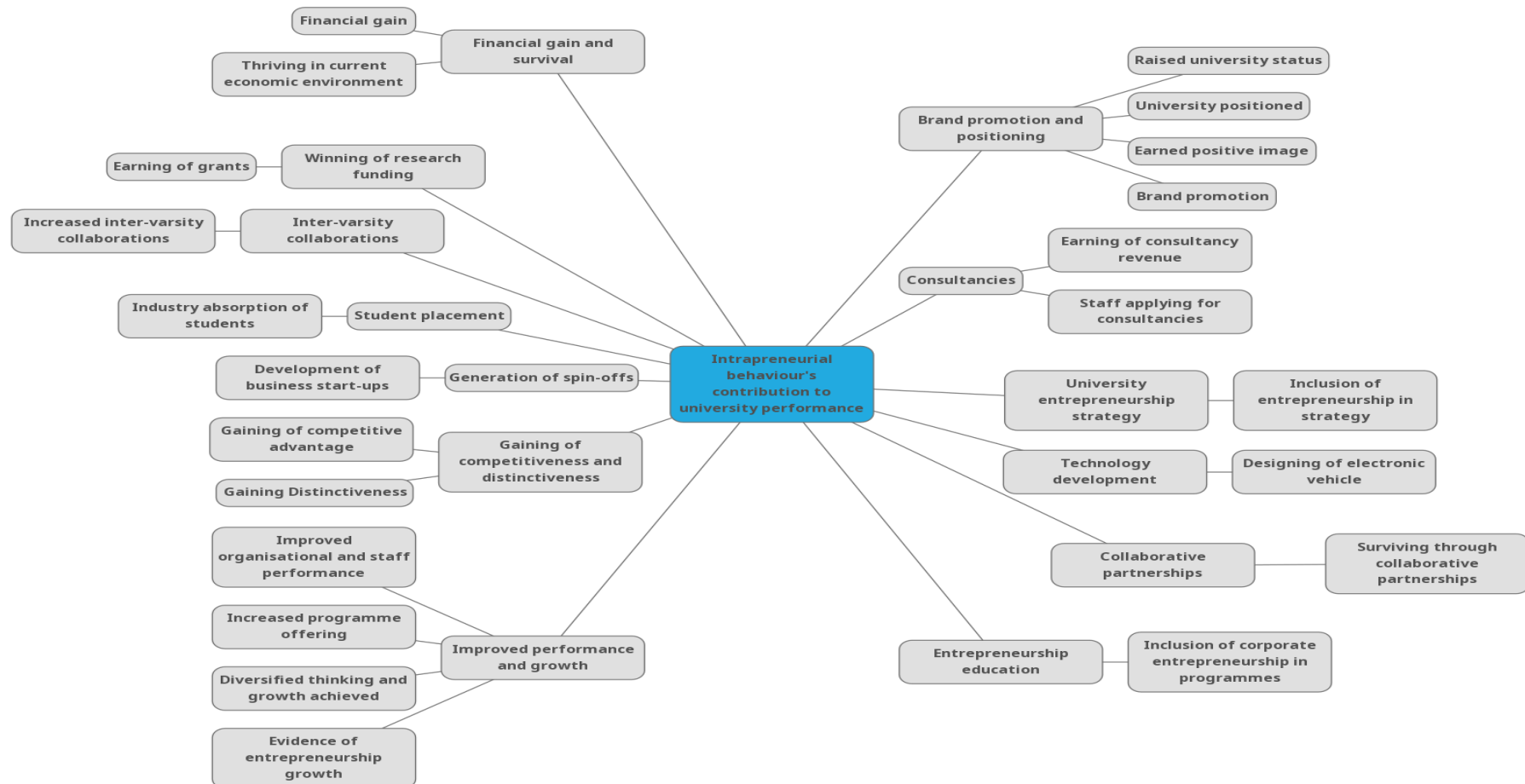
Figure 6.37: Photographic image of intrapreneurial behaviour's contributions to university performance – theme 8



Source: Compiled by the researcher

As a final organisational tool, the photographic image was systematised into an operational network diagram, as shown in Figure 6.38 below.

Figure 6.38: Systemised network diagram for intrapreneurial behaviour's contributions to university performance



A detailed discussion of the sub-themes on intrapreneurial behaviour's contributions to university performance is now provided.

6.12.1 Brand promotion and positioning

Intrapreneurship's potential to improve organisational performance and enable growth in the turbulent business environment (Deprez *et al.*, 2017) makes it an ideal organisational strategy for brand promotion and positioning. This is possible because intrapreneurs behave in ways that go against traditional practices within an organisation (Berzin *et al.*, 2016). Intrapreneurship is characteristic of employee behaviours that affect an organisation's direction and performance levels that exceed expectations (Berzin *et al.*, 2016). This builds an organisation's brand and position in its market. There are four codes under this sub-theme, namely: raised university status, university positioned, earned positive image and brand promotion.

Participant #2 described the contribution of intrapreneurial behaviour as raising the university status, and he said: *"So the status of the university as a research university is raised by such intrapreneurial behaviour."* This description was also provided by Participants #3, #6 and #7. These responses confirm intrapreneurship's ability to foster corporate reinvention, which is vital for an organisation's future well-being because it enhances business competitiveness (Duncan *et al.*, 1988). These universities' status is rising through the strategic renewal attained through innovative employee behaviour, which also positively affects university performance (Kuratko & Audretsch, 2013). Another contribution described was the positioning of the university. Participant #3 mentioned: *"So we have put ourselves, you know, on what is called, we have positioned ourselves. Even colleagues in the European sector also want to collaborate with us, and in Pan-African, you know, like other countries, Kenya, Tanzania and so forth, they actually want to collaborate with the University."* This was also mentioned by Participants #6, #7 and #8.

The positioning of these universities has been attained through the intrapreneurial behaviours of their academics, which exceed expectations and are changing the universities' courses. These universities now define their personalities as innovative, proactive, and risk-takers (Neessen *et al.*, 2018:545-571). This results in efficient

innovation (Rekha *et al.*, 2015), increased profits (Bierwerth *et al.*, 2015), as well as increased effectiveness and public value creation among these universities (Kearney & Meynhardt, 2016). As a result, other institutions are drawn to collaborate with these universities.

Participant #10 spoke of the positive image earned: *“A lot of people have seen the University in a positive image because of the atmosphere that exists in the university, indicating that the university is pushing for growth, development and competitiveness”*, while Participant #6 mentioned brand promotion: *“I think we have set ourselves apart from other private university institutions in the sense that, well, we are visible. We are visible because we are, have integrity, and are authentic. So, we are not doing anything under the table, of course. So, for the fact that we have that kind of integrity and we are out there in the public eye. People know these days that, yes, there is the University.”* All these achievements can be attributed to intrapreneurial academics who employ opportunistic tactics and take advantage of small changes to influence more significant changes within the entire university. They do this by turning ideas into business success (Heize & Weber, 2016; Moriano *et al.*, 2014; Pinchot, 1987). The behaviours of intrapreneurial academics are enabling them to become implementers of new logic. So, they come up with initiatives that are positively impacting the performance of their universities at various levels.

6.12.2 Consultancies

The intrapreneurial behaviour in the universities has resulted in the academics engaging in consultancy work and earning revenue for their universities. This sub-theme has two codes: earning consultancy revenue and staff applying for consultancy work. These codes were both provided by participant #2, who said: *“I also have colleagues who applied for some consultancy and the money that comes from the consultancy, the university gets a certain percentage and by so doing the university is gaining, is benefiting out of an intrapreneurial behaviour within its staff members.”* This is in an effort to implement the entrepreneurial university concept, which is bringing about an evolution of this university's role through the inclusion of the third mission in its strategic orientation (Perkmann *et al.*, 2013; Feola *et al.*,

2020). Through the third mission, this university is creating and using its knowledge, assets and competencies with external stakeholders (Calcagnini *et al.*, 2016; Secundo *et al.*, 2017b; Meoli *et al.*, 2018).

The university is attaining an entrepreneurial focus as it commits funds to developing services for society, industry and other institutions through consultancy work (Compagnucci & Spigarelli, 2020). Through this work, the academics are enabling their university to improve its performance and recreate organisational structures and strategies for better adaption to environmental demands (Antoncic & Hisrich, 2001). Academics are responding to environmental demands as they provide consultancy services.

6.12.3 University entrepreneurship strategy

The implementation of the entrepreneurial university concept involves the analysis of a university's mission statement and strategies to determine whether there is an adaption to the need to enhance entrepreneurial thinking and business creation among students and academic staff. (Taucean *et al.*, 2018). This sub-theme addresses this factor and has one code, including entrepreneurship in strategy. Participant #10 said: *"There is visible evidence that the university is moving towards entrepreneurship to achieve growth. We are using entrepreneurship in our strategy to distinguish ourselves from competitors."* This means that this university is making sure that entrepreneurship exists in its documents on the mission, objectives, vision, values and strategic plans to strengthen its entrepreneurial stance (Errasti *et al.*, 2018; Taucean *et al.*, 2018; OECD, 2016). This is part of the university's adoption of the third mission, which entails abandoning traditional management practices and replacing them with new models to enhance strategic improvements (Teece, 2018).

This university is making strategic choices by developing entrepreneurial pathways to implement its strategic plans on entrepreneurship and all other activities that go with it (Klofsten *et al.*, 2019). By ensuring that the working mission statement and its supportive strategy reflect an entrepreneurial vision for the future, this university is fostering the kind of re-envisioning that brings about positive change (Hamington & Ramaley, 2018; Wakkee *et al.*, 2019).

6.12.4 Technology development

This sub-theme is presented with one code being the designing of electronic vehicles. Participant #2 mentioned: *“I know we have a project in the Faculty of Engineering where one Professor and students have designed an electronic vehicle, and it is all over the press. So the status of the university as a research university is raised by such intrapreneurial behaviour.”* This is evidence that this university also strives to transform into a global, technological, innovative and competitive entity (Fernandez-Nogueira *et al.*, 2018). Entrepreneurial universities achieve this through the production, conference and commercial exploitation of practical research findings locally, nationally and internationally (Goethner & Wyrwich, 2019). The designing of an electronic vehicle is a demonstration that academics in this university are engaging in activities aimed at turning their research output into technological developments which can be commercially exploited and inevitably encourage change in social and governmental practices in Botswana (Wadhvani *et al.*, 2017).

6.12.5 Collaborative partnerships

As universities expand from only executing the traditional missions of teaching and research (Guerrero *et al.*, 2017) to including the third mission, they are engaging in a wide range of collaborative partnerships (Dalmarco *et al.*, 2018). This is because the third mission includes establishing connections between the university and its environment to actively foster local development. Through the third mission, tertiary education institutions also have to undertake activities that are categorised as research, involving innovation and transfer of technology, teaching comprising lifelong learning and university participation in social and cultural affairs (Mora *et al.*, 2015). The collaborative partnerships are therefore built on the transfer and commercialisation of innovative business activities between these universities and their various stakeholders, including the government, based on financial and organisational economic standards (Kalenyuk & Dyachenko, 2016).

This sub-theme on collaborative partnerships has one code: surviving through collaborative partnerships. Participant #5 said: *“The university survived a lot because they were able to work with other people to get the systems running so that the*

university can run.” This means that the university uses its entrepreneurial activities in its collaborative partnerships, ensuring its survival in today’s turbulent business environment. This is corroborated by Mariani *et al.* (2018), who said that many universities have adopted the entrepreneurial culture as a new means of generating imperative funds, partnerships and facilities from diverse sources, which ensures their survival. These universities are, therefore, profiting from the knowledge in the entrepreneurial environment as they closely interact with the business sector (Etzkowitz, 2013a).

6.12.6 Entrepreneurship education

There is one code under this theme, which is the inclusion of Corporate Entrepreneurship in programmes. Participant #10 mentioned how the offering of entrepreneurship education is bringing success to the university: *“Yes, I do agree to say it has contributed positively, and it is tangible on the ground that the university is thriving, and I think that the university is trying to include corporate entrepreneurship in all its programmes. We also have a programme of that particular nature.”* This entrepreneurial education is offered through the entrepreneurial activities of academics as they enhance their research and teaching objectives (Miller *et al.*, 2018:9–37. Entrepreneurial education is thus focused on the university’s teaching mission and the development of entrepreneurial capabilities among students and faculty members (Altmann & Ebersberger, 2013; Galán-Muros *et al.*, 2017; Guerrero *et al.*, 2016). The outcome is, therefore, a thriving university.

6.12.7 Financial gain and survival

Financial gain and survival are attained through the intrapreneurial behaviour of employees who identify, advance and implement new business opportunities and create economic value within an existing organisation. As stated in the codes of this sub-theme, intrapreneurial behaviour contributes to financial gain and the universities' ability to thrive in the current economic environment. Participants #3, #7 and #9 mentioned financial gain. Participant #7 specifically said: *“...in terms of the contribution that it has brought to our institution, we are experiencing increased revenue generation because of the different intrapreneurial ideas that we brought to*

the institution. Maybe let me not say increase. Let me say diversified income generation.” Participant # 3 spoke of the university’s thriving in the current economic environment: *“So it comes with financial gain through our fees and business running. So that is quite a great competitive advantage, and yes, the University is thriving and surviving in these turbulent economic times.”*

These responses confirm intrapreneurship's potential to improve organisational performance and enable growth in turbulent business environments (Deprez *et al.*, 2017). In this case, intrapreneurial behaviour has improved the universities’ performance, specifically, the financial performance, which has led to the survival and sustainability of these institutions in these times of increasing competitive pressure (Falola *et al.*, 2017:9).

6.12.8 Improved performance and growth

Intrapreneurial behaviour leads to the development of innovative ideas and products, which ultimately improves organisational performance and growth (Ogidi, 2014:19). Participants #4 and Participant #10 spoke of this potential of intrapreneurship through the code on improved organisational and staff performance under this sub-theme. Participant #4 was very elaborate as he explained: *“Well, I think the performance is benefiting from these ideas, these new ideas, being intrapreneurial, yes, because everybody is driving to do things differently, and I think that is positive. Because you are being challenged to be intrapreneurial, you are becoming a better performer if you are like. You are discovering new things and being challenged in a way, so I think the challenge this idea brings also generally supports the performance or improves the performance of staff. Even the college in general improves.”*

Another code under this sub-theme is increased programme offering. Participant #6 and Participant #7 provided this code. Participant #6 explained: *“So, I think the contributions that the intrapreneurial behaviour has made to the university performance is that we are visible. We have gained that competitive edge that we have wanted as an institution. We have a lot of programmes. Right now, we have, well, maybe I think up to last month, we have 59 accredited programmes, and our*

programmes are being accredited well month in and month out, so we are doing good.” Yet another code is diversified thinking and growth achieved, which was mentioned by Participant #7 and Participant #10: “We are, we have diversified our thinking, and it is evident in our curriculum, it is evident in our training, it is evident in the events that we host in the University, it is evident in the partners, in the stakeholders or in the people that we interact with in terms of the University. So, we see growth; there is a lot of growth in our institution and a lot of just even personal growth of the employees” (Participant #7). The last code is evidence of entrepreneurship growth: “There is visible evidence on the ground that the university is moving towards entrepreneurship to achieve growth” (Participant #10).

Clearly, these participants perceive intrapreneurship as a significant driver for the improvements in their respective universities’ innovative performance (Hadad, 2015; Lambert, 2016). This demonstrates that the adoption and internalisation of intrapreneurial behaviour by academics who look for opportunities and innovations to attain university goals and objectives leads to improvements in university performance and growth (Gursory & Guven, 2016:152). This aligns with Alt and Craig (2016), who explain that individual employees’ intrapreneurial behaviour influences organisational performance.

6.12.9 Student placement

This sub-theme has one code, which is the industry absorption of students. Participant #9 said: *“I think our students have been absorbed into the industry more than any other university, especially for our School of Computing and SBL (the School of Business and Leisure). You find that they are absorbed a lot. Even when there are no jobs, most of our graduates find jobs.”* This can be attributed to the offering of entrepreneurship education in the university, which fosters an entrepreneurial mindset among students (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019). Entrepreneurship education includes, among others, practical applications (Popescu *et al.*, 2015) which enhance student skills thereby making them highly sought after by the industry. This is why entrepreneurship education has been deemed necessary to develop human capital (Šmídová *et al.*, 2017).

This holds critical importance to Botswana, whose government has made large educational investments. The increased absorption of students by the industry, as mentioned by Participant #9, means that the much-needed matching between the skills developed by the education system and the needs of Botswana's economy is being achieved (Makwinja, 2017; NDP 11, 2017). This means that the government's demand on the tertiary education sector to match their training with industry needs by producing skilled and quality graduates is being met. (ETSSP, 2015; Makwinja, 2017; NDP 11, 2017, Vision 2016:7; Vision 2036).

6.12.10 Winning of research grants

This sub-theme is also presented with one code: earning of grants. Participant #2 said: *"I would talk about myself and my faculty. I have collaborated with a German university and got a substantial amount as a grant. While the grant is used for student and staff exchange, it has raised the status of the university."* This refers to the academic's roles in scholarly research, publications, teaching and administration, which have been extended to include the winning of research funding and the performance of entrepreneurial activities that impact society (Guerrero *et al.*, 2015). By winning research funding, this university demonstrates its capability to increasingly replace state research funding for R&D with investment from industrial enterprises (Kirby, 2006). The university is recruiting and developing its academic staff's confidence in their entrepreneurial skills as they obtain substantial grants (Miller *et al.*, 2018).

It can be observed that Participant #2 and the other academics in his faculty are intrapreneurial academics who employ opportunistic tactics and take advantage of small changes to influence more significant changes within the entire university through the turning of ideas into business success (Heize & Weber, 2016; Moriano *et al.*, 2014; Pinchot, 1987). Such behaviours of the intrapreneurial academics are enabling them to become implementers of new logic, and so they are coming up with initiatives that are impacting their university's status through improved performance (Fellnhöfer *et al.*, 2017; Kollmann *et al.*, 2017).

6.12.11 Inter-varsity collaborations

Participant #2 and Participant #3 spoke of the increased inter-varsity collaborations happening in their respective universities. The only code under this sub-theme. Participant #3 said: *“Right now, as we speak, a lot of international and local, national but mostly regional and international universities, they want now to collaborate with the University.”* As already discussed, these inter-varsity collaborations can be said to include several coordinated activities, such as the establishment of joint degrees with universities in other countries, the execution of international research projects, access to a pool of revenue and the international exchange of students, academics and other partners (Errasti *et al.*, 2018). All these make the main components of an entrepreneurial university (Errasti *et al.*, 2018), which bring an international or global perspective to the planning and carrying out of educational programmes, research and knowledge transfer (Taucean *et al.*, 2018). This is vital in these universities because it promotes change and development through diverse thinking. The universities can hold new insights that alter traditional teaching methods and become accommodative of external stakeholders in managing their entrepreneurial university (Taucean *et al.*, 2018).

6.12.12 Generation of business spin-offs

The entrepreneurial university model is ideal for logically responding to economic challenges by fostering outreach initiatives built on technology transfer and knowledge-based start-ups (Audretsch, 2014; Volkodavova *et al.*, 2019). This model enables tertiary education institutions today to assume a key role in the knowledge-based society. They are gaining increased relevance in technology transfer and company/firm formation, leading to regional renewal (Cai & Etzkowitz, 2020). Participant #8 provided the code under this sub-theme: business start-ups' development. She said: *“I would say the contribution that has quite been visible, it has been more from the business start-ups that have emerged from our alumni, as a result of the entrepreneurial enabling environment that the University has been creating.”* This higher education institution is embarking on entrepreneurial innovations and initiatives to contribute to Botswana's economic development.

The innovations and initiatives are also anticipated to have widespread effects on Botswana's knowledge economy as facets of entrepreneurship emerge from the academic spheres (Volkodavova *et al.*, 2019) This university is clearly transforming and revealing new ways of stimulating job creation among its graduates through business start-ups that will foster sustainable economic growth and employment in Botswana (Oyugi, 2021).

6.12.13 Gaining competitiveness and Distinctiveness

Intrapreneurial behaviour is critical to an organisation's ability to remain competitive, profitable and relevant (Pinchot, 1985; Van der Sijde *et al.*, 2013). This is because intrapreneurial behaviour forms a foundation for innovation and the resultant competitive advantage of organisations, leading to ventures' success (Guerrero & Pena-Legazkue, 2013; Parker, 2011). This is experienced in the universities that participated in the study, as expressed by participants #3, #6, #7, #8 and #10, who spoke of their respective universities having gained competitive advantage as one code under this theme.

In line with the other participants, Participant #8 said: *"And when that happens, it adds to the University's position on the competitive platform as an institution that does not only produce graduates who get into industry as employees of value who become innovative, you know, within the employment industry who are also ready to become, almost ready to work, which has been an achievement that the University has attained"*, while Participant #7 said: *"We have got programmes in which as the University no other university can offer or no other university can talk about. So, in terms of that performance or even our training, we have certain programmes under training and development that are non-existent in other institutions. So, regarding our performance, we are your go-to institution for any business you seek at the University University."*

Participants #6 and Participant #10 provided the second code, which is the gaining of distinctiveness. Participant #6 said: *"I think we have set ourselves apart from other private university institutions in the sense that we are visible. We are visible because we are, have integrity, and are authentic."* Participant #10 said: *"We are using*

entrepreneurship in our strategy to distinguish ourselves from competitors.” These universities are systematising a group of entrepreneurial activities that combine academic and business requisites by widening the inputs to academic knowledge and its application to socio-economic issues. It is through this that they are gaining competitive advantage and distinctiveness in the tertiary education sector (Etzkowitz *et al.*, 2008; Trencher *et al.*, 2014; Compagnucci & Spigarelli, 2020).

In summary, intrapreneurial behaviour has significantly contributed to the improvements in the performance of the large tertiary education institutions that participated in this study. The participants described the following contributions from intrapreneurial behaviour: brand promotion and positioning, consultancies, university entrepreneurship strategy, technology development, collaborative partnerships, entrepreneurship education, financial gain and survival, improved performance and growth, student placement, winning of research funding, inter-varsity collaborations, generation of spin-offs and lastly gaining of competitiveness and distinctiveness. All these contributions from the intrapreneurial behaviour among the academics are leading to the attainment of these universities’ strategic goals and targets in academic entrepreneurship. Consequently, the universities are experiencing intentional and perpetual renovations that are sustaining their competitiveness, survival and growth.

6.13 THEME NINE: RECOMMENDATIONS

This is the final theme, and it addresses the last empirical objective of the study, which is the generation of recommendations by the research participants in three areas, namely: supporting intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and improving the university’s performance through intrapreneurial behaviour. These recommendations may assist in establishing ample supporting evidence for encouraging intrapreneurial behaviour and propose a framework to support intrapreneurial behaviour for improved performance in Botswana’s large tertiary education institutions.

This theme generated 121 code words, which were evaluated and analysed into the following categories and sub-categories:

- **Recommendations on supporting intrapreneurial behaviour**
 - Promote intrapreneurial behaviour with a clear and open policy
 - Instil the entrepreneurial mindset in all staff and students
 - Reserve seed funds for intrapreneurial projects
 - Set up the industry as an entrepreneurial university
 - Reflect managers' role and support for intrapreneurship in annual assessment
 - Remuneration to be based on high-ranking support for intrapreneurship
 - Establish financial and non-financial incentives/rewards such as awards, retreats, sponsorships and salary increments
 - Avoid teaching theory and infuse entrepreneurial courses in syllabuses
 - Set up internships for students to learn on the job
 - Support, acknowledge and praise academics' performance
 - Establish a standard induction programme for new and old employees
 - Establish a balance between academia and entrepreneurship by creating a connected teaching and learning framework
 - Create an enabling environment for entrepreneurship growth
 - Focus on research and idea development for entrepreneurial growth through product innovations
 - Address staff concerns through motivational speakers and small-group staff meetings
 - Adopt a down-up approach by setting up focus groups for open dialogue and using obtained information for training and development on intrapreneurship
 - Expand space and infrastructure
 - Increase industry participation and strengthen partnerships and collaborations with financial institutions so as to obtain enough funding for intrapreneurship
 - Implement the entrepreneurial university objective and avoid mere talk on entrepreneurship
 - Strengthen the exchange programmes with entrepreneurial universities

- **Recommendations on dealing with challenges in supporting intrapreneurial behaviour:**
 - Improve access to resources and work
 - Benchmark with entrepreneurial universities and adopt what they have done
 - Redefine and expand the understanding of academic entrepreneurship
 - Promote and support intrapreneurial behaviour among academics
 - Work with various stakeholders to come up with solutions
 - Foster relationships with organisations that support intrapreneurship to fund start-ups in universities
 - Lobby the government for more government ministries to deal with academic entrepreneurship
 - Perceive and address challenges as risks
 - Come up with a clear strategy for dealing with intrapreneurship issues
 - Identify alternative means of raising funds
 - Encourage practical entrepreneurial exercises in which lecturers work with students in intrapreneurial activities
 - Share information on challenges faced by academics so that they contribute to finding solutions
 - Reward or give some form of motivation to the academics
 - Compensate the use of personal resources and provide financial resources to academics
 - Establish a wellness or welfare programme for staff
 - Create a reflective entrepreneurship environment and relate the learning environment to entrepreneurship
 - Collaborate with the new Ministry of Entrepreneurship to develop a genuine, authentic entrepreneurship curriculum and innovative teaching methods
 - Train all staff in entrepreneurship and financial management
 - Establish more space for intrapreneurial initiatives
 - Leaders to become active, practical and honourable

- **Recommendations on improving university performance through intrapreneurial behaviour**
 - Increase industry/stakeholder collaborations and engagement in Intrapreneurship for economic growth
 - Improve provision and access to all key resources for intrapreneurial activities
 - Continuously support and recognise entrepreneurial achievements using awards of recognition and financial rewards
 - Invest in academics and provide on-going training in specific areas
 - Improve curriculum development and strengthen training centres in the university to generate revenue
 - Inculcate the intrapreneurship spirit among staff and students for revenue generated
 - Become the right calibre of entrepreneurial university
 - Not to think that everyone is entrepreneurial
 - Develop vocational institutions with university status and sponsor passionate students
 - Use research to solve societal and government problems
 - Develop an index or tool and framework for measuring and monitoring intrapreneurial behaviour and performance

6.13.1 Recommendations on supporting intrapreneurial behaviour

Table 6.20 on the following page presents an overview and quotations directly from the participants for the recommendations on supporting intrapreneurial behaviour that the participants provided for the key role-players within their university context.

Table 6.20: Recommendations on supporting intrapreneurial behaviour

Category	Sub-category	Codes and Quotations from participants
Recommendations on supporting intrapreneurial behaviour	Promote intrapreneurial behaviour with a clear and open policy	Promoting intrapreneurial behaviour: Participant #2: <i>"I think they need to allow and promote intrapreneurial behaviour in any way. And it can be in the form of consultancy, it can be in the form of innovation, it can be, you know, in the form of even developing new business models and the likes."</i> Policy for intrapreneurship: Participant #2: <i>"And it should be very clear and open that the university has a policy on promoting and supporting intrapreneurial behaviour among staff members in particular or among academics in particular."</i> Participant #3: <i>"The policy is there, but what it needs is just to be clear on academia as well, not just on students that we are channelling."</i> Participant #4: <i>"...they should not shy away from saying out this is what we do in addition to teaching, research, we actually do ABC to support for, to engage in intrapreneurial culture."</i>
	Instill the entrepreneurial mindset in all staff and students	Instilling intrapreneurial mindset in staff: Participant #2: <i>"Yes, it is true we have very strong entrepreneurial mindsets which we are instilled in students but staff members are still lacking."</i> Instilling intrapreneurial mindset in students and staff: Participant #5: <i>"I think we have covered a lot on entrepreneurship. All I can say for me is I would be happy to see the university embracing the idea of entrepreneurship in its daily activities, in its students and also in its staff."</i> Instilling intrapreneurial mindset in students: Participant #10: <i>"Then also there is need for training and development so as to conscientise the people to likely support the intrapreneurial idea...There is also a need to make it mandatory for every student to do entrepreneurship as a module in their programme. It must be mandatory, not an elective, as it is at this juncture."</i>
	Reserve seed funds for intrapreneurial projects	Funding for intrapreneurial projects: Participant #3: <i>"...we should look on ways, on how to reserve some funds for the projects that I talked about. And once the projects start to run, they can actually have that money returned back because the business will be making a profit. Yes some form of seed money into these business projects. And when the business starts to run, later on, it can be reimbursed or recouped, what they have put in there."</i>

	Set up the industry as an entrepreneurial university	Entrepreneurial university industry: Participant #3: <i>"What it needs is just to be an entrepreneurial university where we have an industry, something like that."</i>
	Reflect managers' role and support for intrapreneurship in annual assessment.	Managers' roles in intrapreneurship: Participant #4: <i>"Ok well, I would recommend to them that the role they play in intrapreneurship should be made that they should highlight that more in their annual assessment..."</i>
	Remuneration to be based on high-ranking support for intrapreneurship	Remuneration for intrapreneurship: Participant #4: <i>"...in terms of remuneration, from the college point of view, I would say that they would be highly ranked for support."</i>
	Establish financial and non-financial incentives/rewards	Incentives/rewards for intrapreneurship: Participant #4: <i>"...incentives should be in different forms, perhaps awards or increments of salary and so forth."</i> Participant #6: <i>"And also, lastly, you know you could take your people out, just a little retreat would not hurt, sponsoring me for having worked hard and taking me out with my team as well."</i> Participant #9: <i>"I think people just want more money. They want, you know, they want a salary raise, they want us to increase the amount, they want more money. People are motivated by money to tell the truth."</i> Participant #10: <i>"...come up with incentives, whether it is financial or non-financial, for mentorship opportunities. Like I said, there is a lot of work, and people feel that they do not have time to just come work for nothing. So, they can be rewarded, and this will also support or promote or support intrapreneurial behaviour."</i>
	Avoid teaching theory and infuse entrepreneurial courses in syllabuses	Teaching of entrepreneurship: Participant #5: <i>"First of all, I would say that gone are the days when we used to teach theory to students. It is high time that we infuse a lot of entrepreneurial courses within our syllabuses so that at the day students can get out with a lot of skills."</i>
	Set up internships for students learn on the job	Internship: Participant #5: <i>"...you will find that there is a gap in skills in that in our university, we still are not doing internships where students should go on and learn on the job what is happening. And as I said before, normally entrepreneurial activities come from what you have seen somebody else do and you want to do the same or a similar thing that the person has done."</i>
	Support, acknowledge and praise academics' performance	Employee performance: Participant #6: <i>"I would call for more advocacy on recognition of what employees are doing, yes on the performance of employees...This one, I believe, speaks to performance from all works, be it the marketing, the vision, be it the academic division right, be it admission. I think all</i>

		<i>these are coined around one concept; support, support, support and support. So, supporting someone, it gives birth to a lot of concepts. You talk of support in terms of showing the person that you appreciate what they are doing, writing to them to say indeed you are doing a great job, applauding them maybe their juniors being there, informing them that you know your supervisor is doing a wonderful job, something like that.</i>
	Establish standard induction programme for new and old employees	Staff induction: Participant #7: <i>"Ok the first thing that I will do to recommend to the key role players is that we need to elaborate about our culture to those who are coming to join our institution or to those who are already existing in our institution. Let us have a standard induction programme for everybody who comes into the University then, we can be able to encourage everybody's intrapreneurial behaviour in our institution. The biggest supporting factor, of supporting intrapreneurial behaviour is that let us be clear about our culture to those that are joining us and to those that are already existing in the institution."</i>
	Strengthen the exchange programmes with entrepreneurial universities	Exchange programmes: Participant #10: <i>"And also to strengthen the exchange programmes, especially with other universities that manage to promote intrapreneurial behaviour. That way, the university can learn other things that it can, you know, practice to support intrapreneurial behaviour."</i>
	Implement the entrepreneurial university objective and avoid mere talk on entrepreneurship	Implementing entrepreneurship objective: Participant #10: <i>"Number one, like I said, is implementation. It is not just a talk, but let us put it into practice. So, they must start from somewhere so as to realise that particular objective..."</i>
	Establish a balance between academia and entrepreneurship by creating a connected teaching and learning framework	Academia and entrepreneurship balance: Participant #8: <i>"I think, for me, it is supporting intrapreneurial behaviour if you really really want to achieve that, one should be able to get to a balance between academics and entrepreneurship, that would be at least 50-50 or even at most more on the entrepreneurial side. For me, that would be the very first thing to do to say, you know, we need entrepreneurs, we are going to create an entrepreneurship programme, and there will be more entrepreneurship, you know, than academics such that even the mode of teaching, the mode of assessment will involve more of the entrepreneurial aspect than, you know, the academic aspect. And this would actually, therefore, mean we provide a link, you know, in a more of a connected framework, you know, teaching and learning framework."</i>
	Create an enabling environment for entrepreneurship growth	Creating enabling environment: Participant #8: <i>"...you know, steps be made in order to create that environment for entrepreneurship, you know, growth."</i>
	Focus on research and idea development for entrepreneurial growth	Focus on research and idealisation: Participant #8: <i>"... would really be focusing on research, idea growth and be able to therefore pass such to the more entrepreneurial aspect of it. We would then be</i>

	through product innovations	<i>able to take this further towards idealisation. But it is not only about that, the entrepreneurial aspect of it would also be focusing on entrepreneurship growth within the context of existing, you know, products as well as, you know, innovations. I think for me that would be one key area of supporting."</i>
	Address staff concerns through motivational speakers and small-group staff meetings	Addressing staff concerns: Participant #9: <i>"...we can bring in motivational speakers to come and speak with them. I think we can also hold a lot of staff meetings and maybe in smaller groups so that we let, we come to the people not to tell them but to ask them what their concerns are and how things can be done to address them."</i>
	Adopt a down-up approach by setting up focus groups for open dialogue and using obtained information for training and development on intrapreneurship	Adopting top-down approach: Participant #9: <i>"We run from the grassroots not from the top-down. Let it trickle from down up so you hear the people and understand what they are going through. Maybe that will be the focus of the training that we need."</i>
	Expand space and infrastructure	Need for more space and infrastructure: Participant #9: <i>"I think we also, you know, we expand our infrastructure from where we can create space. We open up work stations, workshops where we put machinery so that kids from Computing can work with their lecturers. Those from SBL can do that, too, and work in a space that is theirs. We do not have enough space. For what I envisage as an Entrepreneurial university, we do not have that space. That is what we need."</i>
	Increase industry participation and strengthen partnerships and collaborations with financial institutions so as to obtain enough funding for intrapreneurship	Industry participation and collaborations: Participant #9: <i>"We also need to involve a lot, the industry must play a major role in this. We must see industry actively in this university, teaching the students what to do because they always complain that colleges or universities do not, you know, churn out, you know, appropriate workforce for them. What is their input? We need their input. Those are the things that I think can be done."</i> Participant #10: <i>"Also, they need to strengthen partnerships and collaborations, especially with financial institutions so as to get enough funding to support the idea."</i>

Source: Compiled by the researcher

Figure 6.39 below presents the matrix indicating the participants who provided a specific code on this part of the theme.

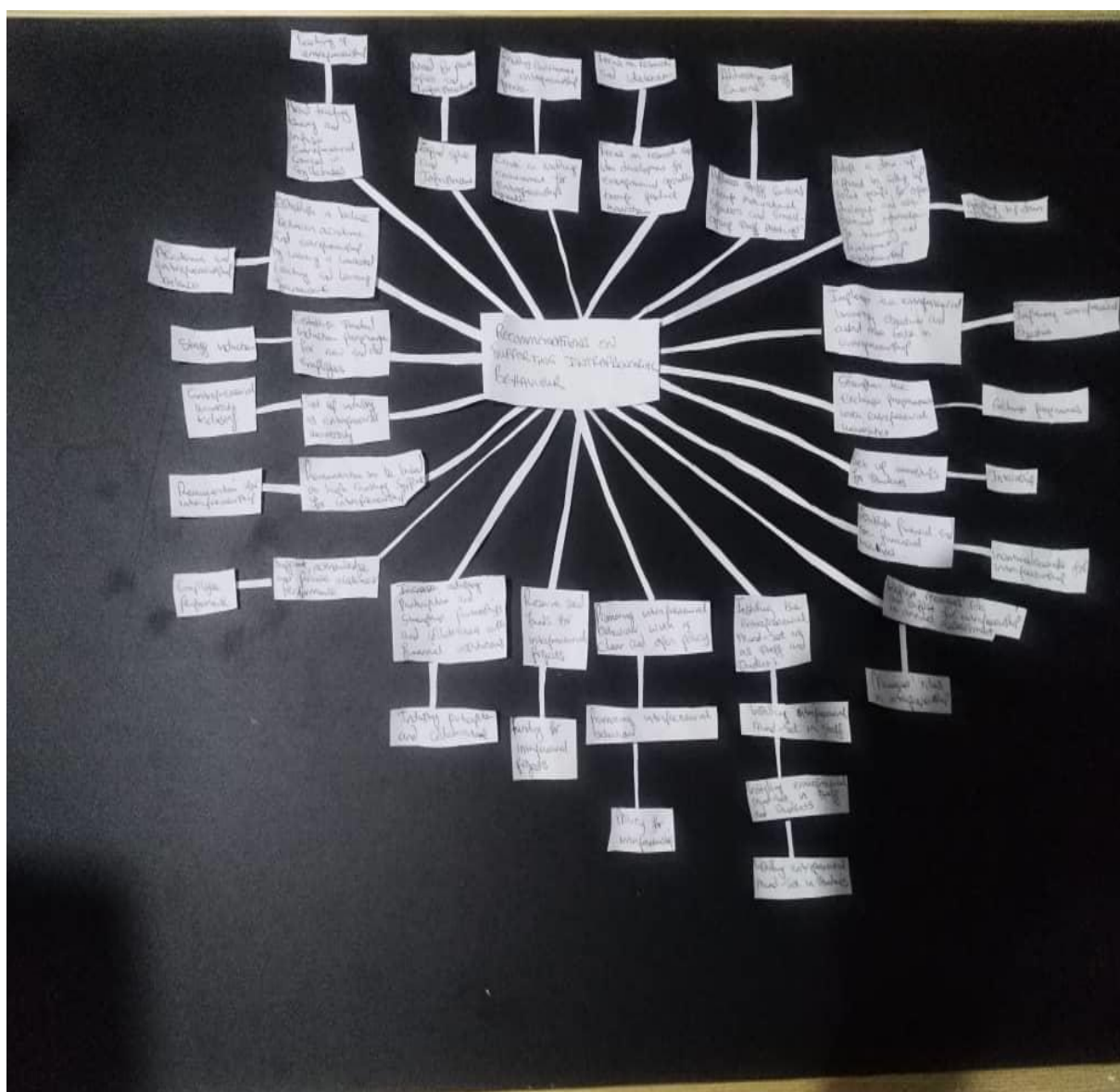
Figure 6.39: Matrix for recommendations on supporting Intrapreneurial behaviour

Theme 9: Recommendations on supporting intrapreneurial behaviour		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Promote intrapreneurial behaviour with a clear and open policy	Promoting intrapreneurial behaviour		X								
	Policy for intrapreneurship		X	X	X						
Instill the entrepreneurial mind-set in all staff and students	Instilling entrepreneurial mind-set in staff		X								
	Instilling entrepreneurial mind-set in students and staff					X					
	Instilling entrepreneurial mind-set in students										X
Reserve seed funds for intrapreneurial projects	Funding for intrapreneurial projects			X							
Set up industry as entrepreneurial university	Entrepreneurial university industry			X							
Reflect managers' role and support for intrapreneurship in annual assessment	Managers' roles in intrapreneurship				X						
Remuneration to be based on high ranking support for intrapreneurship	Remuneration for intrapreneurship				X						
Establish financial and non-financial incentives/rewards	Incentives/rewards for intrapreneurship				X		X			X	X
Avoid teaching theory and infuse entrepreneurial courses in syllabuses	Teaching of entrepreneurship					X					
Set up internships for students	Internship					X					
Support, acknowledge and praise academics' performance	Employee performance						X				
Establish standard induction programme for new and old employees	Staff induction							X			
Strengthen the exchange programmes with entrepreneurial universities	Exchange programmes										X
Implement the entrepreneurial university objective and avoid mere talk on entrepreneurship	Implementing entrepreneurship objective										X
Establish a balance between academia and entrepreneurship by creating a connected teaching and learning	Academia and entrepreneurship balance								X		
Create an enabling environment for entrepreneurship growth	Enabling environment for entrepreneurship growth								X		
Focus on research and idea development for entrepreneurial growth through product innovations	Focus on research and idealisation								X		
Address staff concerns through motivational speakers and small-group staff meetings	Addressing staff concerns									X	
Adopt a down-up approach by setting up focus groups for open dialogue and use obtained information for training and development on intrapreneurship	Adopting top-down approach									X	
Expand space and infrastructure	Need for more space and infrastructure									X	
Increase industry participation and strengthen partnerships and collaborations with financial institutions	Industry participation and collaborations									X	X

Source: Compiled by the researcher

The analysis of this first part of theme nine generated 20 critical sub-themes that present the research participants' recommendations on supporting intrapreneurial behaviour in their respective universities. Figure 6.40 below presents the network diagram of the sub-themes and code words for this part of theme nine as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

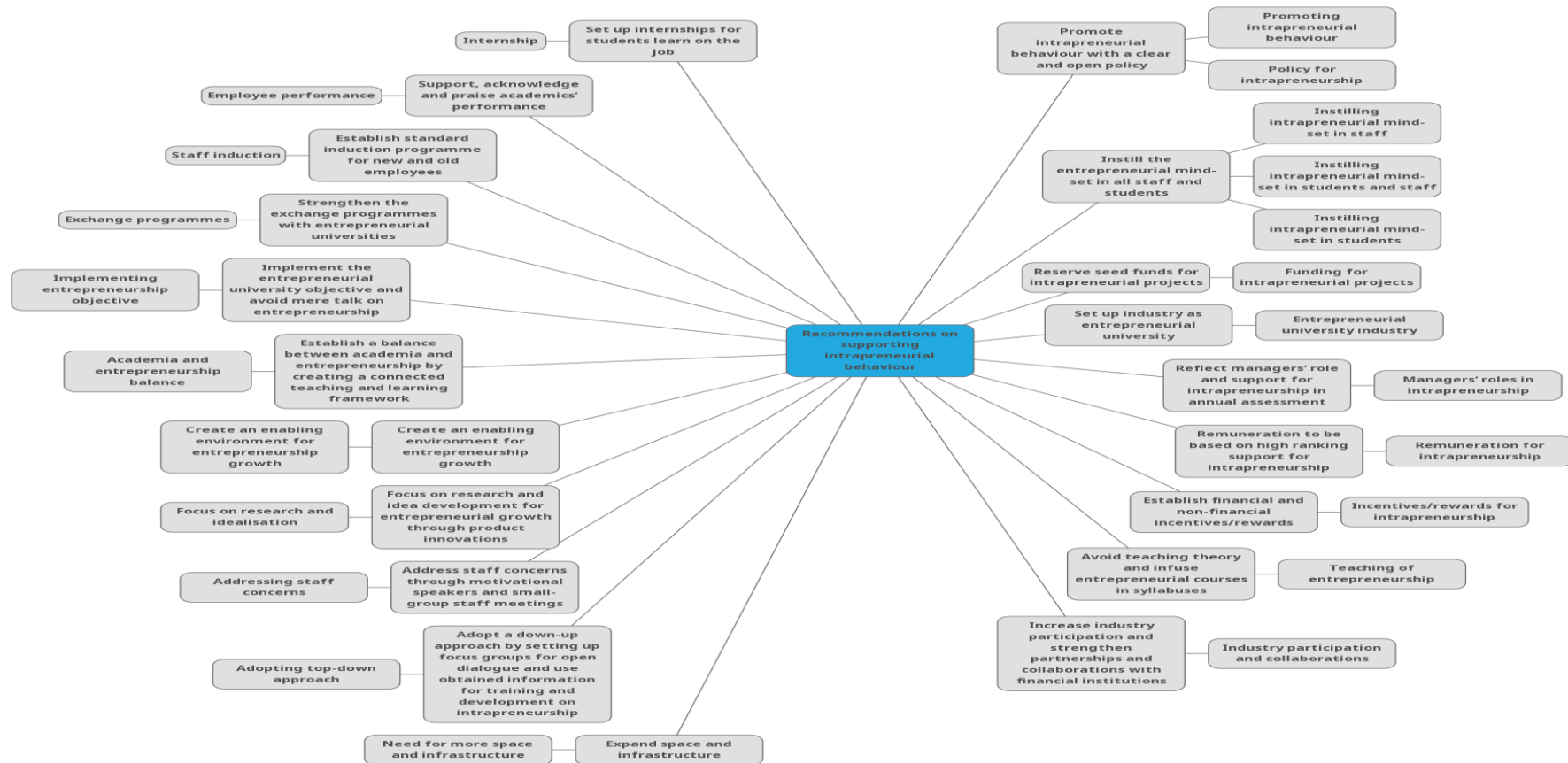
Figure 6.40: Photographic image of recommendations on supporting intrapreneurial behaviour – theme 9



Source: Compiled by the researcher

The photographic image was systematised as a final organisational tool into an operational network diagram, as shown in Figure 6.41 below.

Figure 6.41: Systemised network diagram for recommendations on supporting intrapreneurial behaviour



The sub-themes on the recommendations on supporting intrapreneurial behaviour are now provided as discussed by the research participants in their own words.

6.13.1.1 Promote intrapreneurial behaviour with a clear and open policy

The first recommendation to the key role-players within the university context is that they must promote intrapreneurial behaviour with a clear and open policy. A university's policies must influence its academic entrepreneurship activities. These policies can be on intellectual property, networking activities for university-business partnerships, creation of spin-offs and knowledge transfer. Each of these policies must clearly define the third-mission-related roles and responsibilities, which all internal stakeholders must cooperatively agree on to ensure the attainment of goals (Fernandez-Nogueira *et al.*, 2018).

In making this recommendation, Participant #2 said: *"I think they need to allow and promote intrapreneurial behaviour in any way. And it can be in the form of consultancy, it can be in the form of innovation, it can be, you know, in the form of even developing new business models and the likes."* He said: *"And it should be very clear and open that the university has a policy on promoting and supporting intrapreneurial behaviour among staff members in particular or among academics in particular."* Participant #3 added: *"The policy is there, but what it needs is just to be clear on academia as well, not just on students that we are channelling,"* while Participant #4 said: *"They should not shy away from saying out this is what we do in addition to teaching, research, we actually do ABC to support for, to engage in intrapreneurial culture."*

6.13.1.2 Instill the entrepreneurial mindset in all staff and students

The second recommendation generated on supporting intrapreneurial behaviour is that the key role players in the universities must continue to instil the entrepreneurial mindset in all staff and students. This can be done through more training and research in entrepreneurship, which is the offering of formal education through academic curricula or programmes and research in entrepreneurship (de la Torre *et*

al., 2018). This aims to refine the capabilities of individuals' behaviours, knowledge, skills and attitudes (de la Torre *et al.*, 2018). The goal is, therefore, to foster entrepreneurial mindsets through a unified culture across academia and among academic staff (Sá *et al.*, 2018).

To explain this recommendation, Participant #2 said: *"Yes, it is true we have very strong entrepreneurial mindsets which we are instilled in students, but staff members are still lacking."* Participant #5 added: *"I think we have covered a lot on entrepreneurship. All I can say, for me, is I would be happy to see the university embracing the idea of entrepreneurship in its daily activities, in its students and also in its staff."* Participant #10 reiterated: *"Then also there is a need for training and development so as to conscientise the people to likely support the intrapreneurial idea. There is also a need to make it mandatory for every student to do entrepreneurship as a module in their programme. It must be mandatory, not an elective, as it is at this juncture."*

6.13.1.3 Reserve seed funds for intrapreneurial projects

Another recommendation is that the key role players in the universities should reserve seed money for intrapreneurial projects. Participant #3 said: *"We should look at ways on how to reserve some funds for the projects that I talked about. And once the projects start to run, they can actually have that money returned back because the business will be making a profit. Yes some form of seed money into these business projects. And when the business starts to run, later on, it can be reimbursed or recouped, what they have put in there."* According to Markuerkiaga *et al.* (2014) and Fernandez-Nogueira *et al.* (2018), entrepreneurship funding is one of the internal environment factors that support entrepreneurship and is vital for the autonomy and development of universities. This funding is mainly for research and teaching in entrepreneurship or as seed money for the creation of entrepreneurship projects, companies and organisations (Bezanilla *et al.*, 2020).

6.13.1.4 Set up industry as entrepreneurial university

Participant #3 provided another recommendation on the setting up of an industry by the universities. He briefly and clearly stated: *“What it needs is just to be an entrepreneurial university where we have an industry, something like that.”* This can be made possible by applying the propositions of the Triple Helix model, which has assigned the university the key role in innovation, unlike its subordinate role in industrial society. This heightened role of the university is based on its significance to company formation, technology transfer and regional regeneration (Cai & Etzkowitz, 2020).

6.13.1.5 Reflect managers’ role and support for intrapreneurship in annual assessment

Another recommendation is to ensure that the managers’ roles and support for intrapreneurship are stated in their annual assessments. Participant #4 also briefly and clearly stated: *“Ok, well, I would recommend to them that the role they play in intrapreneurship should be made that they should highlight that more in their annual assessment.”* Including the measurement of intrapreneurial behaviour in the university’s appraisal or performance measurement system is an ideal solution to the challenge of recruiting and developing the academic staff’s confidence in their entrepreneurial skills (Miller *et al.*, 2018).

6.13.1.6 Remuneration to be based on high-ranking support for intrapreneurship

Participant #4 provided another recommendation on the remuneration for the academics to be determined by their high-ranking support for intrapreneurship. He again categorically stated: *“...in terms of remuneration, from the college point of view, I would say that they would be highly ranked for support.”* This view is shared by Bigliardi *et al.* (2020), who explain that people generally become entrepreneurs as a result of opportunities for increased income, and as such, academics may engage in the commercialisation initiatives to generate increased profits and personal payoffs that boost their comparably low remuneration (D’Este & Perkmann, 2011;

Novotny, 2014). Applying this recommendation will motivate academics to establish more academic spin-offs among other entrepreneurial outputs (Elia *et al.*, 2020). The remuneration also has the potential to ensure the success and survival of the entrepreneurial outputs, especially since collaboration with the industry is at the discretion of the academics. It must be understood that the academics' decision to be entrepreneurial is pivotal to the universities' economic development and third mission targets (Hayter, 2011; Bigliardi *et al.*, 2020).

6.13.1.7 Establish financial and non-financial incentives/rewards

It was also recommended that financial and non-financial incentives or rewards should be established. Participant #4 said: *"Incentives should be in different forms, perhaps awards or increments of salary and so forth."* Participant #6 added: *"And also, lastly, you know you could take your people out, just a little retreat would not hurt, sponsoring me for having worked hard and taking me out with my team as well."* Participant #9 explained: *"I think people just want more money. They want, you know, they want a salary raise, they want us to increase the amount, they want more money. People are motivated by money, to tell the truth."* Lastly, Participant #10 also explained: *"Come up with incentives, whether it is financial or non-financial, for mentorship opportunities. Like I said, there is a lot of work, and people feel that they do not have time to just come work for nothing. So, they can be rewarded, and this will also support or promote or support intrapreneurial behaviour."* Compagnucci and Spigarelli (2020) also emphasise the need for improved financial and non-financial incentives for staff in universities.

6.13.1.8 Avoid teaching theory and infuse entrepreneurial courses in syllabi

Participant #5 recommended that key role players ensure that there is no theory teaching and that entrepreneurial courses be infused in syllabi. She explained: *"First of all, I would say that gone are the days when we used to teach theory to students. It is high time that we infuse a lot of entrepreneurial courses within our syllabuses so that the day students can get out with a lot of skills."*

This refers to formalising the practical teaching of entrepreneurship. The formal teaching of entrepreneurship is seen as having the potential to develop capabilities in behaviours, attitudes, knowledge and skills specific to an individual within the research and academic curricula (Errasti *et al.*, 2018).

6.13.1.9 Set up internships for students learn on the job

Participant #5 also recommended the setting up of internships so that students can learn on the job. She explained: *“ You will find that there is a gap in skills in that in our university, we still are not doing internships where students should go on and learn on the job what is happening. And as I said before, normally entrepreneurial activities come from what you have seen somebody else do, and you want to do the same or a similar thing that the person has done.”* The setting up of internships comes as a result of a university's close interaction with the business sector (Etzkowitz, 2013a). This collaboration leads to connections with the business world for knowledge sharing and for students to learn experientially (Fernandez-Nogueira *et al.*, 2018).

6.13.1.10 Support, acknowledge and praise academics' performance

It was further recommended that the key role players in the universities should support, acknowledge and praise academics for their intrapreneurial performance. Participant #6 specifically elaborated: *“I would call for more advocacy on recognition of what employees are doing, yes, on the performance of employees. This one, I believe, speaks to performance from all works, be it the marketing, the vision, be it the academic division right, be it admission. I think all these are coined around one concept: support, support, support and support. So, supporting someone gives birth to a lot of concepts. You talk of support in terms of showing the person that you appreciate what they are doing, writing to them to say indeed you are doing a great job, applauding them maybe their juniors being there, informing them that you know your supervisor is doing a wonderful job, something like that.”*

This recommendation brings out the value of extrinsic reward-related motivations whose provision is controlled by managers who determine their size and the

possibility of them being granted (Singh, 2016:199). The implication here is that intrapreneurs and their motivation to behave entrepreneurially are influenced by how they are treated by their managers (Morianio *et al.*, 2014:103).

6.13.1.11 Establish a standard induction programme for new and old employees

Participant #7 went on to recommend that the key role players in the universities should establish standard induction programmes for new and old employees to familiarise them as well as keep them reminded of the university's entrepreneurship culture or orientation. Participant #7 explained: *"OK, the first thing that I will do to recommend to the key role players is that we need to be elaborate about our culture to those who are coming to join our institution or to those who are already existing in our institution. Let us have a standard induction programme for everybody who comes into the University then, we can be able to encourage everybody's intrapreneurial behaviour in our institution. The biggest supporting factor of supporting intrapreneurial behaviour is that let us be clear about our culture to those joining us and to those already existing in the institution."* Organisational culture is said to mediate intrapreneurship's influence on business performance. This means that having a standard induction programme for all staff will ensure that the universities establish a supportive organisational culture for intrapreneurship to influence university performance (Otache & Mahmood, 2015:525).

6.13.1.12 Strengthen exchange programmes

Participant #10 recommended that the key role players in the universities should strengthen the exchange programmes for their staff and students with entrepreneurial universities to learn how to support intrapreneurial behaviour. He said: *"And also to strengthen the exchange programmes, especially with other universities that manage to promote intrapreneurial behaviour. That way, the university can learn other things that it can, you know, practice to support intrapreneurial behaviour."* This recommendation calls for the universities to engage in internalisation by undertaking a number of coordinated activities that include the establishment of joint degrees with universities in other countries and the execution

of international research projects (Errasti *et al.*, 2018). This will bring about change and development through diverse thinking and new insights that will alter traditional methods of teaching as well as how the entrepreneurial university concept is being managed (Taucean *et al.*, 2018).

6.13.1.13 Implement the entrepreneurial university objective

Participant #10 recommended that the key role players implement the entrepreneurial university objective and not merely talk about entrepreneurship without taking any action. He briefly and clearly said: *“Number one, like I said, is implementation. It is not just a talk, but let us put it into practice. So, they must start from somewhere to realise that particular objective.”* Errasti *et al.* (2018) and Taucean *et al.* (2018) have also stated the importance of strategic plans to strengthen the entrepreneurial stance and that this must not just be a statement.

6.13.1.14 Establish a balance between academia and entrepreneurship

Participant #8 recommended that the key role players in the universities should balance academia and entrepreneurship by creating a connected teaching-learning framework. Tertiary education institutions are hubs for research, innovation and education (Hoskinson & Kuratko, 2014:29). They must, therefore, continuously strive to create a balance between academia and entrepreneurship in their organisational perspective and in the services they offer (Miller *et al.*, 2018).

In providing this recommendation, Participant #8 elaborated: *“I think for me it is supporting intrapreneurial behaviour if you really really want to achieve that one should be able to get to a balance between academics and entrepreneurship, that would be at least 50-50 or even at most more on the entrepreneurial side. For me, that would be the very first thing to do to say, you know, we need entrepreneurs, we are going to create an entrepreneurship programme, and there will be more entrepreneurship, you know, than academics such that even the mode of teaching, the mode of assessment will involve more of the entrepreneurial aspect than, you know, the academic aspect. And this would actually, therefore, mean we provide a*

link, you know, in a more of a connected framework, you know, teaching and learning framework.”

6.13.1.15 Create an enabling environment for entrepreneurship growth

Participant #8 also recommended that the key role players should create an enabling environment for the growth of entrepreneurship in the universities. This is the internal environment, which, according to Markuerkiaga *et al.* (2014), comprises internal factors (organisational structure and support) and strategic factors (mission, vision, and reward systems) which enhance entrepreneurial activities within an organisation. These factors play a key role in influencing a university's disposition toward actualising the entrepreneurial university concept and fostering the growth of an entrepreneurial culture (de Moraes *et al.*, 2020). Participant #8 categorically said: *“You know, steps be made in order to create that environment for entrepreneurship, you know, growth”*. As such, the key role players need to provide ample support for the internal environment factors, which are actually within their control.

6.13.1.16. Focus on research and idea development

Participant #8 went on to further recommend that the key role players must ensure that they place focus on research and idea development for product innovations that would lead to the growth of entrepreneurship in the universities. Participant #8 explained: *“... would really be focusing on research, idea growth and be able to therefore pass such to the more entrepreneurial aspect of it. We would then be able to take this further towards idealisation. But it is not only about that, the entrepreneurial aspect of it would also be focusing on entrepreneurship growth within the context of existing, you know, products as well as, you know, innovations. I think for me that would be one key area of supporting.* As the universities implement the entrepreneurial university concept, they must transform into global, technological, innovative and competitive entities (Fernandez-Nogueira *et al.*, 2018). They can achieve this through the production, conference and commercial exploitation of practical research findings locally, nationally and internationally (Goethner & Wyrwich, 2019).

6.13.1.17 Address staff concerns

Participant #9 provided yet another recommendation that key role players in the universities should address staff concerns using motivational speakers and small-group staff meetings to engage everybody. She said: *“We can bring in motivational speakers to come and speak with them. I think we can also hold a lot of staff meetings and maybe in smaller groups so that we let, we come to the people not to tell them but to ask them what their concerns are and how things can be done to address them.”* This approach is also provided by Bysted and Jespersen (2014), who explain that stimulating employees’ entrepreneurial work behaviour is a complicated process that demands an internal climate that encourages generating and realising ideas through participative and decentralisation mechanisms.

6.13.1.18 Adopt a down-up approach

Participant #9 further recommended that the key role players in the universities should adopt a down-up approach for intrapreneurial ideas and initiatives by setting up focus groups. She said: *“We run from the grassroots, not from the top-down. Let it trickle from down up so you hear the people and understand what they are going through. Maybe that will be the focus of the training that we need.”* This will allow for open dialogue and the information obtained can be used for training and developing staff on intrapreneurship. The down/bottom-up approach allows for open communication channels and procedures that enable the evaluation, selection, and implementation of intrapreneurial ideas (Castrogiovanni *et al.*, 2011). According to Zhu (2014), intrapreneurs develop a higher level of creativity when encouraged to contribute a higher number of ideas and a higher level of proactivity when many of their ideas are accepted. This builds job satisfaction in employees of all personality traits, which inherently enables intrapreneurship in the organisation (Antoncic & Antoncic, 2011; Giannikis & Nikandrou, 2013; Mustafa *et al.*, 2016).

6.13.1.19 Expand space and infrastructure

Participant #9 recommended that the key role players in the universities must look into expanding the space and infrastructure for intrapreneurial activities. She

explained: *“I think we also, you know, we expand our infrastructure from where we can create space. We open up workstations and workshops where we put machinery so that kids from Computing can work with their lecturers. Those from SBL can do that too, work in a space that is theirs, we do not have enough space. For what I envisage as an Entrepreneurial university, we do not have that space. That is what we need.”* Intrapreneurial activities are resource-intensive, and their success will depend on the availability and commitment of resources (Hughes et al., 2019).

6.13.1.20 Increase industry participation and strengthen partnerships and collaborations

This is the last recommendation on the support for intrapreneurial behaviour. It was recommended that the key role players in the universities should increase industry participation and strengthen partnerships and collaborations with financial institutions to obtain enough funding for intrapreneurship. Participant #9 said: *“We also need to involve a lot, the industry must play a major role in this. We must see industry actively in this university, teaching the students what to do because they always complain that colleges or universities do not, you know, churn out, you know, appropriate workforce for them. What is their input? We need their input. Those are the things that I think can be done.”* Participant #10 said: *“Also, they need to strengthen partnerships and collaborations, especially with financial institutions, to get enough funding to support the idea.”*

This reflects how entrepreneurial universities have been actively engaging the business sector and stakeholders, thereby generating social and economic benefits for the business sector and for themselves (Etzkowitz, 2012). Therefore, universities can generate imperative funds, partnerships and facilities from these diverse sources (Mariani et al., 2018).

In summary, the participants generated a wide range of recommendations for the key role players in the universities to consider when supporting intrapreneurial behaviour. Each of the 20 recommendations will help create a conducive internal environment or a supportive organisational culture through which intrapreneurship can influence university business performance.

6.13.2 Recommendations on dealing with challenges in supporting intrapreneurial behaviour.

Table 6.21 on the next page presents an overview and quotations directly from the participants for the recommendations on dealing with challenges in supporting intrapreneurial behaviour.

Table 6.21: Recommendations on dealing with challenges in supporting intrapreneurial behaviour

Category	Sub-category	Codes and Quotations from participants
Recommendations on dealing with challenges in supporting intrapreneurial behaviour	Improve access to resources and work	Access to resources and better work: Participant #1: <i>“Yes, some of the challenges maybe access to finance, facilities, infrastructure, sometimes connectivity, you know the like. Yes, it is just to look at it the other way, to say to improve connectivity, access to resources and all the like and work to improve.”</i>
	Benchmark with entrepreneurial universities and adopt what they have done	Bench-marking: Participant #2: <i>“I think the university has to benchmark with those universities that are supporting and promoting an intrapreneurial behaviour and see how they are doing it, and we may not even need to reinvent the wheel. We can take from what others have already done.”</i>
	Redefine and expand the understanding of academic entrepreneurship	Redefine entrepreneurship: Participant #2: <i>“...I think we need to redefine and expand our definition or understanding of entrepreneurship from an academic point of view...”</i>
	Promote and support intrapreneurial behaviour among academics	Promote intrapreneurial behaviour: Participant #2: <i>“...try to promote and support such among academic staff members.”</i>
	Work with various stakeholders to come up with solutions	Solutions through stakeholder partnerships: Participant #3: <i>“Ok, to actually solve those challenges and work together with stakeholders like lecturers, and top management and probably students as well and come up with some solutions that close those gaps. The private sector and the Not-for-Profit institutions can also be involved.”</i> Participant #5: <i>“So, if the tripartite students, staff and the community or the business community can come together, surely, we can have a platform where we can see people growing our students and grooming them to entrepreneurship, with the help of CEDA and other organisations that are there in Botswana, that can happen, and yes, even improving the economy at large.”</i>

	Foster relationships with organisations that support intrapreneurship to fund start-ups in universities	Partnerships with support organisations: Participant #10: <i>"There are quite a number of institutions available, willing to support the idea of intrapreneurship. It is a matter of trying to forge the relationships because those kinds of organisations are there ... the institutions to get funding for promoting start-ups."</i>
	Lobby the government for more government ministries to deal with academic entrepreneurship	Lobbying the government: Participant #3: <i>"There is also a need to lobby. Institutions have to lobby with the government. As I said, the government currently does not have enough ministries or departments to deal with this aspect of education."</i>
	Perceive and address challenges as risks	Challenges as risks: Participant #4: <i>"I would probably interpret these challenges as risks for the college itself. I would say that if you have challenges and they are not addressed, then at the end of the day, the college risks losing to competitors."</i>
	Come up with clear strategy for dealing with intrapreneurship issues	Clear intrapreneurship strategy: Participant #5: <i>"I think the university should have a clear strategy to say how we are going to deal with intrapreneurship issues for both staff and students."</i>
	Identify alternative means of raising funds	Funding sources: Participant #10: <i>"And then they need to find alternative ways of raising funds, especially attracting grants that drive the idea of the intrapreneurial spirit. That is another way to try and close the gap of lack of resources, especially in universities."</i>
	Encourage practical entrepreneurial exercises in which lecturers work with students	Practical entrepreneurial exercises: Participant #5: <i>"How are we going to deliberately help these people because you must start with a lecturer for them to be able to help a student? Sometimes, ideas are brainstormed in class, and one brilliant student will take that idea and go and put it to fruition if you do that. So, dealing with challenges is just to say that the university should ensure that we have as many practical exercises on entrepreneurship as possible. Not only internship, students should come up with projects that are going to be judged by a panel of people within the university, and it becomes sort of a competition, and those who get that can be helped or more sponsorship. They can be helped to get more sponsorship or a company to even go ahead with whatever idea they may have had."</i>

	Share information on challenges faced with academics so that they contribute to finding solutions	Communication and involvement: Participant #3: <i>“Ok to actually solve those challenges and work together with stakeholders like lecturers, and top management and probably students as well and come up with some solutions that close those gaps.”</i> Participant #6: <i>“... people need to be informed if there are any challenges towards mitigating what they are supposed to be ...We should be put in the loop as to what could be transpiring.”</i>
	Reward or give some form of motivation to the academics	Rewards for motivation: Participant #6: <i>“Maybe rewarded for or maybe just motivation, if they need to be motivated...”</i>
	Compensate the use of personal resources and provide financial resources to academics	Compensation: Participant #6: <i>“If they need to be compensated for having used their vehicles to go and carry out research, or if they have used their resources to go and visit stakeholders...”</i> <i>“Why can I not get P100 to go and do those kind of university activities, as an example.”</i>
	Establish a wellness or welfare programme for staff	Staff wellness programme: Participant #7: <i>“The biggest challenge that I spoke about on the wellness of the employees, so I think it is important to have a programme that supports intrapreneurial behaviour in the University. So, in this programme, you just ensure that the welfare of the employees is taken care of, so that they can be able to continue supporting the vision of the institution.”</i>
	Create a reflective entrepreneurship environment and relate the learning environment to entrepreneurship	Reflective entrepreneurship environment: Participant #8: <i>“I think once you deliberately decide to address, you know, to create an entrepreneurship environment, you are talking that environment, therefore the curricular should talk to that, the resources as in human resource infrastructure and the funding should actually talk to that. And once one has actually recognised the value of these and they actually, you know, start to address them, you will not address or create the behaviour as in individuals but you will also be creating an organisational behaviour by way of addressing the critical factors towards, you know , entrepreneurship... it would be saying to core other learning areas, you know, we can relate what we are doing with to what the other side is doing.”</i>

	Collaborate with the new Ministry of Entrepreneurship to develop a genuine authentic entrepreneurship curriculum and innovative teaching methods	Collaborate with new Ministry of Entrepreneurship: Participant #9: <i>“Maybe see how the Entrepreneurship new Ministry can work with tertiary institutions to develop a genuine authentic entrepreneurship curriculum and, you know, innovative teaching methods and a lot of things, that is what I think. The Ministry should not just stand alone there They should work in-sync with universities because for entrepreneurship to come out, there should taught and there is a need for them to input into the curriculum and ensure kids are given proper skills and competencies.”</i>
	Train all staff in entrepreneurship and in financial management	Staff training: Participant #9: <i>“Everyone needs to be trained about entrepreneurship. People get excited when they handle money. And people must be taught finance management because that is what grows entrepreneurship.”</i>
	Establish more space for intrapreneurial initiatives	Need for more space: Participant #10: <i>“I mentioned that the most critical is insufficient space or limited space, so the gap is that there is a need for more space. So, the university itself should invest in areas where there is space so that we will give a platform to promote the intrapreneurial initiatives.”</i>
	Leaders to become active, practical and honourable	Type of leadership: Participant #10: <i>“The type of leadership is also very important. Leaders must be active, must be practical, and not just talk in order to promote intrapreneurial behaviour. Leaders must be honourable to manage the system.”</i>

Source: Compiled by the researcher

Figure 6.42 on the following page presents the matrix indicating the participants who provided a specific code on this part of the theme.

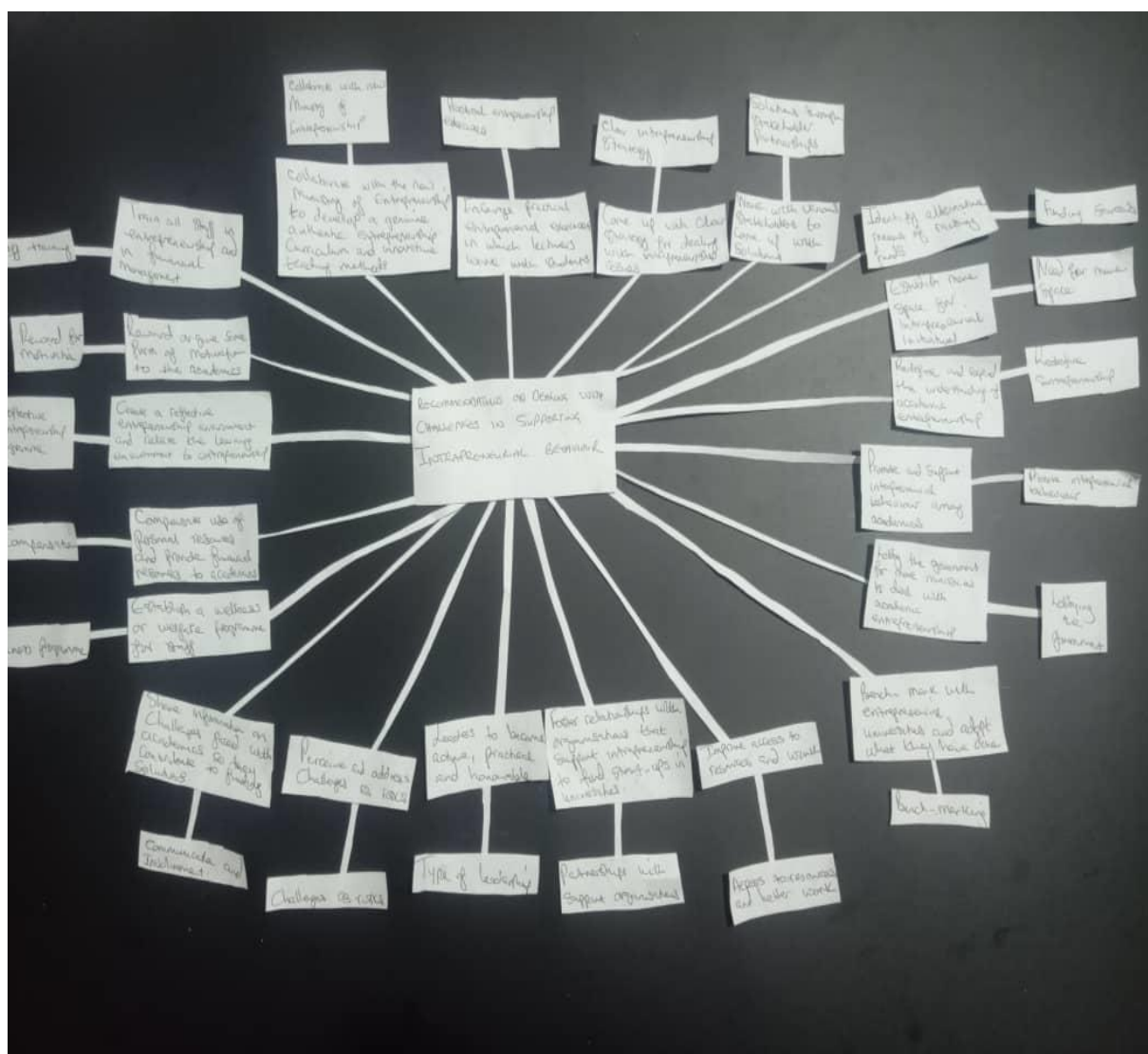
Figure 6.42: Matrix for dealing with challenges in supporting intrapreneurial behaviour

Theme 9: Recommendations on dealing with challenges in supporting intrapreneurial behaviour		Participants									
Sub-themes	Codes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Improve access to resources and work	Access to resources and better work	X									
Bench-mark with entrepreneurial universities and adopt what they have done	Bench-marking		X								
Redefine and expand the understanding of academic entrepreneurship	Redefine entrepreneurship		X								
Promote and support intrapreneurial behaviour among academics	Promote intrapreneurial behaviour		X								
Work with various stakeholders to come up with solutions	Solutions through stakeholder partnerships			X		X					
Foster relationships with organisations that support intrapreneurship to fund start-ups in universities	Partnerships with support organisations										X
Lobby the government for more ministries to deal with academic entrepreneurship	Lobbying the government			X							
Perceive and address challenges as risks	Challenges as risks				X						
Come up with clear strategy for dealing with intrapreneurship issues	Clear intrapreneurship strategy					X					
Identify alternative means of raising funds	Funding sources										X
Encourage practical entrepreneurial exercises in which lecturers work with students	Practical entrepreneurship exercises					X					
Share information on challenges faced with academics so that they contribute to finding solutions	Communication and involvement			X			X				
Reward or give some form of motivation to the academics	Reward for motivation						X				
Compensate use of personal resources and provide financial resources to academics	Compensation						X				
Establish a wellness or welfare programme for staff	Staff wellness programme							X			
Create a reflective entrepreneurship environment and relate the learning environment to entrepreneurship	Reflective entrepreneurship programme								X		
Collaborate with the new Ministry of Entrepreneurship to develop a genuine authentic entrepreneurship curriculum and innovative teaching methods	Collaborate with new Ministry of Entrepreneurship									X	
Train all staff in entrepreneurship and in financial management	Staff training									X	
Establish more space for intrapreneurial initiatives	Need for more space										X
Leaders to become active, practical and honourable	Type of leadership										X

Source: Compiled by the researcher

The analysis of this second part of theme nine generated 20 critical sub-themes that present the interview participants' recommendations on dealing with challenges in supporting intrapreneurial behaviour in their respective universities. Figure 6.43 below presents the network diagram of the sub-themes and code words for this part of theme nine as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

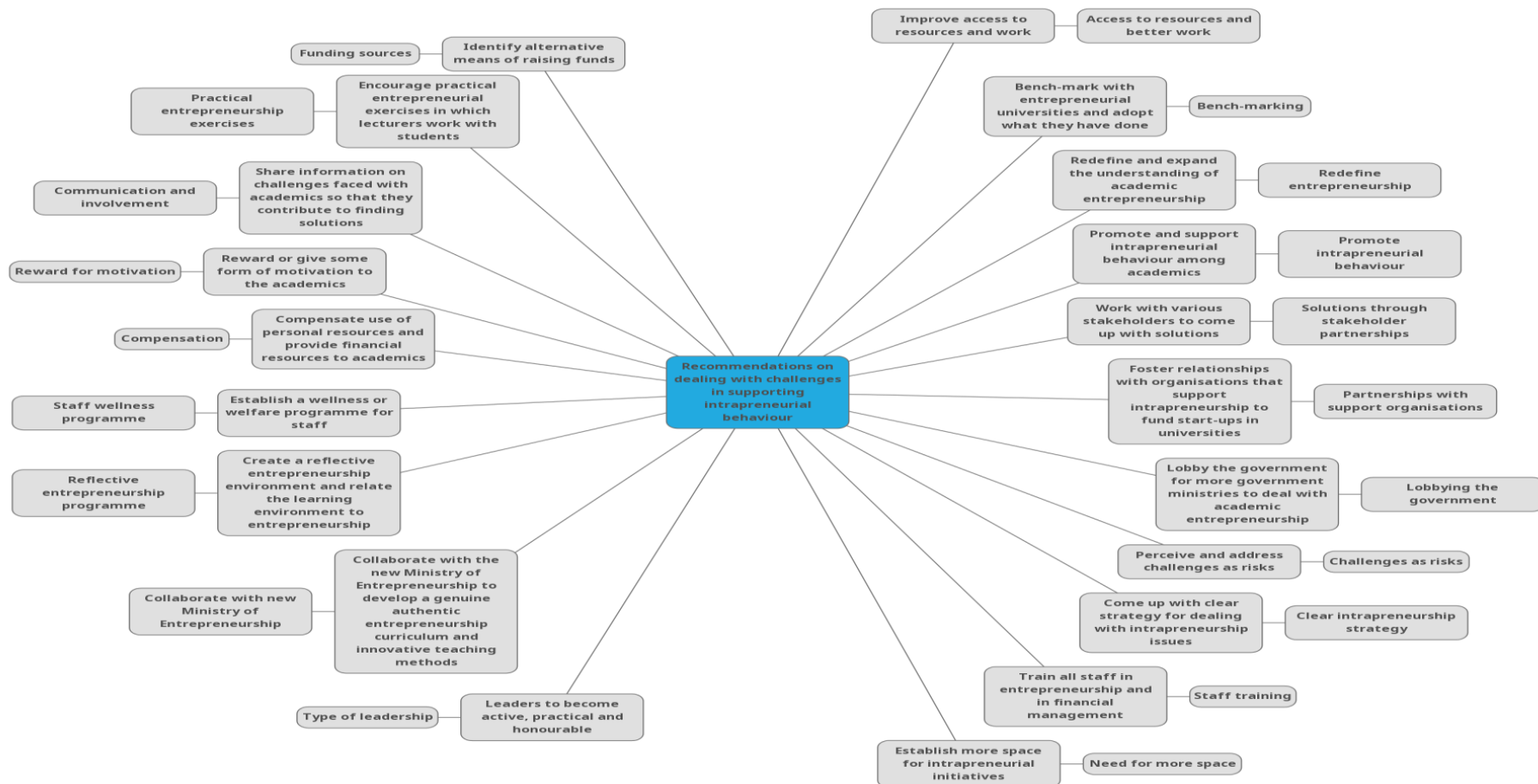
Figure 6.43: Photographic image of recommendations on dealing with the challenges in supporting intrapreneurial behaviour – theme 9



Source: Compiled by the researcher

The photographic image was systematised into an operational network diagram as a final organisational tool, as shown in Figure 6.44 below.

Figure 6.44: Systemised network diagram for recommendations on dealing with challenges in supporting intrapreneurial behaviour



The sub-themes on the recommendations on dealing with challenges in supporting intrapreneurial behaviour are now provided as discussed by the research participants in their own words.

6.13.2.1 Improve access to resources and work

Participant #1 provided the first recommendation that the key role players in the universities need to improve access to resources and to the intrapreneurial work done to deal with the challenges in supporting intrapreneurial behaviour. He said: *“Yes, some of the challenges maybe access to finance, facilities, infrastructure, sometimes connectivity, you know the like. Yes, it is just to look at it the other way, to say to improve connectivity, access to resources and all the like and work to improve.”* There is a need for a high availability of the right resources, which will result in higher levels of intrapreneurial behaviour and initiatives (Rigtering & Weitzel, 2013:337-360).

6.13.2.2 Bench-mark with entrepreneurial universities

Participant #2 recommended that the key role players can deal with the challenges in supporting intrapreneurial behaviour by conducting bench-marking exercises with entrepreneurial universities and adopting what they have done. He said: *“I think the university has to benchmark with those universities that are supporting and promoting an intrapreneurial behaviour and see how they are doing it, and we may not even need to reinvent the wheel. We can take from what others have already done.”* Through benchmarking, the universities will be able to collaborate with other entrepreneurial institutions through formal and informal networks for the sharing of research, knowledge and ideas (Errasti *et al.*, 2018; Bezanilla *et al.*, 2020). The organisational learning that will come out of the collaborations will enhance the universities' entrepreneurial orientation.

6.13.2.3 Redefine and expand the understanding of academic entrepreneurship

Participant #2 further recommended that the challenges in supporting intrapreneurial behaviour can be dealt with by redefining and expanding the understanding of

academic entrepreneurship by the key role players and academics. He said: *“I think we need to redefine and expand our definition or understanding of entrepreneurship from an academic point of view.”* This will lead to transformations in the universities through the extension of their research, teaching and knowledge dissemination portfolio to include innovation networks through entrepreneurship ((Dalmarco et al., 2018; Passaro & Thomas, 2018; Schillo, 2018).

6.13.2.4 Promote and support intrapreneurial behaviour among academics

Participant #2 also recommended that key role players can deal with the challenges in supporting intrapreneurial behaviour by promoting and supporting intrapreneurial behaviour among academics. He said: *“Try to promote and support such among academic staff members.”* This is critical because staff are the main resource in the university’s strategy implementation, offering entrepreneurship education, and establishing business start-ups and all other entrepreneurial initiatives (OECD, 2012).

6.13.2.5 Work with various stakeholders to come up with solutions

It was recommended that working with various stakeholders can help develop solutions to the challenges faced in supporting intrapreneurial behaviour in the universities. Collaborative investment initiatives between academic institutions and various stakeholders are vital in commercialising academic research output (Budyldina, 2018). Participant #3 explained: *“Ok, to actually solve those challenges and work together with stakeholders like lecturers, and top management and probably students as well and come up with some solutions that close those gaps. The private sector and the Not-for-Profit institutions can also be involved.”* Participant #5 added: *“So, if the tripartite students, staff and the community or the business community can come together, surely, we can have a platform where we can see people growing our students and grooming them to entrepreneurship, with the help of CEDA and other organisations that are there in Botswana, that can happen, and yes, even improving the economy at large.”*

6.13.2.6 Foster relationships with organisations that support intrapreneurship to fund start-ups in universities

Participant #10 recommended that key role players in the universities can deal with challenges in supporting intrapreneurial behaviour by fostering relationships with organisations that support intrapreneurship, as these can provide funding for start-ups in the universities. He said: *“There are quite a number of institutions available willing to support the idea of intrapreneurship. It is a matter of trying to forge the relationships because those kinds of organisations are there ... the institutions to get funding for promoting start-ups.”* The collaboration between the university and the industry stakeholders is aimed at creating a social environment that enables access to technologies, the removal of border knowledge, the sharing of knowledge and ideas, the increase of financial resources and the use of the universities’ innovative potential (Lin, 2017).

6.13.2.7 Lobby the government

Participant #3 recommended that the key role players deal with the challenges in supporting intrapreneurial behaviour in the universities by lobbying the government to assign more government ministries to deal with academic entrepreneurship. He said: *“There is also a need to lobby. Institutions have to lobby with the government. As I said, the government currently does not have enough ministries or departments to deal with this aspect of education.”* The government is supposed to facilitate and participate in entrepreneurial activities through legislation, financing as well as the provision of public infrastructures (Bezanilla et al., 2020). The government is also one of the three helices in the Triple Helix model (Etzkowitz & Dzisah, 2008), making its role in academic entrepreneurship crucial.

6.13.2.8 Perceive and address challenges as risks

Participant #4 recommended that the key role players perceive and address the challenges faced as risks that would lead to loss if they do not foster the academics’ intrapreneurial behaviour to improve university performance. He explained: *“I would probably interpret these challenges as risks for the college itself. I would say that if*

you have challenges and they are not addressed, then at the end of the day, the college risks losing to competitors.” The risk emanates from the fact that the incorporation of the third mission represents major challenges for university management due to the need to strike a balance between teaching, research, and the marketing of its results (Etkowitz, 2016b; Tatarski et al., 2020). And so intrapreneurship tends to be resisted among academics. Further, the majority of academic professionals are convinced that if they adopted entrepreneurial initiatives, their more fundamental university qualities, such as critical inquiry, intellectual integrity and commitment to learning and understanding, would be lost (Rizk & Azzazy, 2016:98). However, this has a grave impact on the universities’ competitiveness. As such, there is a need for appropriate mitigations for these challenges.

6.13.2.9 Identify a clear strategy for dealing with intrapreneurship issues

Participant #5 recommended that the key role players develop a clear strategy for dealing with intrapreneurship issues to deal with the challenges being faced. She briefly and clearly stated: *“I think the university should have a clear strategy to say how are we going to deal with intrapreneurship issues for both staff and students.”* As Teece (2018) explains, entrepreneurial activities must be entrenched in clear strategic plans that enable institutional introspection to foster an entrepreneurial culture and productive processes for identifying problems and decision-making. Therefore, universities should have strategies with specific entrepreneurship objectives that reflect performance indicators.

6.13.2.10 Identify alternative means of raising funds

Another recommendation was to identify alternative means of raising funds to address the challenges in supporting intrapreneurial behaviour. Participant #10 said: *“And then they need to find alternative ways of raising funds, especially attracting grants that drive the idea of the intrapreneurial spirit. That is another way to try and close the gap of lack of resources, especially in universities.”* This recommendation can draw support from the work of Clark (1998a), who further conceptualised the entrepreneurial university concept to build on Etzkowitz’s vision of the qualitative

nature of universities. Clark came up with five different components that indicate how universities transform into an entrepreneurial nature. One of these components is a diversified funding base established by seeking various sources of income in the form of additional services and donations (Dalmarco *et al.*, 2018; Volkodavova *et al.*, 2019).

6.13.2.11 Encourage practical entrepreneurial exercises

Yet another recommendation is for the key role players in the universities to deal with the challenges in supporting intrapreneurial behaviour by encouraging practical entrepreneurial exercises in which the academics work with the students. Participant #5 elaborately explained his recommendation to this effect: *“How are we going to deliberately help these people because you must start with a lecturer for them to be able to help a student? Sometimes, ideas are brainstormed in class, and one brilliant student will take that idea and go and put it to fruition if you do that. So, dealing with challenges is just to say that the university should ensure that we have as many practical exercises on entrepreneurship as possible.”* Literature shows that a growing number of universities have adopted the entrepreneurial university perspective by establishing initiatives to foster ecosystems that promote entrepreneurial activities among students and academics (Galán-Muros *et al.*, 2017; Guerrero *et al.*, 2016).

6.13.2.12 Share information on challenges faced by academics

As further recommended, the key role players can deal with the challenges faced in supporting intrapreneurial behaviour by sharing information on these challenges with the academics for them to contribute to the finding of solutions. Participant #3 said: *“Ok, to actually solve those challenges and work together with stakeholders like lecturers, and top management and probably students as well and come up with some solutions that close those gaps.”* Participant #6 added: *“People need to be informed if there are any challenges towards mitigating what they are supposed to be. We should be put in the loop as to what could be transpiring.”* Because implementing the third mission is burdensome for the university and its employees (Kalar & Antoncic, 2015:36-37), university top management needs to consultatively communicate with staff on these challenges to generate workable solutions. The

university management must also be committed to implementing the entrepreneurial strategy by ensuring that all staff clearly understand and share it throughout the institution, as an agreement is vital for advancement (Stolze & Sailer, 2021). This commitment must be emphasised in internal communication and by adopting a structure that places someone responsible for the entrepreneurial agenda (Stolze & Sailer, 2020; Stolze & Sailer, 2021). This is necessary for fostering strong commitment and facilitating the revision of strategies to constantly develop updates (OECD, 2012).

6.13.2.13 Reward or give some form of motivation to the academics

Participant #6 recommended that the key role players should deal with the challenges in supporting intrapreneurial behaviour by giving rewards or some form of motivation to the academics. He stated: *"Maybe rewarded for or maybe just motivation if they need to be motivated."* Top management must fully appreciate the fact that rewards are some of the most influential factors that motivate employees to develop their entrepreneurial competencies, thereby contributing to organisational performance (Turner & Pennington, 2015). As proposed by the expectancy theory, employees are highly motivated to perform well following the set-up of a reward system (Baskaran *et al.*, 2018).

6.13.2.14 Compensate and provide financial resources to academics

Participant #6 further recommended that the key role players should deal with the challenges in supporting intrapreneurial behaviour by compensating the academics for the use of their personal resources as well as by providing them with financial resources. He said: *"If they need to be compensated for having used their vehicles to go and carry out research, or if they have used their resources to go and visit stakeholders. "Why can I not get P100 to go and do that kind of university activity, as an example."* This recommendation emphasises the basis of the importance of tangible resources such as financial resources and their role in the linkage between intrapreneurial behaviour and an organisation's performance (Neessen *et al.*, 2018; Engelen *et al.*, 2014).

6.13.2.15 Establish a wellness or welfare programme for staff

Participant #7 recommended that the key role players can deal with the challenges in supporting intrapreneurial behaviour by establishing a wellness or welfare programme for their staff. He said: *“The biggest challenge that I spoke about on the wellness of the employees, so I think it is important to have a programme that supports intrapreneurial behaviour at the University. So, in this programme, you must ensure that the welfare of the employees is taken care of so that they can continue supporting the institution’s vision.”* This recommendation addresses the situation in which universities find themselves.

The universities are strategically overloaded as they endeavour to integrate the many missions that they have to embark on, such as excellent research, quality education and the facilitation of knowledge transfer (Benneworth *et al.*, 2017). The nurturing of these intrapreneurial initiatives exerts pressure on structures, processes and the academics themselves (Aparicio, 2017; Kalar & Antoncic, 2015). Staff wellness programmes become imperative to relieve the burn-out resulting from the heavy workload.

6.13.2.16 Create a reflective entrepreneurship environment

Participant #8 recommended the creation of a reflective entrepreneurship environment and relating the learning environment to entrepreneurship as a means for the key role players to deal with the challenges in supporting intrapreneurial behaviour. He explained: *“I think once you deliberately decide to address, you know, to create an entrepreneurship environment, you are talking that environment; therefore, the curricular should talk to that, the resources as in human resource infrastructure and the funding should actually talk to that. And once one has actually recognised the value of these and they actually, you know, start to address them, you will not address or create the behaviour as in individuals, but you will also be creating an organisational behaviour by way of addressing the critical factors towards, you know, entrepreneurship. It would be saying to core other learning areas, you know, we can relate what we are doing with to what the other side is doing.”*

This is according to Díaz-Iso *et al.* (2019), who explain that universities can tap into the potential of reflective learning in the curriculum, such as extra-curricular activities. Reflective learning enables students and staff to develop self-reflective skills based on their daily learning to become conscious of their actions and learn from and improve them in their entrepreneurial initiatives (Moussa-Inaty, 2015).

6.13.2.17 Collaborate with the new Ministry of Entrepreneurship

Participant #9 recommended that the challenges in supporting intrapreneurial behaviour can be dealt with by the universities collaborating with the new Ministry of Entrepreneurship so as to develop a genuine, authentic entrepreneurship curriculum and innovative teaching methods. She said: *“Maybe see how the Entrepreneurship new Ministry can work with tertiary institutions to develop a genuine, authentic entrepreneurship curriculum and, you know, innovative teaching methods and a lot of things that is what I think. The Ministry should not just stand alone there. They should work in sync with universities because for entrepreneurship to come out, they should be taught, and they need to input into the curriculum and ensure kids are given proper skills and competencies.”* This recommendation can also be linked to the Triple Helix model, which presents various types and levels of synergy-based interactions between the university and the government, being the key actors in innovation together with the industry (Abd Razak & White, 2015; Cai & Etzkowitz, 2020). This model supports previous approaches on this as all admit the significance of the university, government and industry interactions, which are deemed vital for promoting innovation and entrepreneurship (Cai & Etzkowitz, 2020).

6.13.2.18 Train all staff in entrepreneurship and in financial management

Participant #9 further recommended that the key role players train all staff in entrepreneurship and financial management to deal with the challenges in supporting intrapreneurial behaviour. She said: *“Everyone needs to be trained about entrepreneurship. People get excited when they handle money. And people must be taught finance management because that is what grows entrepreneurship.”* This recommendation draws on the knowledge that staff are the main resource in the university’s implementation of strategy, the offering of entrepreneurship education,

the establishment of business start-ups and all other entrepreneurial initiatives (OECD, 2012:1-54). As such, universities must have a formal policy for developing their academic staff's entrepreneurial capabilities (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019; Šmídová *et al.*, 2017).

6.13.2.19 Establish more space for intrapreneurial initiatives

Participant #10 recommended that the key role players need to establish more space for intrapreneurial initiatives as a critical means to deal with the challenges faced in supporting intrapreneurial behaviour. He said: *"I mentioned that the most critical is the insufficient space or limited space, so the gap is that there is a need for more space. So, the university itself should invest in areas where there is space so that we will give a platform to promote the intrapreneurial initiatives."* Given entrepreneurship's importance to economic development, the universities must commit significant levels of effort to develop extra-curricular activities to inspire entrepreneurial intentions in students (Thomas *et al.*, 2014). The training in the extra-curricular activities includes workshops on building awareness of entrepreneurship, coaching for start-ups, the exploration and identification of opportunities, the execution of innovative projects, the production of business plans and the launching of spin-offs in the form of incubation initiatives, technology transfer and venture capital funds (Errasti *et al.*, 2018). All these activities require adequate amounts of space.

6.13.2.20 Leaders to become active, practical and honourable

Participant #10 further recommended that the key role players in the universities must become active, practical and honourable leaders. He said: *"The type of leadership is also very important. Leaders must be active, must be practical, and not just talk in order to promote intrapreneurial behaviour. Leaders must be honourable to manage the system."* According to Stolze and Sailer (2021), entrepreneurial universities need change-oriented leadership with a clear vision and goals for the advancement of the third mission. Proper leadership must evaluate the existence of an entrepreneurial agenda and a budget for entrepreneurial activities (Muriisa, 2014). It has been observed from the participants' contributions that the tertiary

education institutions that took part in the study require entrepreneurial leadership who understand that the development of an entrepreneurial university needs a good measure of experimentation and less detailed planning or management (Schoemaker *et al.*, 2018; Stolze & Sailer, 2021). The leaders must also regard the third mission as having the same importance as teaching and research if they are to remain relevant for the future of governing Botswana's entrepreneurial universities (Middlehurst, 2013).

In summary, the recommendations on dealing with the challenges in supporting intrapreneurial behaviour draw from both internal and external organisational factors. The recommendations on dealing with the internal environment factors are crucial for the universities' business planning and decision-making processes that will enhance intrapreneurial behaviour. On the other hand, the recommendations on dealing with the external environment factors carry great importance because these will ensure that the universities effectively identify and exploit the opportunities and resources that exist in the external environment to enhance the academics' intrapreneurial behaviour and ultimately improve university performance. However, the key role players must ensure unity among the main internal and external environmental factors if optimum performance is to be achieved in the universities through the support for intrapreneurial behaviour.

6.13.3 Recommendations on improving university performance through intrapreneurial behaviour

Table 6.22 on the following page presents an overview and quotations directly from the participants for the recommendations on improving university performance through intrapreneurial behaviour that the participants provided for the key role-players within their university context.

Table 6.22: Recommendations on improving university performance through intrapreneurial behaviour

Category	Sub-category	Codes and Quotations from participants
Recommendations on improving University performance through intrapreneurial behaviour	Increase industry/stakeholder collaborations and engagement in Intrapreneurship for economic growth	Industry engagement: Participant #1: <i>“Engaging with the industry and I think, yes, access to resources, working with stakeholders and the like. So the status of the university as a research university is raised by such intrapreneurial behaviour to contribute to economic growth.”</i> Collaborations: Participant #8: <i>“The appreciation, realisation that, you know, entrepreneurship is not about being individualistic, it is about, you know, being able to engage in collaborations that realise or that are businesses.”</i>
	Improve provision and access to all key resources for intrapreneurial activities	Provision of and access to resources: Participant #6: <i>“The university should provide all necessary resources required for intrapreneurial activities...”</i> Participant #10: <i>“So lastly, resources, they need to commit a lot of resources.”</i>
	Continuously support and recognise entrepreneurial achievements using awards of recognition and financial rewards	Rewards: Participant #6: <i>“...they must have rewards for the staff.”</i> Recognising and rewarding entrepreneurial achievements: Participant #8: <i>“I think it is really what I have already touched on, but I probably would say, you know, some of the critical wings really now would be, you know, continuing to support and recognise, you know, you know, entrepreneurship or achievements within the University by staff and students through, you know, awards of recognition or finance as an example.”</i>
	Invest in academics and provide ongoing training in specific areas	Staff training: Participant #3: <i>“Probably to come up with some training for the lecturers, train them on specific areas.”</i> Participant #10: <i>“Training is an ongoing process. If you want to improve your systems and processes, if you want to get very effective and efficient results, you need to invest in your people so that they perform at the highest level. If people are not capacitated, then it becomes a challenge for achieving intrapreneurial objectives. So yes, those are the things that they need to do if they are to achieve improved performance.”</i>

	Improve curriculum development and strengthen training centres in the university to generate revenue	Improve curriculum development: Participant #1: <i>"Yes, I think it is still the same in terms of curriculum development..."</i> Participant #5: <i>"The university, if it were to do a lot of projects internally, they should be able to make money if they do that. Currently, we do have centres that are responsible for training, different centres, those be strengthened to say go out there and make money and they can with the support that they can get from the university."</i> Participant #9: <i>The right curriculum, my dear, that is what we should do."</i>
	Inculcate the intrapreneurship spirit among staff and students for revenue generate	Building of intrapreneurial spirit: Participant #4: <i>"My recommendation would be as students come in, we would, first of all, expose students to this idea of being intrapreneurial. So, as they come in, they almost sign into something that they sense to be entrepreneurial. Or they identify something, of course, with the help of the lecturers and the college. We almost do a mapping of, I am student X, I have this idea that I want to pursue. How can you take me through to realise this idea? So, as they come in, they have like a contract. Yes, this demands the lecturer to be alert, that they would be expected to identify intrapreneurial opportunities for their students, and they should be able to guide the students throughout along those intrapreneurial ideas. And I think that is the only way you can have staff, you know, reflect on this problem consciously throughout."</i> Participant #10: <i>"Like I said, they have to inculcate the spirit of intrapreneurship among the staff and the students. It is very, very important because that is the way they will be able to see the tangible results of doing this."</i>
	Become the right calibre of entrepreneurial university	Study model entrepreneurial universities: Participant #4: <i>"I think the whole thing about intrapreneurs and, I think you could look at model universities which have gone their way to do something different from the traditional university set-up you know."</i> Identify opportunities: Participant #7: <i>"Ok, for us to improve our performance through intrapreneurial behaviour, I would encourage us to keep on going to the market and speaking to the market. We should be consistent and continuous in what we do in terms of talking to the market, talking to the global market to understand what kind of skills are needed in Botswana and what kind of areas we can develop at the University."</i> Sponsor interested students: Participant #9: <i>"The right calibre of entrepreneurial universities, that is what we need, and also, we do not give sponsorship to children because they qualified for</i>

		<i>particular programs, we must give those who are interested and can do a good job.”</i>
	Not to think that everyone is entrepreneurial	Identify entrepreneurs: Participant #9: <i>“The problem is we think everyone can be a farmer; everyone can be an entrepreneur, that is not it. I grew up in a farming family. I hate farming, but I am expected to do farming now for survival, but I do not like it. So those are the things we should now be aware of, that not everyone could be an entrepreneur.”</i>
	Develop vocational institutions with a university status and sponsor passionate students	Develop vocational universities: Participant #9: <i>“I want education ministries wherever they are to take vocational education very seriously because that is where we can churn out entrepreneurs ... So, I think they should elevate the position of vocational education and encourage more entrepreneurship coming out of those. And give it the respect it deserves then we will see... so if we could develop vocational institutions to a point where no one shuns going there because they are also treated at the same level as other tertiary institutions, we will win this entrepreneurship problem that we are experiencing, because we are doing it the wrong way. Vocational institutions are where you can improve and let people work at their pace to produce a lot of things.”</i>
	Use research to solve societal and government problems	Research for problem-solving: Participant #10: <i>“We can use research as a form of problem-solving of society's and government's problems. So, if universities inculcate this practice, it will help to improve this particular element.”</i>
	Develop an index or tool and framework for measuring and monitoring intrapreneurial behaviour and performance	Measuring and monitoring intrapreneurial behaviour and performance: Participant #2: <i>“I think we need an index, just like the Research Performance and the indices or maybe within the Research Performance Index. We need an index which specifically talks about intrapreneurship. Which staff member has been the most intrapreneurial during the year. We receive awards for being the best teacher, for being the best researcher, but maybe we may need one on being the most intrapreneurial staff member.”</i> Participant #10: <i>“...there is nothing so far in terms of a framework or tool that is used to actually measure intrapreneurial behaviour. So that tool should also be put into place because without checking, we will not know whether what we are doing is right or wrong. So, there must be a tool also to monitor the performance aspects at a particular level, which I am saying currently is missing. This aspect is important in order to improve.”</i>

Source: Compiled by the researcher

Figure 6.45 on the following page presents the matrix indicating the participants who provided a specific code on this part of the theme.

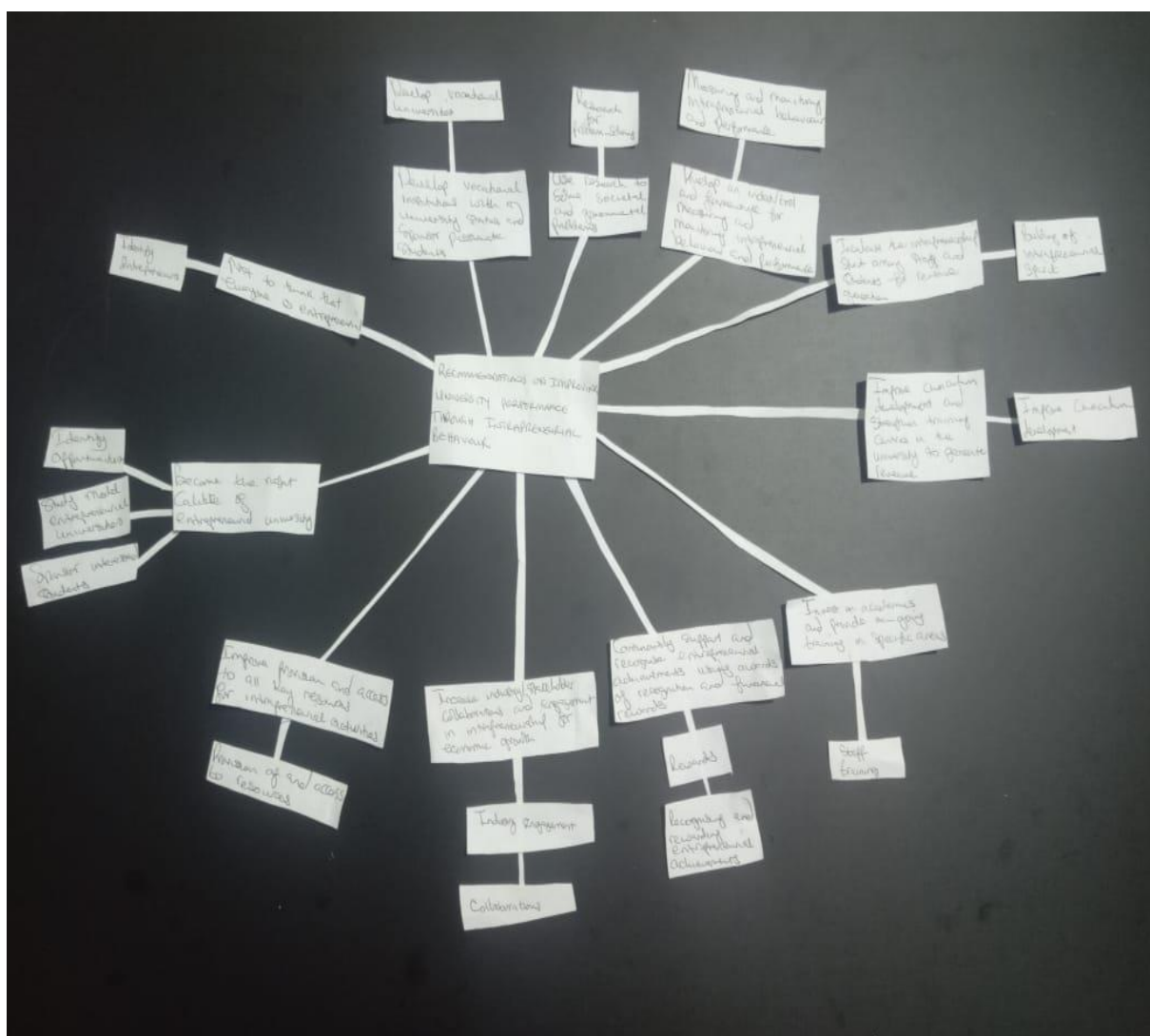
Figure 6.45: Matrix for recommendations for improving university performance through intrapreneurial behaviour

Sub- themes	behaviour Codes	Participants									
		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Increase industry/stakeholder collaborations and engagement in Intrapreneurship for economic growth	Industry engagement	x									
	Collaborations								x		
Improve provision and access to all key resources for intrapreneurial activities	Provision of and access to resources						x				x
Continuously support and recognise entrepreneurial achievements using awards of recognition and financial rewards	Rewards						x				
	Recognising and rewarding entrepreneurial achievements								x		
Invest in academics and provide on-going training in specific areas	Staff training			x							x
Improve curriculum development and strengthen training centres in the university to generate revenue	Improve curriculum development	x				x				x	
Inculcate the intrapreneurship spirit among staff and students for revenue generate	Building of intrapreneurial spirit				x						x
Become the right calibre of entrepreneurial university	Study model entrepreneurial universities				x						
	Identify opportunities							x			
	Sponsor interested students									x	
Not to think that everyone is entrepreneurial	Identify entrepreneurs									x	
Develop vocational institutions with a university status and sponsor passionate students	Develop vocational universities									x	
Use research to solve societal and government problems	Research for problem-solving										x
Develop an index or tool and framework for measuring and monitoring intrapreneurial behaviour and performance	Measuring and monitoring intrapreneurial behaviour and performance		x								x

Source: Compiled by the researcher

The analysis of this third and final part of theme nine generated 11 critical sub-themes that present the research participants' recommendations on improving university performance through intrapreneurial behaviour in their respective universities. Figure 6.46 below presents the network diagram of the sub-themes and code words for this part of theme nine as directly taken from the code book. However, not all the code words were transferred to the cut pieces of paper because the participants repeated some of the codes, and only the leading and unique codes were used in the network diagram.

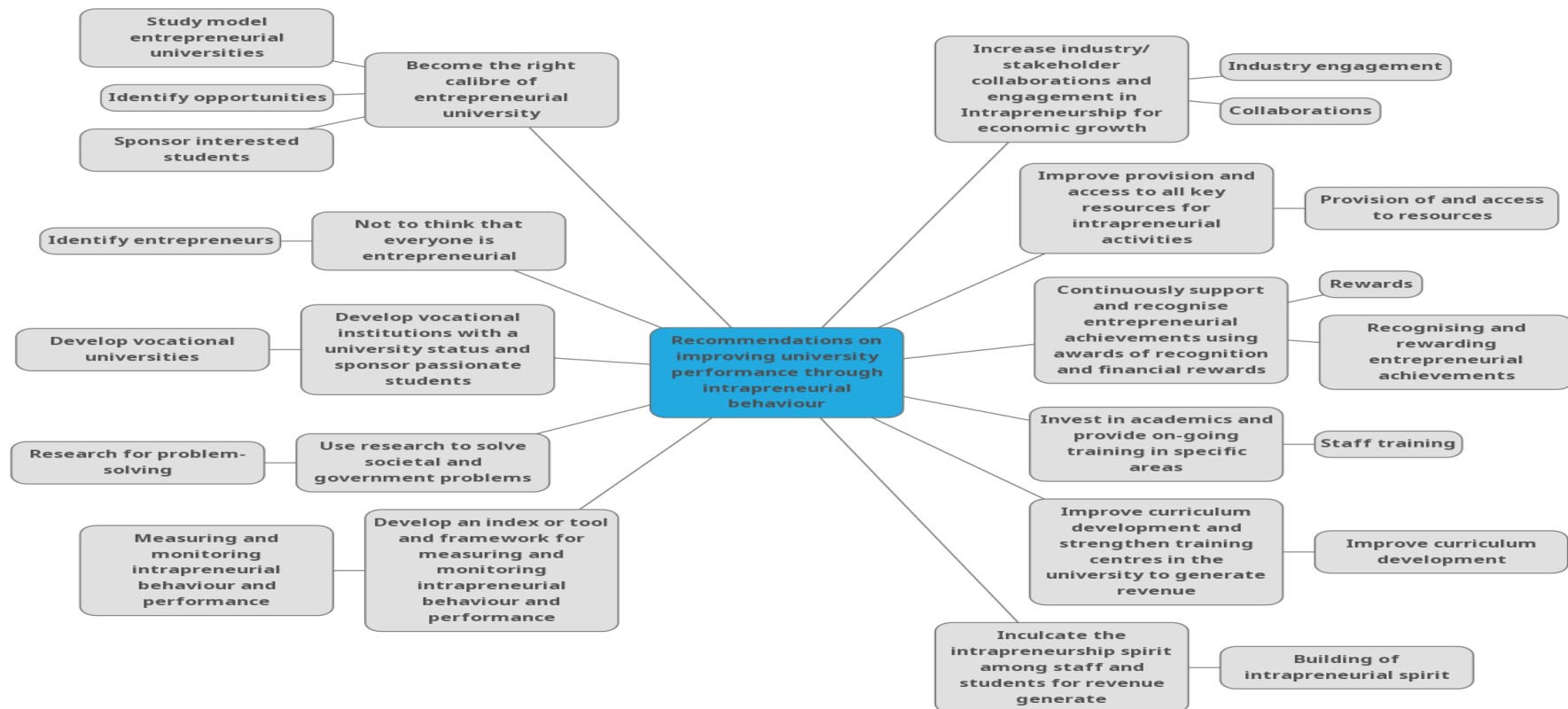
Figure 6.46: Photographic image of recommendations on improving university performance through intrapreneurial behaviour – theme 9



Source: Compiled by the researcher

The photographic image was systematised as a final organisational tool into an operational network diagram, as shown in Figure 6.47 below.

Figure 6.47: Systemised network diagram for recommendations on improving university performance through intrapreneurial behaviour



The sub-themes on the recommendations for improving university performance through intrapreneurial behaviour are now provided as discussed by the research participants in their own words.

6.13.3.1 Increase industry/stakeholder collaborations and engagement

To improve the university's performance through intrapreneurial behaviour, it was recommended that the key role players should increase industry or stakeholder collaborations in intrapreneurship to achieve economic growth in Botswana. Participant #1 said: *"Engaging with the industry and I think, yes, access to resources, working with stakeholders and the like. So the status of the university as a research university is raised by such intrapreneurial behaviour, to contribute to economic growth."* Participant #8 said: *"The appreciation, realisation that, you know, entrepreneurship is not about being individualistic, it is about, you know, being able to engage in collaborations that realise or that are businesses."* This recommendation is in line with the third mission concept, which refers to a group of activities whose purpose to to connect the university to its surrounding environment, specifically through collaborations with external stakeholders such as the industry, government and society at large (Pinheiro *et al.*, 2015; Trencher *et al.*, 2014).

6.13.3.2 Improve provision and access to all key resources

It was also recommended that the key role players improve the provision and access to key resources for intrapreneurial activities to improve university performance. Participant #6 said: *"The University should provide all necessary resources required for intrapreneurial activities."* Participant #10 added: *"So lastly, resources, they need to commit a lot of resources."* Improving the availability of and access to key resources will result in higher levels of intrapreneurial behaviour (Rigtering & Weitzel, 2013).

6.13.3.3 Continuously support and recognise entrepreneurial achievements

Another recommendation is that the key role players should continuously support and recognise the entrepreneurial achievements of the academics through awards of recognition and financial rewards. Participant #6 categorically stated: *“They must have rewards for the staff.”* Participant #8 added by explaining: *“I think it is really what I have already touched on, but I probably would say, you know, some of the critical wings really now would be, you know, continuing to support and recognise, you know, you know, entrepreneurship or achievements within the University by staff and students through, you know, awards of recognition or finance as an example...”* According to Malik *et al.* (2015), extrinsic rewards such as bonuses, awards, and promotions are seen to promote innovation.

6.13.3.4 Invest in academics and provide ongoing training in specific areas

It is further recommended that the key role players invest in the academics and provide ongoing training for them in specific areas to improve the universities' performance through intrapreneurial behaviour. Participant #3 stated: *“Probably to come up with some training for the lecturers, train them on specific areas,”* while Participant #10 elaborately added: *“Training is an ongoing process. If you want to improve your systems and processes, if you want to get very effective and efficient results, you need to invest in your people so that they perform at the highest level. If people are not capacitated, then it becomes a challenge to achieve intrapreneurial objectives. So yes, those are the things that they need to do if they are to achieve improved performance.”* Literature shows that the degree to which a university provides training in areas such as knowledge transfer and the setting up of spin-off companies, for instance, fosters entrepreneurship among the academic staff (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019; Errasti *et al.*, 2018).

6.13.3.5 Improve curriculum development and strengthen training centres

It was recommended that there should be improvements in curriculum development and that the key role players should strengthen the university training centres to generate revenue to improve the universities' performance. Participant #1 said: *"Yes, I think it is still the same in terms of curriculum development..."* Participant #5 said: *"The University if it were to do a lot of projects internally, they should be able to make money if they do that. Currently, we do have centres that are responsible for training, different centres, those are strengthened to say go out there and make money, and they can with the support that they can get from the university."* Participant #9 responded: *The right curriculum, my dear, that is what we should do, the vocational type of curriculum."*

This recommendation emphasises that synergies and linkages must be created across faculties for the exploitation of internal knowledge and resources that include the sharing of facilities, the setting up of student-staff structures, interdepartmental structures, cross-faculty teaching and research groups, as well as the invitation of professionals from organisations to contribute to university curriculum (OECD, 2012; De Luca *et al.*, 2014). As Participant #9 emphasised, there is a need for the right curriculum in tertiary education institutions, which is the Technical Education and Vocational Training (TVET) oriented curriculum, as this will enhance the universities' entrepreneurial orientation.

6.13.3.6 Inculcate the intrapreneurship spirit among staff and students

Another recommendation is that the key role players in the university should endeavor to inculcate the intrapreneurship spirit among staff and students to generate revenue, which will help improve the universities performance. Participant #4 explained: *"My recommendation would be as students come in, we would first of all expose students to this idea of being intrapreneurial. So, as they come in, they almost sign into something that they sense to be entrepreneurial. Or they identify something, of course, with the help of the lecturers and the college. Yes, this demands the lecturer to be alert that they*

would be expected to identify intrapreneurial opportunities for their students, and they should be able to guide the students throughout along those intrapreneurial ideas. And I think that is the only way you can have staff, you know, reflect on this problem consciously throughout.” Participant #10 added by saying: “As I said, they have to inculcate the spirit of intrapreneurship among the staff and the students. It is very, very important because that is the way they will be able to see the tangible results of doing this.” This recommendation is supported by Errasti et al. (2018) and Gibb (2012), who also found out that entrepreneurial universities encourage entrepreneurial behaviour through the support of structures that enable lecturers and students to establish new businesses as well as incubators.

6.13.3.7 Become the right calibre of an entrepreneurial university

Another recommendation is that the key role players must enable the universities to become the right calibre of entrepreneurial universities if they are to improve performance through intrapreneurial behaviour. Participant #4 explained: “I think the whole thing about intrapreneurs and, I think you could look at model universities which have gone their way to do something different from the traditional university set-up, you know.” Participant #7 added by saying: “OK, for us to improve our performance through intrapreneurial behaviour, I would encourage us to keep on going to the market and speaking to the market. We should be consistent and continuous in what we do in terms of talking to the market, talking to the global market to understand what kind of skills are needed in Botswana and what kind of areas we can develop at the University. Lastly, Participant #9 said: “The right calibre of entrepreneurial universities, that is what we need, and also, we do not give sponsorship to children because they qualified for particular programs. We must give those interested and can do a good job.” According to Errasti et al. (2018), entrepreneurial universities have to assume a level of maturity determined by the levels of academic entrepreneurship among their faculties.

6.13.3.8 Not to think that everyone is entrepreneurial

Participant #9 recommended that the key role players in the universities should not assume that all academics are entrepreneurial if intrapreneurial behaviour is to improve the universities' performance. She said: *"The problem is we think everyone can be a farmer, everyone can be an entrepreneur that is not it. I grew up in a farming family. I hate farming, but I am expected to do farming now for survival, but I do not like it. So those are the things we should now be aware of, that not everyone could be an entrepreneur."* Top management must understand that employees possess personal motivations, mainly determined by their personalities, characteristics, and situations. These are influenced by an individual's temperament, experience, personal career goals and current or future value rewards (Carrier, 1996:12). And so there is a need to consider the personal/individual level of intrapreneurship (Blanka, 2019:921) in the execution of entrepreneurial initiatives so as not to assume that every academic can be an intrapreneur.

6.13.3.9 Develop vocational institutions with university status and sponsor passionate students

In further recommending that vocational institutions with a university status should be developed to which passionate students should be sponsored, Participant #9 refers to the need for universities to continue changing their nature to enhance their entrepreneurial capabilities and contribute to economic growth.

She elaborated: *"I want education ministries, wherever they are, to take vocational education very seriously because that is where we can churn out entrepreneurs. So, I think they should elevate the position of vocational education and encourage more entrepreneurship coming out of those. And give it the respect it deserves, and then we will see... so if we could develop vocational institutions to a point where no one shuns going there because they are also treated at the same level as other tertiary institutions, we will win this entrepreneurship problem that we are experiencing, because we are*

doing it the wrong way. Vocational institutions are where you can improve and let people work at their pace to produce many things.”

Universities have been changing in terms of content, structure, governance and strategies as multiple stakeholders continue to shape the university model (Miller *et al.*, 2014). Given Participant #9's recommendation, the change to a TVET orientation is vital if universities are to contribute to the growth of the economy and the knowledge society through the generation of new knowledge, its dissemination and use in industrial processes or services of a new kind (Cillo *et al.*, 2015:129). It has been established that tertiary education institutions are hubs for research, innovation and education and, therefore, hold the keys to developing economies and knowledge and entrepreneurial societies (European Commission, 2004; Hoskinson & Kuratko, 2014:29; Vision 2036, 2016; NDP 11, 2016:54; HRDC, 2015:25-26).

6.13.3.10 Use research to solve societal and government problems

Participant #10 recommended using research to solve societal and governmental problems for universities to improve their performance through intrapreneurial behaviour. He explained: *“We can use research as a form of problem-solving of society's and government's problems. So, if universities inculcate this practice, it will help to improve this particular element.”* This recommendation is aligned with the execution of the third mission, which involves a wide range of activities that tertiary education institutions perform through the transfer of knowledge to external stakeholders such as the government, the industry and society at large (Pinheiro *et al.*, 2015; Meoli *et al.*, 2018). Knowledge transfer is enabled by research activities in technology transfer and innovation (Mora *et al.*, 2015). Through the third mission, universities are finding solutions to socio-economic problems. Universities are therefore able to foster socio-economic development through the transfer of their research findings to the economic system (Feola *et al.*, 2020) as well as the promotion of entrepreneurial thinking, actions and institutions (Audretsch, 2014).

6.13.3.11 Develop an index and framework for measuring and monitoring intrapreneurial behaviour and performance

The final recommendation on improving university performance through intrapreneurial behaviour is that the key role players should develop an index or tool and a framework for measuring and monitoring intrapreneurial behaviour and performance. Participant #2 explained: *“I think we need an index, just like the Research Performance and the indices or maybe within the Research Performance Index. We need an index which specifically talks about intrapreneurship. Which staff member has been the most intrapreneurial during the year? We receive awards for being the best teacher, for being the best researcher, but maybe we may need one on being the most intrapreneurial staff member.”* Participant #10 added by explaining: *“There is nothing so far in terms of a framework or tool that is used to actually measure intrapreneurial behaviour. So, that tool should also be put into place because without checking, we will not know whether what we are doing is right or wrong. So, there must be a tool also to monitor the performance aspects at a particular level, which I am saying currently is missing. This aspect is important in order to improve.”*

The index and framework for monitoring and measuring intrapreneurial behaviour and performance are urgently required because many tertiary education institutions do not have the cultural ability to support this kind of radical innovation (Blanka, 2018). Entrepreneurship in existing organisations requires promoting an intrapreneurial mindset and intrapreneurship culture that expedites organisational change marked with trial and error through experimentation and continuous refinement (Hagedorn & Jamieson, 2014). There is, therefore, a need for tools to effectively measure and monitor this process.

The recommendations discussed above also draw on the internal and external organisational factors as a means to improve the universities' performance through intrapreneurial behaviour. Both internal and external organisational factors identified in the recommendations require the full attention of top management if intrapreneurship is

to generate the desired influence on business performance. The external environmental factors must be supported so that they can effectively moderate intrapreneurship's influence on business performance, while the organisational culture or the internal environment has to be made supportive enough so as to mediate intrapreneurship's influence on business performance.

6.14 SUMMARY

This chapter presented the results and discussion of the empirical research findings. The interview process and the research participants' personal and business profiles were presented. The nine themes, which directly align with the study's empirical objectives and the research questions, were explicitly discussed with the help of quotations from the interview participants and available literature. These nine themes are entrepreneurial university, intrapreneurial academic, university support, hindrances to intrapreneurship, influence of the environment, impact of the environment, challenges in the support of intrapreneurial behaviour, contributions of intrapreneurial behaviour on university performance and recommendations. These themes were first analysed into separate categories, sub-categories and codes using tables, matrixes, pictorial and systemised network diagrams. The data showed how the support for intrapreneurial behaviour is improving university performance despite the many hindrances and challenges faced in implementing the entrepreneurial university concept. The following chapter presents the conclusions and recommendations of the study.

CHAPTER 7 CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

Tertiary education comprises complex institutions mandated to develop the human skills needed to increase an economy's production capacity and competitiveness in global markets (Gennaioli *et al.*, 2013:105). And so, as governments endeavour to develop knowledge economies in the 21st century, these institutions are expected to adopt entrepreneurial activities and business approaches for their research findings to birth knowledge-based businesses (Sambo, 2018:193). Tertiary education institutions are thus being mobilised to assume their role as stimulants for innovation, competitiveness, and economic growth (Audretsch, 2014; Urbano & Guerrero, 2013). Consequently, universities worldwide have become centres for innovation and entrepreneurship as they produce successful ventures with economic benefits (Guerrero *et al.*, 2016). This transformation has come from the encouragement for universities to generate more attention to the use of intrapreneurial approaches in innovation growth and the improvement of their curriculum and programs (Baruah and Ward, 2014:9). The focus has been on inspiring managers and individual employees to be entrepreneurial by using innovation to obtain profit and growth. Intrapreneurship has become a vital aspect of organisational development, an activity of individual employees and a management tool (Sijde & Veenker, 2013:25).

The researcher for this study set out to explore the nature of the support for and the organisational outcomes of intrapreneurial behaviour among employees in Botswana's large tertiary education institutions. These institutions, seen as the major sources of the skills and knowledge that support economic growth and innovation (Kruss *et al.*, 2016), need to make changes that will enable them to create entrepreneurial thinking, stimulate business creation and exploit ideas in the economy. The prevailing challenges faced in the tertiary education sector in Botswana (Vision 2036, 2016) indicate this need and a confirmation that the existing strategies for improved organisational performance and growth in many of these organisations need to be aligned with intrapreneurial

possibilities. Based on this need, this study attempted to develop a framework to support intrapreneurial behaviour for improved performance in these educational institutions.

The research findings and conclusions are discussed in this final chapter of the study. The recommendations for key role players in the university context and the policymakers are presented. Further, the theoretical basis for the study is discussed, exploring how the various theories are related to intrapreneurial behaviour and the entrepreneurial university. The developed framework is discussed under the study's contribution, and the considerations for future research are also presented. Lastly, the researcher's reflections are presented as a summary of the entire study.

This concluding chapter brings the whole study together, merging the views and perceptions being held on the entrepreneurial university concept and the evidence of its manifestation in the universities through the nature of the intrapreneurial behaviour exhibited by the intrapreneurial academics, the university support for intrapreneurial behaviour, the influence and impact of the internal and external environment on the intrapreneurial behaviour, the internal and external organisational support challenges for intrapreneurial behaviour, the contributions made by intrapreneurial behaviour on the university's performance and the recommendations that may enhance intrapreneurial behaviour and its influence on university performance while working to overcome the challenges faced in the support for intrapreneurial behaviour.

7.2 THE RESEARCH FINDINGS AND CONCLUSIONS

This section discusses the achievement of the research objectives, findings, and conclusions.

7.2.1 The achievement of the research objectives

The study's primary objective was to explore the nature of the support for intrapreneurial behaviour and the organisational performance outcome among Botswana's large tertiary education institutions to develop recommendations on how to enhance this phenomenon. The course of the study was driven by this primary objective, supported by secondary objectives in three categories: literature review objectives, empirical study objectives, and the conclusions and recommendations objectives. In order to address and achieve these objectives, six research questions were drawn. According to Kivunja (2016:167), a research question is an unambiguous statement that articulates the phenomenon the research intends to investigate. A research question, therefore, narrows the focus and provides a structure to the research by establishing an inter-connection with the data collection methods and interpretation results (Newman & Covrig, 2013).

The six overall research questions that this study sought to answer were:

1. What is the nature of the intrapreneurial behaviour in Botswana's large tertiary education institutions?
2. What are the managers' interpretations of university support for intrapreneurial behaviour in Botswana's large tertiary education organisations?
3. What are the internal and external environmental factors influence the support for intrapreneurial behaviour?
4. What are the major challenges experienced in the support for intrapreneurial behaviour?
5. How does intrapreneurial behaviour contribute to improvements in organisational performance?
6. What are the recommendations for improving support for intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and improving performance through intrapreneurial behaviour?

To answer these research questions, the study was conducted in two phases. Phase one encompassed the literature review or the secondary data collection process, and phase two comprised the empirical research or the primary data collection process.

While carrying out phase one, the researcher consulted a wide range of secondary data sources and composed three literature review chapters (see Chapter 2, Chapter 3 and Chapter 4). These chapters mainly focused on intrapreneurship, intrapreneurship in tertiary education, the entrepreneurial university and intrapreneurial behaviour's influence on organisational performance. The literature review was composed so that it presented a comprehensive summation of various scholars' perspectives on these subject matters.

A primary data collection was conducted in phase two of the study. The exploratory, descriptive qualitative research approach was applied, as discussed in Chapter 5. Ten managers were interviewed to enable the evaluation of the existing support for intrapreneurial behaviour in Botswana's large tertiary education institutions and the consequent improvements in university performance. The semi-structured interview protocol was used to interview the managers (See Annexure C). The empirical study findings, based on the views, perceptions and experiences of the ten managers about the entrepreneurial university, evidence of the entrepreneurial university aspects and the nature of the intrapreneurial academics' behaviour, university support for intrapreneurship, influence and impact of the internal and external environment on intrapreneurial behaviour, internal and external organisational support challenges, contributions of intrapreneurial behaviour on university performance and recommendations were explored, descriptively captured and discussed in chapter 6 of this study.

Table 7.1 summarises how the researcher answered this study's six research questions through the secondary and primary research phases. The table indicates the sections of the study that respond to each research question. The table also summarises the research findings to demonstrate how they address each research question. The

remainder of section 7.2 provides details of the research findings and conclusions concerning each research question.

Table 7.1: Answering the research questions

Research question	Research findings	Source: Secondary research	Source: Primary research
1. What is the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions?	The nature of intrapreneurial behaviour in Botswana's large tertiary education institutions is mainly demonstrated through: • Identifying and exploiting opportunities • Entrepreneurial education and initiatives • Employment creation • Industry engagement • Stakeholder engagement through community service • Inter-varsity partnerships • Research and knowledge transfer • Consultancies and incubations • Business start-ups	Literature review (Chapter 2, Section 2.5 Chapter 4, Sections 4.1, 4.2 and 4.3)	Theme 1: The entrepreneurial university Theme 2: The intrapreneurial academic and Theme 4: Hindrances to intrapreneurship (Chapter 6, Section 6.5, Section 6.6 and Section 6.8)
2. What are the managers' interpretations of the university's support for intrapreneurial behaviour in Botswana's large tertiary education organisations?	The university's support for intrapreneurial behaviour includes: • Support for process improvement • Provision of training • Enabling industry engagement • Support for initiatives • Support for business development and revenue generation • Policy and strategy development • Setting up of structures • Inter-varsity collaborations	Literature review (Chapter 1 Section 1.2 2 Chapter Section 2.1 and Chapter 3 Section 3.2)	Theme 3: Support by the university/Enablers, key support factors and Theme 4: Hindrances to intrapreneurship Chapter 6, Section 6.7 and Section 6.8)
3. What are the internal and external environment factors that influence the	The internal environment factors that influence the support for intrapreneurial behaviour include: • Strategy and policy development • Staff welfare and support	Literature review (Chapter 3 Section 3.2)	Theme 5: Influence of the environment and Theme 6: Impact of the environment (Chapter 6, Sections 6.9 and 6.10)

support for intrapreneurial behaviour?	• Process improvement • Inter-varsity partnerships • Conducive environment • Professionalism and enthusiasm for intrapreneurship • Financial provision • Organisational vision and culture • Product development • Available resources • Incentives and rewards • Challenges faced • Provision of training The external environment factors that influence the support for intrapreneurial behaviour include: • Conducive business environment • Environmental factors • Technological environment • Process improvement activities • Industry and government funding • Government vision and strategic direction • Provision of training • Implementation of the sustainable development goals • Stakeholder engagement and support		
4. What are the major challenges experienced in the support for intrapreneurial behaviour?	The major challenges are internal organisational challenges, such as: • Limited access to resources • Lack of rewards • No work discretion	Literature review (Chapter 2 Section 2.6 and Chapter 4 Section 4.7)	Theme 7: Challenges in supporting intrapreneurial behaviour (Chapter 6, Section 6.11)

	External organisational challenges , such as: • Lack of external stakeholder support • Small market and economy in Botswana and • Financial, legal and technological challenges.		
5. How does intrapreneurial behaviour contribute to improvements in organisational performance?	Intrapreneurial behaviour contributes to improvements in organisational performance through: • Brand promotion and positioning • Gaining competitive advantage and distinctiveness Consultancies and university entrepreneurship strategy • Technology development • Collaborative partnerships • Entrepreneurship education and student placement • Financial gain and survival • Winning of research funding • Generation of spin-offs	Literature review (Chapter 2 Sections 2.4 and 2.5 Chapter 3 Section 3.1 Chapter 4 Section 4.1)	Theme 8: Intrapreneurial behaviour's contribution to university performance (Chapter 6, Section 6.12)
6. What are the recommendations for supporting intrapreneurial behaviour for improved university performance?	• Recommendations for supporting intrapreneurial behaviour • Recommendations for dealing with challenges in supporting intrapreneurial behaviour • Recommendations on improving performance through intrapreneurial behaviour	Literature review (Chapter 3 Section 3.2 Chapter 4 Sections 4.3 and 4.4	Theme 9: Recommendations (Chapter 6, Section 6.13)

Source: Compiled by the researcher

7.2.2 Nature of intrapreneurial behaviour

The study's first research question sought insight into the nature of intrapreneurial behaviour in Botswana's large tertiary education institutions. The summary of the findings from both the secondary and primary research is presented below.

Table 7:2: Summary of the findings on the nature of intrapreneurial behaviour

Secondary research findings	Primary research findings
• Identifying opportunities • Producing ideas • Creating new products and new business lines • Responsiveness to stakeholder needs • Entrepreneurial services • Production and commercial exploitation of practical research findings • The third mission is connecting the university to external stakeholders • Entrepreneurship education and initiatives	• Identifying and exploiting opportunities • Entrepreneurial education and initiatives • Employment creation • Industry engagement • Stakeholder engagement through community service • Inter-varsity partnerships • Research and knowledge transfer • Consultancies and incubations • Business start-ups

Source: Compiled by the researcher

One of the definitions of intrapreneurial behaviour is that this is voluntary employee behaviour involving identifying opportunities, producing ideas, creating new products, and new business lines (Antoncic & Zorn, 2004; De Jong *et al.*, 2011). What the researcher has discovered about the nature of the intrapreneurial behaviour in Botswana's tertiary education institutions aligns with the behavioural traits in this definition. In summary, the intrapreneurial behaviour in these universities all involves opportunity identification, the production of ideas and the creation of new products and business lines. It can, therefore, be concluded that the nature of the intrapreneurial behaviour in Botswana's universities fits what has been outlined in existing literature on the subject matter.

The nature of the intrapreneurial behaviour in the universities indicates a process by which the academics are involved in identifying, advancing and implementing new

business opportunities and creating economic value within these organisations. Through their intrapreneurial behaviour, the academics demonstrate their skills and competencies through the activities in Table 7.3 below.

Table 7.3: Intrapreneurial behaviour of the research participants

Nature of intrapreneurial behaviour in the universities
Identifying and exploiting opportunities
Entrepreneurial education and initiatives
Employment creation
Industry engagement
Stakeholder engagement through community service
Inter-varsity partnerships
Research and knowledge transfer
Consultancies and incubations
Business start-ups

Source: Compiled by the researcher

All the activities in Table 7.3 are of great importance to university performance. These activities make the academics to be referred to as intrapreneurial academics, the root word being intrapreneur as coined by Pinchot (1985). This term is a combination of "intracorporate" and "entrepreneur". According to Pinchot and Pellman (1999:16), intrapreneurs are like entrepreneurs who transform ideas into realities within an organisation with their policies and bureaucracy (Baruah & Ward, 2014). Their behaviour further includes identifying opportunities and establishing innovations from within an existing chain of command (Camelo-Ordaz *et al.*, 2012). Therefore, the intrapreneurial academics in the universities are the needed human capital that will form a foundation for innovation and the resultant competitive advantage of Botswana's tertiary education institutions, leading to much-needed improvement in performance (NDP 11, 2016:54).

The empirical findings support this body of knowledge, as can be seen from the following quotations. Participant #2 spoke of the innovation occurring in his university:

"So it is quite an important concept because it promotes innovation and this idea of putting the entrepreneurship mind-set in staff, students and even in management."

Participant #8 spoke of the set-up of business start-ups and employment creation: *"You know, small start-up businesses. It happens, you know, every year ...our strategic objectives to a very large extent, they do now also talk to, you know, job creation through encouraging graduates and enabling them, supporting them, you know, to be entrepreneurial through, you know, focusing on also getting the business start-ups."*

Participant #1 added: *"That is why many of the institutions have incubations, start-up initiatives and employability initiatives"*, while others have plans to do so: *"We are now at the stage where we are trying to establish the innovation centre and the incubation centre."*

Participant #9 spoke of the research in her university: *"Our Executive Director is always encouraging us to work on research that brings funds. He does not encourage the kind of research that leads to just enhancing knowledge. He wants that type of research to bring in funds into the university,"* while Participant #10 spoke of stakeholder engagement: *"...we are trying at this juncture to establish stakeholder partnerships in order to create an innovation hub or an innovation centre to promote this kind of an agenda."* Last, but not the least, participant #7 spoke of the consultancies that the academics are undertaking: *"...you know, staff members themselves to engage, you know, in consultancies, you know consultative initiatives where we provide services to industry and through such initiatives..."* All these activities reflect the innovative behaviour of the academics, which affects university performance through strategic renewal (Kuratko & Audretsch, 2013). In line with the research by Heize and Weber (2016) and Pinchot (1987), intrapreneurial academics can be seen to be employing opportunistic tactics and taking advantage of small changes in the environment to influence more significant changes within the entire university through the turning of ideas into business success.

According to Pinchot (1985), these intrapreneurial academics are, firstly, dreamers who control the innovation process that transforms ideas into profitable realities. Therefore,

universities need to provide a supportive environment for intrapreneurial behaviour to thrive, as it is critical to their ability to remain competitive, profitable and relevant (Pinchot, 1985; Van der Sijde *et al.*, 2013). As Fellnhöfer *et al.* (2017) and Kollmann *et al.* (2017) found out, these behaviours of the intrapreneurial academics are enabling the universities to become implementers of new logic, and so they come up with initiatives that are impacting university direction and performance at different levels that exceed expectations. This is possible, despite the many hindrances to intrapreneurship in the universities, because the intrapreneurial academics are behaving in ways that go against traditional practices within their universities (Berzin *et al.*, 2016) in identifying opportunities and their use of knowledge and resources to exploit the opportunities (Baczynska *et al.*, 2016; Urbano & Turro, 2013).

This finding supports existing literature and provides evidence that employees' intrapreneurial behaviour results explicitly in innovation, strategic business renewal, organisational performance and productivity (Baggen *et al.*, 2016; Rigtering & Weitzel, 2013; Neessen *et al.*, 2018).

7.2.3 University support for intrapreneurial behaviour

The study's second research question sought to explore the participants' interpretations of the support for intrapreneurial. The summary of the secondary and primary research findings is illustrated in Table 7.4 on the following page.

Table 7.4: Summary of the findings on support for intrapreneurial behaviour

Secondary research findings	Primary research findings
Reward or reinforcement systems	Support for process improvement
Top management support	Provision of training
Managerial autonomy or work discretion	Enabling industry engagement
Freedom and independence to implement new ideas	Support for initiatives
Transparency and open communication	Support for business development and revenue generation
Training programmes	Policy and strategy development
Resource availability	Setting up of structures
Organisational boundaries	Inter-varsity collaborations

Source: Compiled by the researcher

There are several similarities between the secondary research and primary research findings in terms of the support for intrapreneurial behaviour. However, some aspects of support for intrapreneurial behaviour were not part of the participants' interpretations, which is a cause of concern. These are reward or reinforcement systems, managerial autonomy or work discretion and the freedom and independence to implement new ideas. All these are vital to the support of intrapreneurial behaviour. Table 7.5 on the following page illustrates the similarities by categorising the primary research findings against the secondary research findings to show how the empirical findings relate to existing literature.

Table 7.5: Similarities between support factors in secondary and primary research findings

Secondary research findings	Primary research findings
Top management support and Resource availability	• Support for process improvement • Support for initiatives • Support for business development and revenue generation • Policy and strategy development • Enabling industry engagement
Training programmes	• Provision of training • Policy and strategy development
Organisational boundaries	• Enabling industry engagement • Inter-varsity collaborations • Policy and strategy development
Transparency and open communication	• Policy and strategy development • Setting up of structures

Source: Compiled by the researcher

Support for intrapreneurial behaviour is the main focus of this study, and as such, the findings on this aspect demand a more extensive discussion. Top management support and resource availability appear in the secondary research findings as key support factors for intrapreneurial behaviour. Top management refers to senior executives in charge of an organisation's functional areas (Menz, 2012:45). According to Amo (2010:145), intrapreneurship begins at the top management level through the support for intrapreneurial ideas. Top management support, therefore, is the degree to which top managers support, facilitate, and promote intrapreneurial behaviour (Kuratko *et al.*, 2014a). This support is seen through top management's deliberate efforts to facilitate and promote employees' entrepreneurial initiatives (Zbierowski, 2016). As can be seen from the primary research findings, the academics receive support for initiatives from the university's top management.

According to Bloodgood *et al.* (2015:384) and Banumathi and Samudhararajakumar (2015:5), top management has to lead in the generation of innovative ideas and the provision of the required resources guided by organisational policies and appropriate

managerial practices. This is evident in the primary research findings through the support for process improvement, initiatives, business development and revenue generation and the enabling of industry engagement guided by the developed policies and strategies as cited by participants #1, #2, #5, #7, #8, #9 and #10. Participant #5 narrated how his university supports intrapreneurial behaviour through policies that encourage academics to generate revenue: *"We have policies that encourage that we make money in the university. And we are implementing those incrementally because we are a very small university."* The categorising of this similarity between the secondary and primary research findings is reflected in the first row of Table 7.5 on the previous page. This finding provides evidence that the top management in the universities is behaving per the findings by Bloodgood *et al.* (2015:384) and Banumathi and Samudhararajakumar (2015:5).

Hughes *et al.* (2019) explain that intrapreneurial activities are resource-intensive. As a result, the availability and commitment of the right resources are crucial because a high availability of the right resources results in higher levels of intrapreneurial behaviour (Rigtering & Weitzel, 2013). The fact that the top management in the university is supporting a wide range of intrapreneurial activities indicates their willingness and ability to stimulate intrapreneurial behaviour as they seek to respond to market signals, trends, and changes with novel innovations. This aligns with the findings by Hughes *et al.* (2019). Resources are vital if the universities are to augment the market mandate. Neessen *et al.* (2018) and Engelen *et al.* (2014) explain that the basis for the importance of resources, both intangible, such as time and knowledge, and tangible ones, such as financial resources, is the linkage between intrapreneurial behaviour and an organisation's performance.

It can be deduced that the leadership in the universities are analysing their understanding and support of the university's entrepreneurial culture and strategy through the decisions they make, their behaviours and actions, as Lombardi *et al.* (2019) recommended. Further, concerning Stolze and Sailer's (2021) findings, it can be said that the universities have a change-oriented leadership with a clear vision and

goals for advancing the third mission. It can be concluded that there is proper leadership in universities that evaluate the existence of an entrepreneurial agenda and a budget for entrepreneurial activities, as Muriisa (2014) advised. Participants #9 and #10 reflected this. Participant #9 said: *"There is a research fund in the office of the Deputy Director of the Executive Director Academic,"* while Participant #10 said: *"...we have funds for projects through grants, but we have not achieved quite a lot in that particular area, but it is one area that the university is trying to support intrapreneurial behaviour in the university."*

The findings further indicate that the university management is strong in providing the necessary support for the transformation into a more entrepreneurial structure, in line with the findings by Wakkee *et al.* (2019). This structure aims to enhance the coordination and integration of entrepreneurial activities throughout the university's departments or faculties without duplication (Wakkee *et al.*, 2019). Synergies and linkages must be created across faculties for the exploitation of internal knowledge and resources that include the sharing of facilities, the setting up of student-staff structures, interdepartmental structures as well as cross-faculty teaching and research groups (OECD, 2012).

The other similarity between the secondary research and primary research findings is in training. Both indicate that providing training is a form of support for intrapreneurial behaviour as guided by developed policies and strategies. This finding aligns with a wide range of literature on this subject matter. Errasti *et al.* (2018) state that university top management must establish a degree to which entrepreneurship training is provided to its staff. Because the entrepreneurial domain is changing rapidly, there is a constant need for employee upskilling and knowledge acquisition. The training may be in the form of knowledge transfer and the setting up of spin-off companies to foster entrepreneurship among the students and academic staff (Trencher *et al.*, 2014; Civera & Meoli, 2018; Backs *et al.*, 2019).

Staff are the main resource in the university's strategy implementation, offering entrepreneurship education, establishing business start-ups and all other entrepreneurial initiatives (OECD, 2012). As such, the universities must have a formal policy for developing their employees' careers to keep up with the changes and achieve their goals (OECD, 2012). Following this statement, Participant #10 spoke of the training offered in his university: *"We have got workshops with industries, we have got public lectures, and we have experts' programmes like currently with the National University of Science and Technology where we are trying to promote the same agenda."* This indicates the support of intrapreneurial behaviour through the provision of training, reflected in the categorising in the second row of Table 7.5.

The support for intrapreneurial behaviour through organisational boundaries in the secondary research findings has been matched to the support provided by enabling industry engagement and inter-varsity collaborations, as well as the development of policy and strategy reflected in the primary research findings. This categorising is illustrated in the third row of Table 7.5. The element of organisational boundaries falls within an organisation's structure and refers to the degree to which an organisation has flexible boundaries that enable intrapreneurial activities because they encourage the flow of information between the organisation and the external environment as well as between organisational departments and divisions (Kuratko *et al.*, 2014:39).

According to Karyotakis and Moustakis (2016:47), if intrapreneurial behaviour is to flourish in a large organisation, organisational boundaries must not be stringent and restrictive as this allows for creativity, knowledge mining and communication openness.

The fact that academics can engage with the industry and collaborate with other universities shows that the universities have flexible boundaries. In line with the findings from a study by Karyotakis and Moustakis (2016:48), these boundaries provide guidelines for reporting lines, employee responsibilities and behaviour according to university objectives. Participant #1 and Participant #2 provided this evidence. Participant #1 said: *"Yes, the university supports intrapreneurial behaviour by engaging,*

as I alluded to engaging with the industry and involving the industry in the development of programmes." Participant #2 added: "And also these collaborations with other universities, locally, regionally and internationally. I think while they are also doing that, an entrepreneurial mind-set is promoted."

Organisational boundaries are critical because innovative outcomes are often a result of a structured and purposeful process that involves an organisation's internal and external environments (Lakhani *et al.*, 2013). This entails that for intrapreneurial activities to be productive, they must be conducted in organisational systems in which uncertainty is well managed. Kuratko *et al.* (2014) explain that these manageable levels of uncertainty can be attained by setting boundaries that initiate, direct and enhance coordinated intrapreneurial behaviour across the organisation. Therefore, this finding shows that organisational boundaries in the universities are determining the effective use of innovation-enabling resources through the academics' creativity and knowledge mining in the internal and external environments as mentioned by participants #1 and #2.

The last similarity between the secondary research and primary research findings is in the support for intrapreneurial behaviour through transparency and open communication, as illustrated in the fourth row in Table 7.5. The empirical findings indicate this support in the form of policy and strategy development and the setting of structures. As explained by Karyotakis and Moustakis (2016:47), intrapreneurial behaviour flourishes in an environment where communication is open. This is critical to enable knowledge sharing and joint idea generation (Park *et al.*, 2014; Rigtering & Weitzel, 2013) through an entrepreneurship unit or a faculty representative assigned by management. This is to enhance clear and open communication with the staff, which is key to influencing the entrepreneurial climate in an organisation, as explained by Uslu and Arslan (2018). The success of such a climate further depends on clear policies.

On the other hand, the setting up of structures refers to the design of specific positions within the organisational structure (Mintzberg, 1993). According to DeliĆ *et al.* (2016:44), the organisational structure is an essential factor that leads to intrapreneurship. It

represents the levels of flexibility of the organisation, the communication patterns in the entire organisation and the centralisation of decision-making (Zur & Walega, 2015). The design of specific positions in the organisational structure indicates the flexibility that exists in the universities in support of intrapreneurial behaviour. Participant #5 spoke of this in mentioning a new position that has been created in her university's structure: *"In the new structure, we have a DVC who is going to be dealing with development issues, and under that portfolio, there were going mainly towards the entrepreneurship route of both the lecturers and the students."* Such a position is key to ensuring clear communication patterns and that decisions about intrapreneurship are centralised to guarantee success.

The researcher puts forward that all forms of university support for intrapreneurial behaviour must have one aspect in common: policy development. This is supported by both the secondary and primary research findings, which indicate policy development as a part of the support for intrapreneurial behaviour. Policies are, therefore, very important in successfully executing academic entrepreneurship activities. Following the findings by Fernandez-Nogueira *et al.* (2018), the universities must evaluate their policies, practices and procedures to determine their existence and influence on their academic entrepreneurship activities. These include policies and procedures on intellectual property, networking activities for university-business partnerships, creation of spin-offs and knowledge transfer (Fernandez-Nogueira *et al.*, 2018). The universities' policies, practices and procedures must clearly define the third-mission-related roles and responsibilities, which all internal stakeholders cooperatively agree on through various performance management tools to ensure the attainment of goals.

Further, the universities must have policies on resource allocation for their mission activities and for the staff's collaborations and co-creation with regional ecosystem stakeholders (Stolze & Sailer, 2021). The universities must also have a policy for the provision of a learning environment that will ensure that students graduate with the requisite skills needed by the industry and society (Gokhberg *et al.*, 2014; Fayolle & Gailly, 2015; Jaekel *et al.*, 2015). This is the Botswana government's expectation of the

tertiary education sector (NDP 11, 2016:68; Vision 2036, 2016:1-20). This policy must also extend to the professional development of the tertiary educational institutions' leaders to enhance their business skills and relationship management capabilities (Tran & Nghia, 2020). This is another expectation of the Botswana government (NDP 11, 2016:68; Vision 2036, 2016:1-20).

7.2.4 Influence of the environment

The third research question of the study sought to identify the internal and external environmental factors that influence the support for intrapreneurial behaviour. Table 7.6 below summarises the secondary and primary research findings on the influence of the internal environment.

Table 7.6: Summary of the findings on Influence of the internal environment

Secondary research findings	Primary research findings
Individual entrepreneurial cognitions or motivational dimensions	Strategy and policy development
The support of the top management team	Staff welfare and support
The organisational structure and culture	Process improvement
Reward and reinforcement systems for employees	Inter-varsity partnerships
A transparent promotional system for the intrapreneurs	Conducive environment
Work discretion	Professionalism and enthusiasm for intrapreneurship
Time availability	Financial provision and available resources
Organisational boundaries	Organisational vision and culture
Resource availability	Product development
	Incentives and rewards
	Challenges faced
	Provision of training

Source: Compiled by the researcher

The internal environment comprises two main types of internal dimensions that facilitate an intrapreneurship orientation. This is referred to as the interactionist perspective,

which suggests that intrapreneurial behaviour is a consequence of the interaction between personal or individual dimensions of intrapreneurs and those of the organisational context or the work environment conditions (Hornsby *et al.*, 1993). Both organisational factors and the individual self-determined behaviour of employees are vital for enabling intrapreneurial behaviour within established organisations (Åmo & Kolvereid, 2005). These two types of internal dimensions are evident in both the secondary and primary research findings through the interaction between the different aspects of the work environment conditions and the personal dimensions of intrapreneurial academics. For instance, the secondary research findings indicate individual motivation dimensions alongside the support of the top management, while the empirical findings indicate strategy and policy development, which is a function of top management, alongside professionalism and enthusiasm for intrapreneurship among academics.

This interactionist perspective is reflected as manifesting in the universities through what participants #8, #9 and # 10 explained. On the organisational context or the work environment conditions, participant #8 shared how his university's top management is creating an internal environment that influences intrapreneurial behaviour through strategy and policy development: *"Above all, it has a strategy that deliberately talks to entrepreneurial growth within the University, and I must say yes at the moment our strategy does talk to that which means accommodation for implementation of such entrepreneurship or entrepreneurial focus on strategic objectives becomes key. So really, in short, we are saying we need the policies, we need the strategies, and we need the policies to be in place."*

The individual dimension of the intrapreneurial academic was mentioned by participant #9, who spoke of the professional leaders and staff in his university: *"I think there is a lot of professionalism with the University, and it just keeps you on your feet to say I should do the right thing because we work on contracts. If you do not do well, you go. So, if you work against the values of the University, then you are out of this place. That is a negative but the environment itself, the leadership is very professional. And the*

lecturers are very professional." Participant #10 added by speaking of the academics' skills, zeal and mind-set: *"So, we do have people with skills and the zeal to do the task. I do not know if you get my point. This factor, in considering the context of Botswana, is because a few people who are having, there is interest to say after you get into a job, the mind-set to start a business initiative is just growing."*

A closer look at the factors identified as influential in the support for intrapreneurial behaviour, the secondary research findings outline them as individual entrepreneurial cognitions or motivational dimensions, top management support, organisational structure and culture, reward and reinforcement systems, a transparent promotional system for intrapreneurs, work discretion, time availability, organisational boundaries and resource availability (Kuratko *et al.*, 2005b; Hornsby *et al.*, 2013; Rekha *et al.*, 2014; Kuratko *et al.*, 2014a; Hughes & Mustafa, 2017). The primary research findings, on the other hand, outline the internal factors as strategy and policy development, staff welfare and support, process improvement, inter-varsity partnerships, conducive environment, professionalism and enthusiasm for intrapreneurship, financial provision, organisational vision and culture, product development, available resources, incentives and rewards, challenges faced and provision of training.

Most factors identified as influential in the support for intrapreneurial behaviour in the empirical findings align with those in the secondary research findings. The only ones not specifically identified under the empirical findings are the transparent promotional system for intrapreneurs, work discretion and time availability. The literature presents these factors as some of the main dimensions in an organisation's intrapreneurial efforts, which must be assessed to determine an organisation's level of preparedness to stimulate intrapreneurial behaviour (Hornsby *et al.*, 2013; Croneen *et al.*, 2016). Thus, there is a need for the universities' management to address these factors. The empirical findings also contribute some factors of the internal environment that influence intrapreneurial behaviour, which do not specifically appear in the reviewed literature. These include challenges faced and staff welfare. All of these factors demand a radical

shift in the internal way of working in the universities. Table 7.7 below summarises the secondary and primary research findings on the influence of the external environment.

Table 7.7: Summary of the findings on the Influence of the external environment

Secondary research findings	Primary research findings
Hostility environments: high organisational failure rates, intensive competition among organisations in the same or related industry, and competition based on price	Conducive business environment
Technologically advanced environments: meaningful R&D investments, recurrent product and/or process technology innovations, and dependence on high-ranking technical personnel as the primary source of competitive advantage, the increasing technological turbulence and competition	Environmental factors
Political, economic and social factors	Technological environment
Dynamism: the unpredictability of the environment due to frequent changes	Process improvement activities
Munificence: the availability of opportunities in the environment and the availability of the resources needed to pursue the identified opportunities	Industry and government funding
Organisational growth	Government vision and strategic direction
The industry life-cycle stages: the industry's state as emerging, growing or maturing	Provision of training
	Implementation of the sustainable development goals
	Stakeholder engagement and support

Source: Compiled by the researcher

The external environmental conditions are considered essential factors that influence intrapreneurial initiatives within an organisation (Kasturi *et al.*, 2019; Otache & Mahmood, 2015). However, these factors comprise forces outside the organisation that have an uncontrollable impact on business activities and performance through diverse dimensions that are ideal for developing and implementing intrapreneurial initiatives (Bradley *et al.*, 2011).

As observed under the internal environment factors, the external environment factors that influence intrapreneurial behaviour identified in the primary research findings

correspond to those mentioned in the secondary research findings. Table 7.8 below illustrates this alignment of the factors.

Table 7.8: Similarities in the factors identified under the secondary and primary research findings

Secondary research findings	Primary research findings
Hostility environments	Conducive business environment
Technologically advanced environments:	• Technological environment • Process improvement activities
Political, economic and social factors	• Environmental factors • Industry and government funding • Government vision and strategic direction • Implementation of the sustainable development goals • Stakeholder engagement and support
Dynamism	Environmental factors
Munificence	Provision of training
The industry life-cycle stages	

Source: Compiled by the researcher

Hostility and technologically advanced environments are some of the dimensions of the external environment (Behram & Ozdemirci, 2014). According to Kuratko *et al.*, 2014a:38), hostile environments are marked by high organisational failure rates, intensive competition among organisations in the same or related industry, and competition based on price. These factors exist in Botswana's tertiary education sector (HRDC, 2015:41; NDP 11, 2016:68) and are the reasons why managers in universities are working to create a conducive environment for intrapreneurial behaviour as a means of business growth and survival. Participant #10 said: "So, in that aspect, to come up with something from scratch that will be fruitful is a possible task and another factor *influencing the support of intrapreneurial behaviour in the context of the University.*"

On the other hand, technologically advanced environments display factors that include meaningful R&D investments, recurrent product and/or process technology innovations, and dependence on high-ranking technical personnel as the primary source of

competitive advantage (Baruah & Ward, 2014). Participant #7 and Participant #10 provided statements that coincide with this finding by Baruah and Ward (2014). Participant #10 said: *"So, technology is also an influencing factor like, you know, everything that you do nowadays is supported by technology and when you look at the technological infrastructure in the country, it is quite sufficient."* Baruah and Ward (2014) emphasise the importance for intrapreneurial organisations to understand the effects of these external environmental factors. Ireland *et al.* (2009) also recommend that top-level managers in organisations should demonstrate a strategic posture toward entrepreneurial activities for their organisations to compete successfully in these environments. The empirical evidence suggests that this is the case with the top management in the universities.

External environment conditions are further characterised by other complex and volatile environmental factors that can potentially affect organisational operations (Behram & Ozdemirci, 2014). These environmental factors are classified as political, economic and social (Kasturi *et al.*, 2019). The empirical findings identify the environmental factors, including industry and government funding, government vision and strategic direction, implementation of the sustainable development goals and stakeholder engagement and support. These environmental complexities comprise diverse and complex information organisations need to survive in an environment (Otache & Mahmood, 2015:527). Participants #3, #4, #5, #7 and #10 spoke of how their universities are obtaining and using the diverse and complex information from these environmental factors to survive. Participant #7 explained: *"So externally we are influenced by the president, his ministers influence us, we are influenced by Vision 2036, we are influenced by the president's mantra, we influenced by such initiatives like nationalisation of government portfolio that will make us as the University to become intrapreneurial in our behaviour."*

Further, factors such as dynamism, munificence, organisational growth and technological opportunities have been identified as being among the four positive external environmental factors that are seen to influence intrapreneurial initiatives in an organisation (Behram & Ozdemirci, 2014). Dynamism refers to all the unforeseeable

changes that result from a change in political, economic, social and technological factors (Kasturi *et al.*, 2019). These are the environmental factors. Dynamism, therefore, represents the unpredictability of the environment due to frequent changes (Otache & Mahmood, 2015:527). As Participant #3 mentioned: *"The environment we are living in is a challenge in terms of economic prices, inflation is also coming up and so forth."* This increased dynamism promotes intrapreneurial activities in organisations as they must be entrepreneurial in their business processes to deal with the dynamic environment (Farrukh *et al.*, 2019). It can be deduced that dynamism provides increased opportunities for these entrepreneurial universities in Botswana to exploit as the intrapreneurial academics can be supported in proactive and risk-taking activities.

On the other hand, environmental munificence refers to the availability of opportunities in the environment and the resources needed to pursue the identified opportunities (Rosenbusch *et al.*, 2011). As dynamism provides opportunities to be exploited, providing resources to facilitate the training for the academics enables them to pursue the identified opportunities. Participant #6 spoke of the training provided through external seminars and public lectures and from government regulatory bodies: *"...external we have had seminars that we, I forgot the name of the company which was presented, but we do get seminars and public lectures...We also go for, under external, we get, I think it falls under training because we get experts from Botswana Qualifications Authority, from Human Resource Development Council."* This significantly influences the universities' intrapreneurial activities and consequent improvements in performance, in line with the findings in a study by Otache & Mahmood (2015:527).

The secondary research findings identify one other vital dimension of the external environment that is not identified under the primary research findings. The industry life-cycle stage represents the industry's state as emerging, growing or maturing (Otache & Mahmood, 2015:527). According to Wasowska *et al.* (2018), the stages at the beginning of the industry life cycle, which are the phases of industry development and growth, are the most attractive intrapreneurial activities. The growth leads to maturity and efficiency (Cucculelli & Peruzzi, 2020). Organisations need to renew themselves as the industry

develops; otherwise, they risk exiting the market if they fail to adapt their intrapreneurial behaviour to the changing industry life-cycle stages (Cucculelli & Peruzzi, 2020). University leaders must understand and consider this factor's influence on intrapreneurial behaviour in their institutions. As Kasturi *et al.* (2019) recommend, the management must be flexible and adaptable to cope with these external environmental factors.

7.2.5 Impact of the environmental factors

In considering the influence of environmental factors on the support for intrapreneurial behaviour, the study also sought to explore how and to what extent these factors impact intrapreneurial behaviour within the universities. The impact of the internal organisational dimensions includes staff turnover, staff enthusiasm, project funding, development of entrepreneurial capabilities, training and continuous professional development, participatory leadership, product development and improvement and profitability. It can be seen that most of the impact is positive except for one negative impact, which requires the close attention of university management. Participant #7 spoke of the high staff turnover in his university: *"Also, internally, the pressure of work is very high, leading to high staff turnover. We have employees working for two weeks and leaving because they cannot cope with the targets."*

This corresponds to the findings in the studies by Siegel and Wright (2015) and Tatarski *et al.* (2020), who explain that the adoption of the entrepreneurial university model involves risks and challenges for the management of higher education institutions. These result from the fact that the process calls for faculty members to make exchanges between the amounts of time devoted to improving teaching, conducting research and performing the required activities to comply with the third mission. It is not easy for employees to merge their principal jobs with the accompanying administration, which explains the high staff turnover that is experienced. University management needs to find mitigations for this risk to avoid losing highly skilled intrapreneurial academics and their excellence.

The impact of the external organisational dimensions, on the other hand, includes product development and improvement, alignment to government regulations, industry partnerships, collaborations and funding, informed decision-making, training of stakeholders, increased student placement and enrolment, increased dissemination of information, changing of stakeholder perceptions and intrapreneurial initiatives and growth. All the impacts of the external organisational factors are positive. For instance, participant #8 spoke of the commercialisation of entrepreneurial outputs: *"Concerning such developments and a couple of commercialisations that have come on board have been a result of an address of such factors, a creation of an environment that leads to these factors, that brings industry on board and from those we have seen commercialisation outcomes hence I will say those factors have been positive so far, and we hope they continue."*

This finding confirms the findings by Otache and Mahmood (2015:527). It can be concluded from this finding that the external environment carries greater importance in nurturing intrapreneurship because it is the source of opportunities that organisations exploit and the resources needed to pursue the opportunities (Otache & Mahmood, 2015:527). Therefore, the external environment's availability of opportunities and resources determines an organisation's success or failure (Otache & Mahmood, 2015:527). It can be deduced that the positive impacts of the external organisational dimensions will lead to the universities' success as intrapreneurial behaviour is enhanced.

7.2.6 The major challenges experienced in the support for intrapreneurial behaviour

The fourth research question of the study sought to identify the major challenges the universities experienced in supporting intrapreneurial behaviour. The summary of the findings on the major internal and external organisational support challenges is presented in Table 7.9 on the next page.

Table 7.9: Summary of findings on the major internal and external organisational support challenges

Internal organisational support challenges	External organisational support challenges
Secondary research findings	
Institutional bureaucracy	Environmental turbulence
Resistant organisational culture	Rapidly changing trends and market demands
The ownership of intellectual property (IP) rights	No clear policies or structures for facilitating entrepreneurial university activities
Remuneration and lack of rewards	Inadequate resources
Nurturing intrapreneurial initiatives	
Ineffectiveness of traditional management techniques	
Insufficient resources	
The adoption of the entrepreneurial university model and the incorporation of the third mission	
Lack of formal organisational structures for university-based entrepreneurs' needs	
Lack of cultural ability to support radical innovations	
Primary research findings	
Limited access to resources	Lack of external stakeholder support
Lack of rewards Covid	Small economy and market in Botswana Failure of industry partnerships
No work discretion	Academia not meeting industry expectations
Delayed change	Unemployment
Low idea generation	Corruption and theft in funding
Insufficient knowledge on entrepreneurial university	Low entrepreneurial behaviour in Botswana
Low university capability	Financial challenges
Poor human resource management	Poor digital marketing
Staff and student resistance	Legal challenges
Low levels of industry collaborations	Technological challenges
Heavy workload and staff turnover	Dependence on government support
Low staff intrapreneurial behaviour	No/too few industry collaborations
	Academics not seen as entrepreneurial

Source: Compiled by the researcher

It is concluded that many internal and external organisational challenges are experienced in supporting intrapreneurial behaviour, as reflected in both the secondary and primary research findings. This conclusion confirms Buekens's (2014) findings that projects to activate intrapreneurship fail due to several challenges in the organisation's internal and external environment. Buekens (2014) explains that scientific management techniques tend to work against the innovative power in organisations. This is because the abstract analytic techniques employed in centralising decision-making are not aligned with the way people in organisations think and do not help with deciding on new ideas, thereby working against the concept of intrapreneurship. According to Bysted and Jespersen (2014), stimulating employees' entrepreneurial work behaviour is a complicated process that demands an internal climate that encourages generating and realising ideas through financial, participative and decentralisation mechanisms.

In line with the literature above, the internal climate in the universities presents challenges that include limited access to resources, lack of rewards, no work discretion, delayed change, low idea generation, insufficient knowledge of the entrepreneurial university concept, low university capability, poor human resource management, staff and student resistance, low levels of industry collaborations, heavy workload and staff turnover, low staff intrapreneurial behaviour and the effects of the Covid pandemic. All these challenges make stimulating the academics' intrapreneurial behaviour difficult. As participant #8 explained: *"We are largely an academic institution and therefore that, you know, strategic transformative view towards bringing in the entrepreneurial aspect of it, is not just going to be an easy, you know, task not because the appetite is not there but because the whole university has been initially structured on the premise of an academic entity and hence it takes time to therefore bring in that element of entrepreneurship as within the context of what we do in terms of, you know, the curriculum aspect, in terms of the staff aspect itself."*

On the other hand, the turbulence in the external environment tends to hurt organisations as it increases the threats to their missions and outputs. Consequently, these negative factors reduce an organisation's profit margins, placing additional

pressure on attaining radical innovations to sustain the industry life cycle (Rambakus *et al.*, 2020). The universities' challenges in their external environment confirm this explanation. These challenges include the lack of external stakeholder support, Botswana's small economy and market, the failure of industry partnerships with the universities often because academia does not meet industry expectations, the unemployment in the country due to the skills mismatch, the corruption and theft in government funding for university research projects, the low entrepreneurial behaviour in Botswana, the financial challenges in the economy, the poor digital marketing that exists, the dependence on government support, the no or too few industry collaborations, the fact that academics are not seen as being entrepreneurial and the legal and technological challenges faced. On the last two challenges in this list, participant #10 explained: *"There is not enough legal framework to support or create an environment for entrepreneurship in universities...there is also insufficient technological infrastructure for all innovative projects."*

All these challenges make nurturing intrapreneurial initiatives complex as the pressure they exert on the universities' structures and processes limits their innovative capabilities. With specific reference to academia, all these challenges can be seen through the difficulties faced in maintaining research skills, lifelong learning, and building a community that can sustain and expand vital knowledge alongside social principles and ethics (Aldawod & Day, 2017). This is why Altringer (2013) explained that intrapreneurial projects tend to have a failure rate of between 70% and 90%.

7.2.7 Intrapreneurial behaviour's contribution to improvements in organisational performance

The fifth research question of the study sought to explore intrapreneurial behaviour's contribution to improvements in organisational performance. The summary of the findings is presented in Table 7.10 on the next page.

Table 7.10: Summary of findings on intrapreneurial behaviour's contribution to improvements in organisational performance

Secondary research findings	Primary research findings
Improved financial performance, growth and desired business prosperity	Brand promotion and positioning
Impact on individuals' views on self-efficacy and intentions to establish new businesses	Consultancies
Establishment of connections between the university and its environment/ establishment and use of inter-organisational relationships	University entrepreneurship strategy
Improved research: involving innovation, transfer of knowledge and technology	Technology development
Improved teaching: comprising of lifelong learning	Collaborative partnerships
Increased university participation in social and cultural affairs	Entrepreneurship education
Enhanced entrepreneurial skills: innovativeness, proactiveness, and risk-taking	Financial gain and survival
Attainment of competitiveness and sustaining a competitive edge	Improved performance and growth
Competencies to manage business' primary functions: technical, human resources, marketing and finance	Student placement
Gaining learning capabilities and orientation	Winning of research funding
Achievement of corporate reinvention or venturing	Inter-varsity collaborations
	Generation of spin-offs
	Gaining competitive advantage and distinctiveness

Source: Compiled by the researcher

Bau and Wagner (2015:231) define intrapreneurial behaviour as the process by which employees can identify, advance and implement new business opportunities and create economic value within an existing organisation. Employees demonstrate their skills and competencies through intrapreneurial behaviour, essential to organisational performance. Existing literature has shown that employees' intrapreneurial behaviour results explicitly in innovation, strategic business renewal and venturing, productivity, establishment and use of inter-organisational relationships, improved financial performance, enhanced entrepreneurial skills, attainment of competitiveness and sustaining of a competitive edge, competencies to manage business' primary functions,

gaining of learning capabilities and orientation and ultimately improved organisational performance and (Baggen *et al.*, 2016; Rigtering & Weitzel, 2013; Neessen *et al.*, 2018).

The empirical findings correspond to this literature as it can be concluded that, despite the many internal and external challenges that the universities face in supporting intrapreneurial behaviour, this phenomenon has contributed to their improved performance. The contributions identified in the primary research findings suggest this. They include achievements in brand promotion and positioning, the undertaking of consultancies among academics, the development of a university entrepreneurship strategy, technology developments, the offering of entrepreneurial education, financial gain, increased student placement in the industry, winning of research funding, the establishment of inter-varsity collaborations, generation of business spin-offs, gaining of competitive advantage and distinctiveness, all of which result in improved performance, growth and survival. In explaining the improved organisational and staff performance, participant #4 said: *"Well, I think the performance is actually benefiting from these ideas, these new ideas, being intrapreneurial, yes because everybody is driving to do things differently, and I think that is positive...you know, supports the performance or improves the performance of staff generally. Even the college in general improves."* In addition, participant #10 provided evidence of entrepreneurship growth: *"There is visible evidence on the ground that the university is moving towards entrepreneurship in order to achieve growth."*

It can be concluded that the support for intrapreneurial behaviour contributes to improved university performance. This conclusion follows the research findings by Kuratko (2017) that state the potential of intrapreneurial behaviour to improve organisational performance and to enable growth in the turbulent business environment as explained by Deprez *et al.* (2017). The empirical findings also confirm the explanation by Duncan *et al.* (1988) that intrapreneurial behaviour is a means for corporate reinvention or corporate venturing, which is vital for an organisation's future well-being because it enhances business competitiveness.

7.2.8 Recommendations as made by the research participants

The sixth research question of the study sought to explore what recommendations may be put forth for improving support for intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and improving performance through intrapreneurial behaviour in tertiary education institutions.

The ten research participants put forth the following recommendations, which are in three categories:

Recommendations on supporting intrapreneurial behaviour:

- Promote intrapreneurial behaviour with a clear and open policy.
- Instil the entrepreneurial mind-set in all staff and students.
- Reserve seed funds for intrapreneurial projects.
- Set up the industry as an entrepreneurial university.
- Reflect managers' role and support for intrapreneurship in annual assessment.
- Remuneration is to be based on high-ranking support for intrapreneurship.
- Establish financial and non-financial incentives/rewards such as awards, retreats, sponsorships and salary increments.
- Avoid teaching theory and infuse entrepreneurial courses in syllabuses.
- Set up internships for students to learn on the job.
- Support, acknowledge and praise academics' performance.
- Establish a standard induction programme for new and old employees.
- Establish a balance between academia and entrepreneurship by creating a connected teaching and learning framework.
- Create an enabling environment for entrepreneurship growth.
- Focus on research and idea development for entrepreneurial growth through product innovations.
- Address staff concerns through motivational speakers and small-group staff meetings.

- Adopt a down-up approach by setting up focus groups for open dialogue and using obtained information for training and development on intrapreneurship.
- Expand space and infrastructure.
- Increase industry participation and strengthen partnerships and collaborations with financial institutions so as to obtain enough funding for intrapreneurship.
- Implement the entrepreneurial university objective and avoid mere talk on entrepreneurship.
- Strengthen the exchange programmes with entrepreneurial universities.

Recommendations on dealing with challenges in supporting intrapreneurial behaviour:

- Improve access to resources and work.
- Benchmark with entrepreneurial universities and adopt what they have done.
- Redefine and expand the understanding of academic entrepreneurship.
- Promote and support intrapreneurial behaviour among academics.
- Work with various stakeholders to come up with solutions.
- Foster relationships with organisations that support intrapreneurship to fund start-ups in universities.
- Lobby the government for more government ministries to deal with academic entrepreneurship.
- Perceive and address challenges as risks.
- Come up with a clear strategy for dealing with intrapreneurship issues
- Identify alternative means of raising funds.
- Encourage practical entrepreneurial exercises in which lecturers work with students in intrapreneurial activities.
- Share information on challenges faced by academics so that they contribute to finding solutions.
- Reward or give some form of motivation to the academics.
- Compensate the use of personal resources and provide financial resources to academics.

- Establish a wellness or welfare programme for staff.
- Create a reflective entrepreneurship environment and relate the learning environment to entrepreneurship.
- Collaborate with the new Ministry of Entrepreneurship to develop a genuine, authentic entrepreneurship curriculum and innovative teaching methods.
- Train all staff in entrepreneurship and financial management.
- Establish more space for intrapreneurial initiatives.
- Leaders to become active, practical and honourable.

Recommendations for improving University performance through intrapreneurial behaviour:

- Increase industry/stakeholder collaborations and engagement in Intrapreneurship for economic growth.
- Improve provision and access to all key resources for intrapreneurial activities.
- Continuously support and recognise entrepreneurial achievements using awards of recognition and financial rewards.
- Invest in academics and provide ongoing training in specific areas.
- Improve curriculum development and strengthen training centres in the university to generate revenue.
- Inculcate the intrapreneurship spirit among staff and students for revenue generation.
- Become the right calibre of an entrepreneurial university.
- Not to think that everyone is entrepreneurial.
- Develop vocational institutions with university status and sponsor passionate students.
- Use research to solve societal and government problems.
- Develop an index or tool and framework for measuring and monitoring intrapreneurial behaviour and performance.

7.3 RECOMMENDATIONS FOR KEY ROLE PLAYERS WITHIN THE UNIVERSITY CONTEXT

The sixth research question of the study sought to explore what recommendations may be put forth to the key role players within the university context to guide in three categories: supporting intrapreneurial behaviour, dealing with the challenges in supporting intrapreneurial behaviour and improving university performance through intrapreneurial behaviour. These recommendations are derived from the researcher's reflection on the practical theory that emerged from the interviews that were conducted with the ten managers in concurrence with insights from the literature review.

Section 7.3 discusses the three categories that make up the recommendations, as stated above.

7.3.1 Recommendations on supporting intrapreneurial behaviour

It is recommended that the key role players in the university context must support intrapreneurial behaviour with a clear and open policy. Policies influence academic entrepreneurship activities. This recommendation aligns with research findings by Fernandez-Nogueira *et al.* (2018), who explain that a university's policies, practices and procedures must be evaluated to determine their existence and influence on its academic entrepreneurship activities. The empirical findings agree as the research participants advised that the university must ensure that it has clear and open policies for supporting intrapreneurial behaviour across a wide range of activities. This recommendation further corresponds to the literature on the types of policies that must exist. Fernandez-Nogueira *et al.* (2018) explain that there must be policies and procedures on intellectual property, networking activities for university-business partnerships, creation of spin-offs and knowledge transfer. Further, the policies, practices and procedures must clearly define the third-mission-related roles and responsibilities, which all internal stakeholders must cooperatively agree on to ensure the attainment of goals.

There must be policies on resource allocation for third mission activities and for the staff's collaborations and co-creation with regional ecosystem stakeholders (Stolze & Sailer, 2021). Universities must also have a policy for the provision of a learning environment that will ensure that students graduate with the requisite skills needed by the industry and society (Gokhberg *et al.*, 2014; Fayolle & Gailly, 2015; Jaekel *et al.*, 2015). This policy must also extend to the professional development of the tertiary educational institutions' leaders to enhance their business skills and relationship management capabilities (Tran & Nghia, 2020). The researcher suggests that these policies must be explained and shared with all staff and students to ensure buy-in. The policies must also clearly support the recruitment of entrepreneurship lecturers.

It is further recommended that the key role players in the university must instil an entrepreneurial mindset in all staff and students to support intrapreneurial behaviour. The researcher and participants suggest that training and development be used to achieve this. The researcher specifically recommends that all academic staff undergo training in innovation and entrepreneurship and conduct research to incorporate their findings in their teaching to enhance their entrepreneurial mindsets and those of their students. This is in line with the research findings by de la Torre *et al.* (2018) and Sá *et al.* (2018), who explain that entrepreneurial mindsets can be developed through more training and research in entrepreneurship. This is the offering of formal education through academic curricula or programmes and entrepreneurship research.

The researcher also recommends that all universities should refine their curricula by increasing the number of entrepreneurship courses for non-business or entrepreneurship programmes to enhance action-based learning, direct participation and the development of independent learning. This comprehensive system of entrepreneurship education courses will increase the notional hours for entrepreneurship education and enhance the entrepreneurial competencies of both lecturers and students (Arranz *et al.*, 2017). This will further refine individuals' capabilities, behaviours, knowledge, skills and attitudes. The goal is to foster entrepreneurial mindsets through a unified culture across academia and among

academic staff. The researcher further proposes that, where this is not the case, universities should ensure that all their programmes incorporate entrepreneurship to enhance staff and students' entrepreneurial mindsets.

To further support intrapreneurial behaviour, it is recommended that the key role players in the university reserve seed funds for intrapreneurial projects. This confirms the findings by Markuerkiaga *et al.* (2014), Fernandez-Nogueira *et al.* (2018) and Bezanilla *et al.* (2020), who all emphasise that entrepreneurship funding is one of the internal environment factors that support entrepreneurship and is vital for the autonomy and development of universities. This funding is mainly for research and teaching in entrepreneurship or as seed money for creating entrepreneurship projects, companies and organisations. This recommendation is connected to another: the key role players must endeavour to use the created projects, companies and organisations to set up an industry as an entrepreneurial university. This should further assist the key role players in implementing the entrepreneurial university objective, avoid mere talk on entrepreneurship and ensure that they discourage the extreme use of theory-based methods of teaching.

To achieve the above, the researcher strongly recommends that the key role players must understand and apply the propositions of the Triple Helix model, which has assigned the university the key role in innovation based on its significance to company formation, technology transfer and regional regeneration (Cai & Etzkowitz, 2020). The key role players must also formalise the practical teaching of entrepreneurship as it can develop capabilities in behaviours, attitudes, knowledge and skills specific to an individual within the research and academic curricula (Errasti *et al.*, 2018).

It is further recommended that the key role players in the university must support intrapreneurial behaviour by redesigning the performance appraisals to reflect managers' roles and support for intrapreneurship. The annual assessments must be attached to remuneration, which must be based on high-ranking support for intrapreneurship. This recommendation is widely supported in the literature, which

indicates that people generally become entrepreneurs as a result of opportunities for increased income and as such, academics may engage in commercialisation initiatives to generate increased profits and personal payoffs that boost their comparably low remuneration (D'Este & Perkmann, 2011; Novotny, 2014, Bigliardi *et al.*, 2020). In view of this, the researcher recommends that the key role players in the universities improve the reward systems and the remuneration in relation to the academics' work load and market rates to enhance staff motivation and retention.

The key role players must also support, acknowledge and praise the academics for their performance. The implication of this recommendation is aligned with that provided by Moriano *et al.* (2014:103), who explain that intrapreneurs and their motivation to behave entrepreneurially are influenced by how their managers treat them. Concerning this, it is recommended that the key role players should establish financial and non-financial incentives or rewards such as awards, retreats, sponsorships and salary increments. This recommendation brings out the value of extrinsic reward-related motivations whose provision is controlled by managers who determine their size and the possibility of them being granted, as explained by Singh (2016:199). This recommendation also agrees with Compagnucci and Spigarelli (2020) who emphasise the need for improved financial and non-financial incentives for staff in universities. The researcher suggests that managers should also be more empathetic, open-minded and less bureaucratic in order to motivate the academics' intrapreneurial behaviour.

To further the support for intrapreneurial behaviour, it is recommended that the key role players in the university should establish and strengthen several programmes that include an internship programme for students to learn on the job, a standard induction programme for new and old employees and exchange programmes with entrepreneurial universities. The researcher and the research participants propose that the key role players adopt these recommendations for the following important reasons. The setting up of internships comes as a result of a university's close interaction with the business sector (Etzkowitz, 2013a). This recommendation confirms that the university-industry collaboration leads to connections with the business world for knowledge sharing and

for students to learn experientially as explained in a research study by Fernandez-Nogueira *et al.* (2018).

When it comes to having a standard induction programme for all staff, the researcher considers this to be very cardinal as it will ensure that the universities establish a supportive organisational culture for intrapreneurship to influence university performance (Otache & Mahmood, 2015:525). The strengthening of exchange programmes, on the other hand, will bring about change and development through diverse thinking and new insights that will alter traditional methods of teaching as well as how the entrepreneurial university concept is being managed (Taucean *et al.*, 2018).

The key role players should support intrapreneurial behaviour by taking more strategic measures, such as establishing a balance between academia and entrepreneurship. This can be achieved by creating a connected teaching and learning framework. This is supported by the research findings by Hoskinson and Kuratko (2014:29) and Miller *et al.* (2018), who explain that tertiary education institutions are hubs for research, innovation and education and must continuously strive to create a balance between academia and entrepreneurship in their organisational perspective and in the services they offer. The researcher recommends that the key role players must also create an enabling environment for entrepreneurship growth by allowing for more work discretion for the academics as they balance between their teaching and entrepreneurial initiatives. De Moraes *et al.* (2020) confirm that this would play a key role in influencing the universities' disposition toward actualising the entrepreneurial university concept and fostering the growth of an entrepreneurial culture.

The key role players are also recommended to support intrapreneurial behaviour by focusing on research and idea development for entrepreneurial growth through product innovations. As Fernandez-Nogueira *et al.* (2018) and Goethner and Wyrwich (2019) explain, implementing the entrepreneurial university concept requires universities to transform into global, technological, innovative and competitive entities. They can achieve this through the production, conference and commercial exploitation of practical

research findings locally, nationally and internationally. This will enable the key role players to strategically implement the entrepreneurial university objective. This is in line with the research findings by Errasti *et al.* (2018) and Taucean *et al.* (2018), who have also stated the importance of strategic plans to strengthen the entrepreneurial stance and that this must not just be a statement.

To further strengthen their entrepreneurial stance, the researcher recommends that universities change their vision and mission statements from merely being the best educators to those that reflect the aspect of generating income from intrapreneurial activities. This way, universities can successfully facilitate the much-needed changes in strategy and culture. It is further recommended that the key role players strategically provide for expanding space and infrastructure to enhance the execution of intrapreneurial initiatives.

It is recommended that the key role players in the universities address staff concerns through motivational speakers and small-group staff meetings. This approach is also provided by Bysted and Jespersen (2014), who explained that stimulating employees' entrepreneurial work behaviour is a complicated process that demands an internal climate that encourages the generation and realisation of ideas through participative and decentralisation mechanisms. They must also adopt a down-up approach by setting up focus groups for open dialogue and using the information obtained for intrapreneurship training and development. Staff should be given an open platform where they can freely express themselves and their contributions should be recognised as well as implemented.

The down or bottom-up approach has been widely recommended in the available literature. Castrogiovanni *et al.* (2011) recommend the bottom-up approach because it allows for open communication channels and procedures to evaluate, select, and implement intrapreneurial ideas. Zhu (2014), on the other hand, justifies the bottom-up approach based on the fact that intrapreneurs develop a higher level of creativity when encouraged to contribute a higher number of ideas and a higher level of proactivity

when a large number of their ideas are accepted. This builds job satisfaction in employees of all personality traits, which inherently enables intrapreneurship in the organisation (Antoncic & Antoncic, 2011; Giannikis & Nikandrou, 2013; Mustafa *et al.*, 2016).

Last, but not least, it is recommended that the key role players in the universities increase industry participation and strengthen partnerships and collaborations with financial institutions to obtain enough funding for intrapreneurship. This recommendation aligns with how entrepreneurial universities have been actively engaging the business sector and stakeholders, thereby generating social and economic benefits for the business sector and themselves (Etzkowitz, 2012). The universities can generate imperative funds, partnerships and facilities from these diverse sources (Mariani *et al.*, 2018). In view of this, the researcher recommends that university-industry partnerships and collaborations go beyond the current arrangements for internship programmes and provision of research funds to include aspects such as creating more start-ups.

7.3.2 Recommendations on dealing with challenges in supporting intrapreneurial behaviour

To assist the key role players in the universities in dealing with the challenges of supporting intrapreneurial behaviour, it is recommended that they improve access to resources and work. This is aligned with the research findings by Rigtering and Weitzel (2013), who explain that there is a need for high availability of the right resources, which will result in higher levels of intrapreneurial behaviour and initiatives. The researcher recommends that the availability of time for academics to think and execute intrapreneurial initiatives should be given equal emphasis among the right resources, such as finances, equipment and spaces.

The key role players must also compensate the academics for using their personal resources and provide them with adequate financial resources. There must be strategic

attempts to identify means of obtaining more financial resources within and beyond academic boundaries. The researcher recommends that there should also be a balance in the provision of the resources as well as an improvement in the turnaround time for the provision. This recommendation emphasises the basis of the importance of tangible resources, such as financial resources and their role in the linkage between intrapreneurial behaviour and an organisation's performance (Neessen *et al.*, 2018; Engelen *et al.*, 2014). To achieve all this, the key role players are advised to benchmark with entrepreneurial universities and adopt what they have done. By benchmarking, the universities will be able to collaborate with other entrepreneurial institutions through formal and informal networks for the sharing of research, knowledge and ideas (Errasti *et al.*, 2018; Bezanilla *et al.*, 2020). The organisational learning that will come out of the collaborations will enhance the universities' entrepreneurial orientation.

The research participants also suggest redefining and expanding the understanding of academic entrepreneurship to deal with the challenges in supporting intrapreneurial behaviour. This is vital as it will lead to transformations in the universities through the extension of their research, teaching and knowledge dissemination portfolio to include innovation networks through entrepreneurship (Dalmarco *et al.*, 2018; Passaro & Thomas, 2018; Schillo, 2018). It is also recommended that the key role players must include the creation of a reflective entrepreneurship environment to relate the learning environment to entrepreneurship. This recommendation is according to Díaz-Iso *et al.* (2019), who explain that universities can tap into the potential of reflective learning that exists in the curriculum, such as extra-curricular activities. Reflective learning enables students and staff to develop self-reflective skills based on their daily learning to become conscious of their actions and learn from and improve these actions in their entrepreneurial initiatives (Moussa-Inaty, 2015).

It is also recommended that the key role players must deal with the challenges in supporting intrapreneurship by promoting and supporting intrapreneurial behaviour among academics. This can be achieved through the implementation of several initiatives that include encouraging practical entrepreneurial exercises in which lecturers

work with students in intrapreneurial activities, sharing information on challenges faced by academics so that they contribute to finding solutions, rewarding or giving some form of motivation to the academics, establishing a wellness or welfare programme for staff, training all staff in entrepreneurship and financial management, establishing more space for intrapreneurial initiatives and identifying alternative means of raising funds.

These initiatives are critical because staff are the main resource in the university's strategy implementation, offering entrepreneurship education, establishing business start-ups and all other entrepreneurial initiatives (OECD, 2012). The researcher also sees these initiatives as having the potential to improve the quality of education in Botswana by developing new products or processes that will change how the government, the industry and society as a whole perceive academics.

It is recommended that the key role players further deal with the challenges in supporting intrapreneurial behaviour by working with various stakeholders to develop solutions. They can do this by fostering relationships with organisations that support intrapreneurship to fund start-ups in universities, lobbying the government for more government ministries to deal with academic entrepreneurship and collaborating with the new Ministry of Entrepreneurship to develop a genuine, authentic entrepreneurship curriculum and innovative teaching methods. This recommendation aligns with the research findings by Budyldina (2018), who explains that collaborative investment initiatives between academic institutions and various stakeholders are vital in commercialising academic research output. And because the entrepreneurial university concept is new and not widely understood in Botswana, the researcher recommends that academic institutions should purposefully take the initial steps to establish engagements and collaborations with government, industry and other strategic stakeholders.

Further, the collaboration between the university and the industry stakeholders creates a social environment that enables access to technologies, the removal of border knowledge, the sharing of knowledge and ideas, the increase of financial resources and

the use of the universities' innovative potential (Lin, 2017). With regards to lobbying the government and working with government ministries, this recommendation aligns with the research work by Etzkowitz and Dzisah (2008), which identifies the government as one of the three helices in the Triple Helix model, making its role in academic entrepreneurship very crucial.

The key role players in the universities can also deal with the challenges in supporting intrapreneurial behaviour by perceiving and addressing challenges as risks. As Etzkowitz (2016b:83-97) and Tatarski *et al.* (2020) explain, the incorporation of the third mission represents major risks and challenges for university management due to the need to strike a balance between teaching, research, and the marketing of its results. This understanding should enable the key role players to develop a clear strategy for dealing with intrapreneurship issues. This recommendation is supported by Teece (2018), who explains that entrepreneurial activities must be entrenched in clear strategic plans that enable institutional introspection to foster an entrepreneurial culture and efficacious processes for identifying problems and decision-making. It is, therefore, ideal that the universities have strategies that include specific entrepreneurship objectives that reflect performance indicators.

Last but not least, it is recommended that the key role players deal with the challenges in supporting intrapreneurial behaviour by themselves as leaders, becoming active, practical and honourable. This recommendation also receives a wide range of support in the available literature. According to Stolze and Sailer (2021), entrepreneurial universities need change-oriented leadership with a clear vision and goals for the advancement of the third mission. Proper leadership must evaluate the existence of an entrepreneurial agenda and a budget for entrepreneurial activities (Muriisa, 2014). Tertiary education also requires entrepreneurial leadership that understands that the development of an entrepreneurial university needs a good measure of experimentation and less detailed planning or management (Schoemaker *et al.*, 2018; Stolze & Sailer, 2021). The researcher strongly recommends that leaders must also regard the third mission as having the same importance as teaching and research if they are to remain

relevant for the future of governing Botswana's entrepreneurial universities (Middlehurst, 2013).

7.3.3 Recommendations on improving university performance through intrapreneurial behaviour

The research participants recommend that the improvement of university performance through intrapreneurial behaviour can be achieved by increasing industry or stakeholder collaborations and engagements in intrapreneurship for economic growth. This recommendation is in line with the third mission concept, which refers to a group of activities whose purpose is to connect the university to its surrounding environment, specifically through collaborations with external stakeholders such as the industry, government and society at large (Pinheiro *et al.*, 2015; Trencher *et al.*, 2014). The researcher proposes that the academics be trained in establishing and sustaining the industry or stakeholder collaborations and engagements in intrapreneurship. They must also be appraised on their performance in this specific area.

It is further recommended that the key role players improve university performance through intrapreneurial behaviour by improving the provision and access to all key resources for intrapreneurial activities. This will result in higher levels of intrapreneurial behaviour (Rigtering & Weitzel, 2013). Related to the provision of resources, it is recommended that the key role players provide resources to improve curriculum development and strengthen the training centres in the university to generate revenue. To facilitate these developments, the researcher recommends that synergies and linkages must be created across faculties for the exploitation of internal knowledge and resources that include the development of course content, sharing of facilities, the setting up of student-staff structures, interdepartmental structures, cross-faculty teaching and research groups, as well as the invitation of professionals from organisations to contribute to university curriculum (OECD, 2012; De Luca *et al.*, 2014).

Another recommendation is that the key role players can improve university performance through intrapreneurial behaviour by taking certain measures to improve the staff's enthusiasm for intrapreneurial activities. These include teaching the intrapreneurship spirit among staff and students for revenue generation, continuously supporting and recognising entrepreneurial achievements among the academics by using awards of recognition and financial rewards, investing in the academics and providing ongoing training in specific areas. This recommendation is supported by Errasti *et al.* (2018) and Gibb (2012), who also found out that entrepreneurial universities encourage entrepreneurial behaviour through the support of structures that enable lecturers and students to establish new businesses as well as incubators that generate revenue. More specifically, the support and recognition of entrepreneurial achievements is endorsed by Malik *et al.* (2015), who state that extrinsic rewards such as bonuses, awards, and promotions are seen to promote innovation.

However, the key role players need to understand that not all employees are entrepreneurial because they possess personal motivations, mainly determined by their personalities, characteristics, and personal situations. These are influenced by an individual's temperament, experience, personal career goals and current or future value rewards (Carrier, 1996). The researcher, therefore, suggests that faculty managers identify the academics who are entrepreneurial and those who are not so as to balance the assignment of purely academic activities.

The key role players are also advised to improve university performance through intrapreneurial behaviour by ensuring their university becomes the calibre of an entrepreneurial university. This can be done by developing vocational attributes within their university curricula and processes, sponsoring students with a passion for entrepreneurship, using research to solve societal and government problems and developing an index, tool or framework for measuring and monitoring intrapreneurial behaviour and performance. This recommendation is supported by Errasti *et al.* (2018), who emphasise that entrepreneurial universities have to assume a level of maturity determined by the levels of academic entrepreneurship among their faculties. This is

possible because universities have been changing in nature in terms of content, structure, governance and strategies as multiple stakeholders continue to shape the university model (Miller *et al.*, 2014).

The researcher agrees with the research participants and strongly proposes that the change to a TVET orientation is vital if universities are to contribute to the growth of the economy and the knowledge society through the generation of new knowledge, its dissemination and use in industrial processes or services of a new kind (Cillo *et al.*, 2015:129). It has been established that tertiary education institutions are hubs for research, innovation and education and hold the keys to developing economies and knowledge and entrepreneurial societies (European Commission, 2004; Hoskinson & Kuratko, 2014; Vision 2036, 2016:1-20; NDP 11, 2016:54; HRDC, 2015:25-26). Through the third mission, universities are finding solutions to socio-economic problems. Universities can foster socio-economic development through the transfer of their research findings to the economic system (Feola *et al.*, 2020). However, for all this to be successful, an index and framework for monitoring and measuring intrapreneurial behaviour and performance is urgently required because many tertiary education institutions do not have the cultural ability to support this kind of radical innovation (Blanka, 2018). Table 7.11 below presents a summary of the recommendations.

Table 7.11 Summary of recommendations to key role players in the university context

Recommendations on supporting intrapreneurial behaviour	• Use of a clear and open policy. • Instil the entrepreneurial mindset in all staff and students. • Reserve seed funds for intrapreneurial projects. • Use the created projects, companies and organisations to set up an industry. • Implement the entrepreneurial university objective and avoid mere talk on entrepreneurship. • Discourage the teaching of theory only. • Infuse entrepreneurial courses in syllabuses. • Redesigning the performance appraisals to reflect managers' role and support for intrapreneurship. • Establish financial and non-financial incentives or rewards such as awards, retreats, sponsorships and salary

	increments. • Establish and strengthen an internship programme for students, a standard induction programme for new and old employees and exchange programmes with entrepreneurial universities. • Establish a balance between academia and entrepreneurship by creating a connected teaching and learning framework. • Place focus on research and idea development for entrepreneurial growth through product innovations. • Expand space and infrastructure for intrapreneurial initiatives. • Address staff concerns through motivational speakers and small-group staff meetings. • Adopt a down-up approach by setting up focus groups for open dialogue and use the information obtained for intrapreneurship training and development. • Increase industry participation as well as strengthen partnerships and collaborations with financial institutions.
Recommendations on dealing with challenges in the support for intrapreneurial behaviour	• Improve access to resources and work. • Compensate academics for the use of personal resources and provide them with financial resources. • Benchmark with entrepreneurial universities and adopt what they have done. • Redefine and expand understanding of academic entrepreneurship. • Create a reflective entrepreneurship environment so as to relate the learning environment to entrepreneurship. • Promote and support intrapreneurial behaviour among academics through several initiatives, such as encouraging practical entrepreneurial exercises. • Continuously improve university structures, governance and architecture to transform academic ethos to assume entrepreneurial culture • Commercialise research findings and create new business models • Work with various stakeholders, such as government ministries, to develop solutions. • Induce interactions with industry and government to enhance economic development • Perceive and address challenges as risks. • Develop a clear strategy for dealing with intrapreneurship issues. • Leaders to become active, practical and honourable.
Recommendations on improving university performance through intrapreneurial behaviour	• Increase industry or stakeholder collaborations and engagements in intrapreneurship. • Improve the provision and access to all key resources for intrapreneurial activities.

- Improve curriculum development
- Strengthen training centres in the university to generate revenue.
- Improve the staff's enthusiasm for intrapreneurial activities through measures such as rewarding entrepreneurial achievements among the academics.
- Establish the right calibre of entrepreneurial universities by developing vocational institutions with a university status or adopting a TVET orientation.
- Use research to solve societal, industry and government problems.
- Generate new economic development missions.
- Develop an index or tool and framework for measuring and monitoring intrapreneurial behaviour and performance.

Source: Compiled by the researcher

7.4 THE THEORETICAL BASIS FOR THE STUDY

This section presents the different theories that provided a theoretical basis for this study. Theories are critical to a research study because they inform the rest of the design to help the researcher assess and refine the research goals. They help the researcher to develop realistic and relevant research questions, select appropriate methods, identify potential validity threats to the conclusions and justify the research (Maxwell, 2004).

The theories discussed in this section provide the basis and support for the conceptual framework covered in this study's three literature review chapters. It is important to note this because this study employed a qualitative research design with a less structured theoretical framework to keep the researcher from forcing preconceptions on the findings. As such, the theoretical framework is emerging in this data analysis phase.

The participants in the empirical study unknowingly provided evidence of their respective universities' actions and efforts to support intrapreneurial behaviour which is based on proven solid academic theories. Several theories will therefore be discussed on the relationship between the support for intrapreneurial behaviour and university performance. The theories are the Triple Helix Model, the theory of academic

capitalism, the innovation theory, the theory of planned change, the expectancy theory, the resource-based view (RBV), the social cognitive theory, and the inclusive leadership theory.

The Triple Helix Model

The Triple Helix Model was developed by Etzkowitz and Leydesdorff (1998). This model presents three main actors or helices in the knowledge economy: government, industry, and the university, which are integrated yet independent. The Triple Helix Model uplifts the university from a subordinate role to an elevated full partner role with the industry and government. In this interaction with the industry and government, the university is progressively transforming into an entrepreneurial organisation as it expands its functions. This on-going process of reformation has been referred to as the second academic revolution (Etzkowitz & Webster, 1998) as it is resulting in the loss of traditional identity. Leydesdorff (2005:13) refers to this as creative destruction resulting in increasing development. Concerning the concept of creative deconstruction, Etzkowitz (1998) also asserted that the entrepreneurial university is the most recent phase in the development of the higher education institution, in which the university assumes a new controversial mission that removes it from its traditionally accepted functions. This mission is the capitalisation of knowledge, which is the basis for economic and social development as it brings the university closer to knowledge users. It is through this mission that the university assumes the position of an economic player (Etzkowitz, 1998) and an enhanced role in society" (Etzkowitz, 2004:66).

The empirical findings reveal this transformation and execution of the new mission. Participants #1 spoke of the community service that the academics in his university provide: *"Yes the concept of an intrapreneurial academic is to create a platform, to ensure that or to provide entrepreneurial education for young and aspiring entrepreneurial students and also to engage with stakeholders and realise the vision of various community operatives"* while participant #8 explained that academics in his university apply knowledge to economic, societal and industry challenges: *"They do*

actually, you know, try and contextualise, you know, the academic content that they are actually, your knowledge, that they are acquiring as skills within, you know, the framework of the application area in terms of where and how can the knowledge they are acquiring be applied and this therefore means contextualising that, you know, with the needs of the economy, the society and the industry and be able to use the knowledge that they are acquiring as an academic, either through research and engagements in communities of practice towards, you know, addressing the challenges in the industry, society and economy."

Participant #9 said: *"We just contribute to knowledge, and sometimes the work that we do is used by policymakers to change, you know, to change the environment to whatever environment you might be talking about. Because after churning out research, we usually share the output with the research offices in our various ministries. I would take mine to the Ministry of Education. The one who does finance would take it to the research office in the Finance Ministry, whichever way."* It can be seen that in applying the entrepreneurial university model, this university is generating knowledge and communicating it for practical applications and advancements in theoretical disciplines.

The Theory of Academic Capitalism

Academic capitalism is a term that was first adopted by Slaughter and Leslie in 1997. These authors later developed the concept into a theory in 2004. Academic capitalism is defined as "institutional and professional market or market-like efforts to secure external funds" (Slaughter & Leslie, 1997). These external funds usually include research grants, contracts, and partnerships with industry and government (Slaughter & Leslie 1997:210). This theory highlights the "encroachment of for-profit motive" into academia. It also emphasises the "internal embeddedness of profit-oriented activities" by universities and their faculties (Slaughter & Rhoades, 2004:11). This is reflected in the empirical findings. Participant #9 spoke of how the intrapreneurial academics in his university secure external funds: *"You know lecturers draw, they write proposals, grant proposals to make money...our Executive Director is always encouraging us to work on*

research that brings funds. He does not encourage research that leads to just enhancing knowledge. He wants that type of research to bring funds into the university."

Participant #8 spoke of how university management encourages academics to engage in consultancies, which leads to the development of business start-ups: *"...I will give you an example, you know, with policies that encourage, you know, staff members themselves to engage, you know, in consultancies, you know consultative initiatives where we provide services to industry...That does lead to opportunities for, you know, business start-ups going forward."* Participant #10, on the other hand, referred to partnerships with the industry: *"We are trying at this juncture to establish stakeholder partnerships to create an innovation hub or an innovation centre to promote this kind of agenda."* Regarding partnerships with the government, participant #6 spoke of the training initiatives offered to academics by government regulatory bodies: *"We also go for, under external, we get, I think its falls under training because we get experts from Botswana Qualifications Authority, from Human Resource Development Council..."* while participant #10 spoke of the government funding: *"There is funding that is given to universities to encourage and support these initiatives, but as the situation stands in Botswana, there is quite a bit that is being done which is likely to affect the intrapreneurial behaviour in the context of the university."*

It can be seen from this empirical evidence that these higher education institutions are being "pushed and pulled" to adopt academic capitalism. Universities adopt academic capitalism as a response to external pressure because organisations tend to reflect and assume the attributes of their main resource providers (Slaughter & Leslie 1997:211). It is also evident that universities are no longer passive institutions merely serving corporations and other external market forces but instead becoming the state-subsidised entrepreneurs that "initiate capitalism" through an internal drive to generate external resources. Universities are, therefore, applying aggressiveness and embeddedness of profit-motivated behaviours and practices (Slaughter & Rhoades, 2004:12).

Innovation theory

The Austrian economist Joseph Schumpeter introduced the innovation theory in 1942 in a book titled *Capitalism, Socialism and Democracy* (Tribe, 1978). He explained how the innovation process can revolutionise the economic structure using a growth model based on three important ideas (Aghion & Howitt, 1992). The first idea is that innovations lead to long-run growth (Schumpeter, 1942). The second idea is that entrepreneurial investments such as R&D, training and computer purchase, result in innovations and that entrepreneurs respond to positive and negative economic incentives emanating from economic institutions and policies. This idea implies that innovation-based growth is a social process that requires growth policies and institutions of growth (Ahuja *et al.*, 2008:1-98). The third idea is on creative destruction in which innovations replace old technologies, creating a conflictual process between the new and the old (Bull & Willard, 1993:182-195). Creative destruction is a key characteristic of capitalism (Schumpeter, 1942; Brenner & Theodore, 2002).

This study generated empirical evidence for the three ideas in the innovation theory. Concerning the first idea, the research participants explained how their universities' innovations improve performance and growth. Participant #4 said: *"Well, I think the performance is benefiting from these ideas, these new ideas, being intrapreneurial, yes, because everybody is driving to do things differently, and I think that is positive...you know, supports the performance or improves the performance of staff generally. Even the college, in general, improves."* Participant #10 added: *"There is visible evidence that the university is moving towards entrepreneurship to achieve growth."*

On the second idea, academics respond and generate innovations as the universities make entrepreneurial investments such as R&D, training and computer purchases. Participant #10 provided evidence of the development of prototypes in her university: *"And then the School of Computing, their students are always developing simulations... They will develop those prototypes."* This further provides evidence of the third idea of creative destruction in that as these new prototypes are developed, they replace the old

ones. This is why Schumpeter saw entrepreneurs as innovators who disrupt the status quo by introducing new services and products. In line with Schumpeter's innovation theory, it can be seen that universities view entrepreneurship as a means for identifying and capitalising on new business opportunities and finding new combinations in their use of natural resources (Filion, 1997).

The theory of planned change

The theory of planned change is one of the theories that explain intrapreneurial behaviour. This theory was developed by a social psychologist and Emeritus Professor, Icek Ajzen of the University of Massachusetts Amherst (Ajzen, 1985; 1991). The theory of planned behaviour was first captured in a chapter in 1985 and published in an article in 1991. This psychological theory tries to connect beliefs to behaviours using key components such as attitude, subjective norms, and perceived behavioural control. All of these components direct an individual's behavioural intentions and ultimately produce human social behaviour.

Ajzen (1991) proposed that an individual's beliefs could be behavioural, normative, or control. Behavioural beliefs produce an individual's attitude towards the behaviour. The normative beliefs prompt a subjective standard, while the control belief leads to achieving perceived behavioural control. An individual's original intention determines all of these and their behaviour. Regarding academia, academics have attitudes that are influenced by subjective norms but control these attitudes through their behaviours. As a result, these aspects guide their intentions, which lead to behaviour planning. The theory prompts certain types of behavioural patterns that demonstrate social influence. Therefore, an expectation level is placed on an individual's behaviour by the organisation and society at large.

As a reflection of the theory of planned change, participant #2 explained how he, as an individual, applies his original intention to influence his behaviour of commodifying his abilities and competencies: *"For instance, I would say if I am a researcher and I am*

invited to make a presentation, and I cost my time and charge for it for doing so, I become an intrapreneurial academic because I am commodifying my abilities, my competencies, what I can do best." In describing the behavioural traits of an intrapreneurial academic and the nature of the intrapreneurial behaviour in his university, participant #5 spoke about the undertaking of consultancies and large projects: *"An intrapreneurial academic is that individual who does not just depend on the university for their salary, who can carry out large projects like consultancies, like applying for international funding and in our school, we have done that."* It can be seen from this empirical evidence that academics are developing entrepreneurial attitudes as influenced by their personal feelings and they use creativity, proactivity and self-motivation to control these attitudes. They use this to address organisational challenges and attain a competitive edge over their competitors in the tertiary education sector.

The expectancy theory

The expectancy theory also called the theory of motivation or the rational intention theory, determines the effect of individual intentions on the motivation-decision-action process (Holland, 2011; Reinharth & Wahba, 1975). It proposes that people tend to act more from anticipation rather than from deprivation (Locke & Baum 2007). Lawler and Suttle (1973) suggest that people will behave in a particular way because they are motivated to choose a specific behaviour over another based on their expected outcome from that selected behaviour. Therefore, the motivation for the chosen behaviour is determined by how desirable the outcome is. However, at its core, the expectancy theory presents a cognitive process of how an individual considers the different motivational factors, and this happens before the final choice is made. This theory is an analytical framework that presents expectancy as the foundation for human behaviour (Manolova *et al.*, 2012).

Given the expectancy theory's propositions, the empirical findings have provided insight that academics are not motivated to demonstrate their intrapreneurial behaviour because they have no anticipation for rewards based on the work environment in their

respective universities. In responding to the question on the hindrances to intrapreneurial behaviour in his university, participant #4 spoke of how the staff are not keen and motivated to be intrapreneurial: *"I think the only thing that is lacking is perhaps staff themselves coming out and then claiming those benefits that would have them to become entrepreneurial."* Participant #2 added on the need to increase monetary incentives: *"...but I think as people see their pockets get fatter, they actually become more loyal to you than they were before."* These responses indicate that the staff do not demonstrate their intrapreneurial behaviour because they do not perceive any desirable outcome of this behaviour. The lack of a reward system or substantial incentives in the universities does not motivate academics to be entrepreneurial. The literature agrees with this as it states that, based on the expectancy theory, employees are highly motivated to perform well following the reward system's performance (Baskaran *et al.*, 2018:29-42). The expectancy theory, therefore, attempts to explain an individual's work performance in general terms (Chiang & Jang, 2008).

Resource Base View Theory

The resource-based view (RBV/RBT) theory has been extensively applied in organisational performance studies (Innocent, 2015). The RBV addresses the unique resources and capabilities organisations possess, distinguishing one organisation from another in the same industry. The RBV also addresses an organisation's ability to attain competitive advantage and improve organisational performance. This theory proposes that the internal properties of an organisation determine its achievements. An organisation's internal properties include organisational assets (tangible and intangible) and capabilities (internal knowledge and competencies) (Chuang & Lin, 2017; Teece *et al.*, 1997).

The RBV further suggests that an organisation possesses various resources: processes, management competencies, assets, capabilities, knowledge, and technology (Barney, 1991). These resources and capabilities enhance organisational performance and are a basis for competitive advantage (Barney, 1991). Hsu and

Pereira (2008) add that RBV enables an organisation to identify its distinctive internal resources, including organisational factors such as strategic orientation, organisational culture, and organisational commitment. These are perceived as unique organisational resources that are highly valued as the factors which enable the attainment of an organisation's set goals as well as superior performance and market leadership.

The universities also possess various resources, as highlighted in the RBV theory. Participant #10 spoke of several available university resources such as space: *"Then internally, we have factors like these; we have space for starting up projects, say of developing electricals, depending on the ambition. We have the space. Then several resources are available to influence the support of intrapreneurial behaviour..."* Regarding management competencies and knowledge resources, participant #10 spoke of the academics' skills, zeal and mindset: *"So, we do have people with skills and the zeal to do the task. I do not know if you get my point. This factor, in considering the context of Botswana, is because a few people who are having, there is interest to say after you get into a job, the mindset to start a business initiative is just growing."* Participant #9 also spoke to her university's professional leaders and staff: *"I think there is a lot of professionalism with the University, and it just keeps you on your feet to say I should do the right thing because we work on contracts. If you do not do well, you go. So, if you work against the values of the University then you are out of this place. That is a negative but the environment itself, the leadership is very professional. And the lecturers are very professional."*

Participant #7 spoke of the organisational culture: *"OK, so the environmental factors here, I would say, which influence intrapreneurial behaviour in our institution is the culture, is our culture. Our culture is based on our Managing Director. How he started this institution, where he wants to take it makes us want to support him in that regard. It is a cultural aspect and truly speaking that encourages us or influences us to support his vision for the institution and for us to be entrepreneurial in that regard."* Participant #8, on the other hand, spoke of his university's strategic orientation, which is driven by the development of enabling objectives, policies and strategies: *"Above all, it has a*

strategy that deliberately talks to entrepreneurial growth within the University, and I must say yes at the moment our strategy does actually talk to that which means accommodation for implementation of such entrepreneurship or entrepreneurial focus on strategic objectives becomes key. So really, in short, we are saying we need the policies, strategies, and policies to be in place." All these examples point to the organisational commitment in these universities, which is another unique internal resource.

The quotations from the participants provide evidence of some of the many unique resources that the universities possess. These resources and capabilities enable the attainment of set goals, thereby enhancing university performance. Some of the universities that took part in the study provided evidence of superior performance, competitive advantage and market leadership within the tertiary education sector in Botswana. All this is a consequence of the existence of unique resources and capabilities in these universities.

Social Cognitive Theory

The social cognitive theory is a learning theory built on the premise that people learn by observing others (Bandura, 1986). These learned behaviours determine an individual's personality. Bandura (2001) explains that three interactive factors determine behaviour. The first determinant is personal, which determines an individual's sense and level of self-efficacy in behaviour (Wood & Bandura, 1989). The second determinant is behavioural, which refers to the feedback an individual receives after demonstrating a behaviour (outcome expectation). The third determinant is environmental, which refers to a certain environment or setting that induces an individual's ability to demonstrate a behaviour. This theory, therefore, explains how self-efficacy and outcome expectation promote an employee's intrapreneurial behaviour (Bandura, 1986).

The self-efficacy concept is very significant in academic entrepreneurship. The entrepreneurial university provides entrepreneurship training to directly impact

individuals' views on self-efficacy and their intention to establish new businesses (Bergmann *et al.*, 2016:53-76; Saeed *et al.*, 2015:1127-1145).

As such, this study obtained empirical evidence that aligns with the propositions of the social cognitive theory. Participant #5 explained that the intrapreneurial academic in his university demonstrates self-efficacy by undertaking consultancies and large projects based on an outcome expectation such as obtaining funding for the university: *"An intrapreneurial academic is that individual who does not just depend on the university for their salary, who can carry out large projects like consultancies, like applying for international funding and in our school, we have done that."*

Participant #7 provided evidence on how this behaviour is learned by observing others through bench-marking exercises: *"We are also consistently involved in bench-marking event exercises in which we go to other universities to see what they have done differently that we can adopt as the University."* Participant #2 spoke of the learning that happens through collaborations with other universities: *"And also these collaborations with other universities; locally, regionally and internationally. I think while they are also doing that, an entrepreneurial mindset is promoted."* These quotations provide evidence that is in line with Bandura's proposition that almost all learning phenomena can happen through observing the behaviours of other people and the consequences thereof (Bandura, 1986).

Inclusive Leadership theory

Inclusive leadership provides a theoretical lens on relational leadership. It explains the correlative processes of influence and development used by leaders and followers to affect each other and to foster mutual growth and development (Carmeli *et al.*, 2010; Stephens & Carmeli, 2017). This theory also recognises the significance of context in studying these relational dynamics, which result in emotional, cognitive and physical resources that are key to an individual's flourishing. Based on these positive effects, inclusive leaders have several characteristics. They ask followers to get involved

(Cenkci *et al.*, 2020). They challenge, motivate and support their employees to increasingly contribute to their organisation (Hollander, 2009:3) and participate in activities outside their formal job description (Detert & Edmondson, 2011). They also call upon their employees to undertake creative and innovative initiatives (Mansoor *et al.*, 2021). The outcome is the enhancement of an individual's well-being (Choi *et al.*, 2017), psychological welfare (Carmeli *et al.*, 2010), change-oriented behaviour (Zeng *et al.*, 2020), engagement in work (Cenkci *et al.*, 2020), creativity (Choi *et al.*, 2015) and innovation (Mansoor *et al.*, 2021). Inclusive leadership also develops an individual's sense of belonging and recognises the importance of uniqueness (Randel *et al.*, 2018).

The inclusive leadership theory applies to many of the challenges that the universities face in supporting intrapreneurial behaviour. University leaders need to assume the characteristics of an inclusive leader as outlined in the theory. Some of the specific challenges that call for this kind of leader in the tertiary education sector include the lack of appreciation and acknowledgement that was mentioned by participant #6: *"...yes when you do not have enough support, financially maybe or just a word from your supervisors, it is a challenge"* and the statement provided by participant #2 on how university management does not openly state support for intrapreneurship: *"Maybe to a large extent they are supporting but maybe it needs to be said openly."* For these reasons, Participant #10 spoke on the type of leadership in his university: *"The type of leadership is also very important. Leaders must be active and practical, not just talking to promote intrapreneurial behaviour. Leaders must be honourable to manage the system."*

Adopting the inclusive leadership style is imperative in universities because its relational nature promotes behaviours that influence others to participate. The propositions of this theory have the potential to convince team members that their contributions are of great value (Nembhard & Edmondson, 2006) and to enable leaders to achieve mutual benefit through the spirit of 'doing things with people rather than to people (Hollander, 2009:3).

Table 7.12 below illustrates the relationship between the research questions and the research themes to the study's theoretical base.

Table 7.12: The relationship between the research questions and the research themes to the study's theoretical base

Research questions	Research themes	Relevant theory
1. What is the nature of the intrapreneurial behaviour in Botswana's large tertiary education institutions?	• Entrepreneurial university • Intrapreneurial academic	• The Triple Helix Model • The Theory of Academic Capitalism • Innovation Theory • The theory of planned change • Expectancy Theory
2. What are the managers' interpretations of the importance of support for intrapreneurial behaviour?	• Support by the university • Hindrances to intrapreneurship	• The Theory of Academic Capitalism • Innovation Theory • Expectancy theory
3. How are the dimensions of the internal and external environment that influence intrapreneurial behaviour supported?	• Influence of the environment • Impact on the environment	• The Theory of Academic Capitalism • The Triple Helix Model • Innovation Theory • The expectancy theory
4. What are the major challenges experienced in the support for intrapreneurial behaviour?	• Challenges in the support for intrapreneurial behaviour	• The expectancy theory • Resource base view theory • Inclusive leadership theory • Social cognitive theory
5. How does intrapreneurial behaviour contribute to improvements in organisational performance?	• Contributions of intrapreneurial behaviour to university performance	• Innovation Theory • Social cognitive theory • Inclusive leadership

Source: Compiled by the researcher

7.5 CONTRIBUTION OF THE STUDY

The primary objective of this study is to explore the nature of the support for intrapreneurial behaviour and the organisational performance outcome among

Botswana's large tertiary education institutions. The researcher desired to explore and investigate what the tertiary education institutions are doing to support the academics' intrapreneurial behaviour to improve the performance of this sub-sector of Botswana's economy. The aim was to learn from the managers how the entrepreneurial university aspects manifest in their respective universities, how the university supports intrapreneurial behaviour and its impact on university performance so that other universities may share and implement the findings.

Available literature extensively elaborates on how universities are facilitators of innovation and entrepreneurship. However, how this can be attained remains unclear. In addition, the entrepreneurial university and academic entrepreneurship or intrapreneurship concepts are under-studied, although scientific interest in these topics has been growing. There has been a recent increase in the number of publications on intrapreneurial research based on various concepts, but the scope is still evolving. The actual nature and importance of these concepts and how to define and support this phenomenon still require answers. Many challenges constrain the support for intrapreneurial behaviour in universities, negatively affecting academic entrepreneurial activities and university performance. Therefore, it is of great importance that more studies are carried out on supporting the intrapreneurial behaviour of academics or the emergence of academic entrepreneurship at universities in different countries. There is also an urgent need for clarity on the pathways for applying the entrepreneurial university model. As such, this study makes contributions in three areas, namely: theoretical contributions, practical contributions, government policy and regulations contributions and industry contributions.

7.5.1 Theoretical contributions

The managers who took part in this study comprised low and middle-level managers from five of the large universities in Botswana. These universities were selected based on the degree of academic entrepreneurial activities that they carry out. The managers assigned to be interviewed by the Ethics Committees in the respective universities were

also identified as those whose faculties participate actively in the universities' intrapreneurial initiatives. Most of them spoke of the successful initiatives that have improved their university's performance, such as offering entrepreneurship education and training, community, government and industry engagements, winning research grants, developing prototypes and developing consultancies and business spin-offs.

This study highlighted the importance of the second revolution in tertiary education, which is the entrepreneurial university model and its third mission of bringing about social change, economic growth and regional development. In executing this third mission, the intrapreneurial behaviour of academics becomes crucial, requiring the full support of university management. As such, this study focused mainly on the importance of the internal and external environment that influences employees' entrepreneurial mindsets and, consequently, intrapreneurial behaviour. The results of this study will benefit managers and employees in tertiary education institutions in Botswana and elsewhere with theoretical knowledge of innovative internal and external environments that lead to the creation and sustenance of intrapreneurial behaviours for improved organisational performance. The findings of this study also enhance the theoretical knowledge on academic entrepreneurship, the support needed by academic intrapreneurs and the architecture of the Entrepreneurial University.

7.5.2 Practical contributions for key role players in the universities

As an emerging field of study, academic entrepreneurship is inspiring and has the potential to enhance understanding of the relationship between the universities' knowledge generation, the practical market application of the knowledge and the impact of this knowledge on socio-economic growth and development. However, the contributions in this field are fragmented. Specifically, intrapreneurship research still lacks an integrated framework for identifying enablers and other significant facilitating mechanisms to enhance the support for intrapreneurial behaviour. To close this research gap, this study contributes a holistic framework for management's practical support for intrapreneurial behaviour among academics in tertiary education institutions.

As a foundation for building the framework, the researcher aimed to establish the nature of the intrapreneurial behaviour among the academics and the university's support to influence it to determine the contributions to university performance, withstanding the challenges being faced. This was to portray the positive influence and impact of the academics' intrapreneurial behaviour on university performance to justify top management's support. As such, Table 7.11 presents responsibility areas and roles that were suggested to highlight the desired outcomes moving forward, and these include:

- Instil the entrepreneurial mindset in all staff and students through the use of a clear, open policy and strategy.
- Implement the entrepreneurial university objective and avoid mere talk on entrepreneurship.
- Redesigning the performance appraisals to reflect managers' role and support for intrapreneurship.
- Establish financial and non-financial incentives or rewards such as awards, retreats, sponsorships and salary increments.
- Establish and strengthen an internship programme for students, a standard induction programme for new and old employees and exchange programmes with entrepreneurial universities.
- Place focus on research and idea development for entrepreneurial growth through encouraging practical entrepreneurial exercises for product innovations and for addressing societal, industry as well as government problems.
- Expand space, infrastructure and improve access to key resources for intrapreneurial initiatives.
- Address staff concerns and adopt a down-up approach by setting up focus groups for open dialogue and using the information obtained for intrapreneurship training and development.
- Increase industry participation as well as strengthen partnerships and collaborations with financial and government institutions to develop solutions.
- Benchmark with entrepreneurial universities and define and expand understanding of academic entrepreneurship.

- Strengthen training centres in the university to generate revenue.
- Develop an index or tool and framework for measuring and monitoring intrapreneurial behaviour and performance.

7.5.3 Government policy and regulations contributions

The aspiration for this study arises from the researcher's first-hand observation of the performance challenges faced in Botswana's tertiary education sector, which have greatly concerned the government. This study endeavoured to contribute to government efforts by establishing evidence on how management support for intrapreneurial behaviour among Botswana's tertiary education institutions can help improve organisational performance. However, the study further contributes to government policy as it confirms the Triple Helix Model's presentation of the government as one of the three main actors or helices in the knowledge economy, the other two being the industry and the university. The model proposes that the government is integrated with the other helices, yet independent, and as such, has a role and responsibility to enable the university to progressively transform into an entrepreneurial organisation. This study specifically suggests that the government:

- Regulates the establishment of the right calibre of entrepreneurial universities through the development of vocational institutions with a university status or adopting a TVET orientation.
- Increases government ministries' engagement and collaboration with universities to find solutions and support academic entrepreneurship by funding start-ups for economic growth.
- Place a demand on universities and their faculties in governmental projects.
- Regulates that the new Ministry of Entrepreneurship collaborate with universities in the development of a genuine, authentic entrepreneurship curriculum and innovative teaching methods.
- Government regulators to allow for faster adoption of innovative changes to curricular.

- Identify and implement measures to expand and open the economy
- Assume the role of public venture capitalists to enhance innovation and economic development.
- Give intellectual property ownership rights to universities.

7.5.4 Industry contributions

The industry is one of the helices in the Triple Helix model and, just like the government, has a role and responsibility to enable the university to progressively transform into an entrepreneurial organisation. This study specifically suggests that the industry:

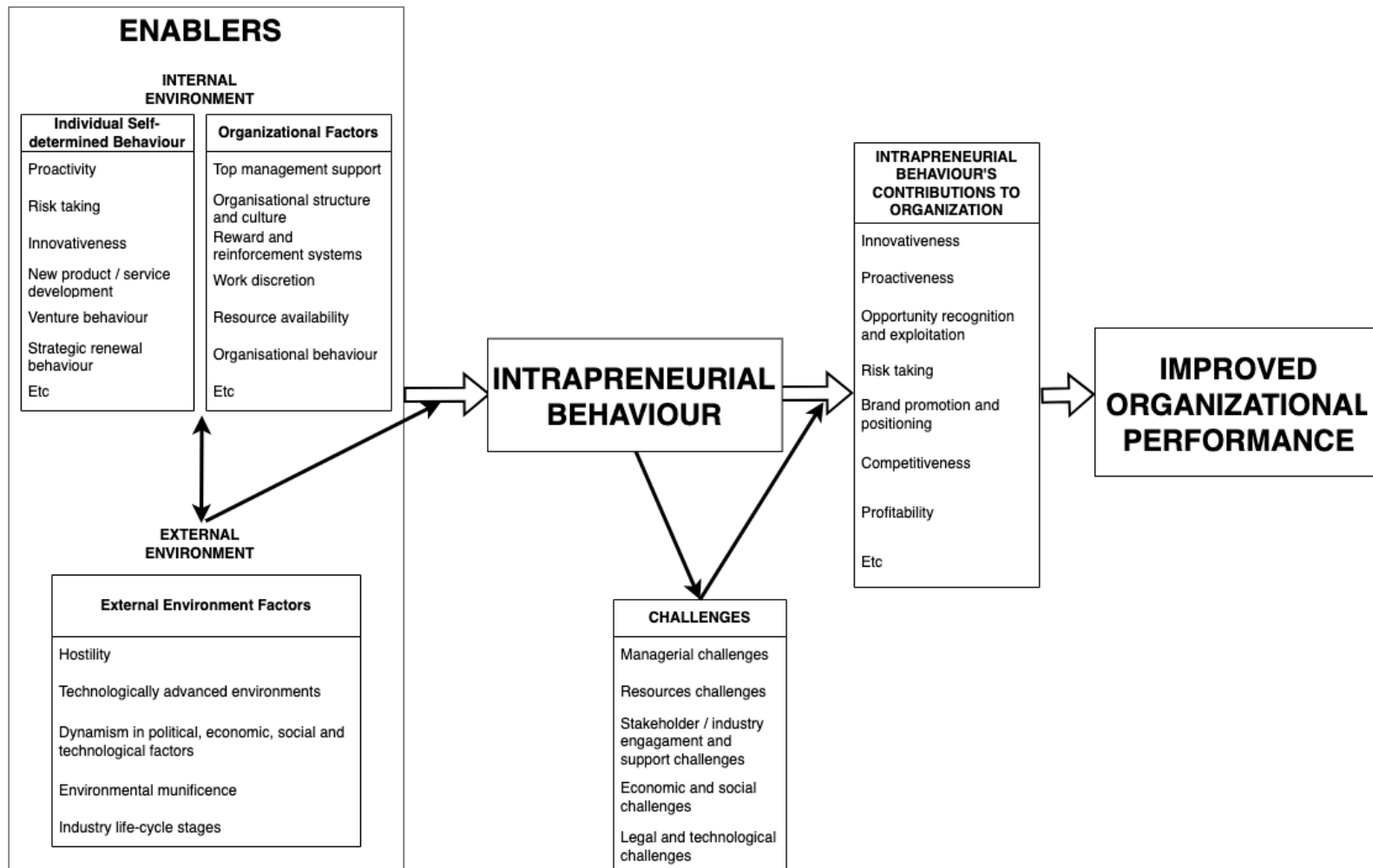
- Be open to changing negative perceptions of tertiary institutions being purely academic and theoretical.
- Increase engagement and participation in universities' intrapreneurial initiatives.
- Increase opportunities for student internships and staff industrial attachment.
- Place a demand on universities and their faculties for solutions.
- Increase collaboration with universities and government to improve their employees' learning through the set up of in-house corporate universities.
- Collaborate with the government in identifying and implementing measures to expand the economy.

With these contributions of the study in mind and after reflecting on the insights obtained from all the various themes generated, the researcher constructed the framework presented in Figure 7.1. This framework categorises the enablers and other significant facilitating mechanisms for intrapreneurial behaviour as obtained from the literature and validated by the empirical study. These **enablers and facilitating mechanisms** are **the internal environmental factors** (comprising of two main types of internal dimensions that facilitate an intrapreneurship orientation, namely, the personal or individual dimensions of intrapreneurs and the organisational context or the work environment conditions) and **the external environmental factors** (comprising of

factors such as hostility, political, economic, technological, social, environmental munificence, industry life-cycle stages).

The contributions of intrapreneurial behaviour that lead to **improved organisational performance** are also presented in the framework and the challenges that must be addressed to enhance intrapreneurial behaviour. The contribution of this study will be explained further with a detailed discussion of these categories of the framework.

Figure 7.1: Framework for supporting intrapreneurial behaviour in large tertiary education institutions



Source: Compiled by the researcher

Enablers

Literature shows that various dimensions within and without an organisation encourage intrapreneurial behaviour among employees (Miller, 1983; Antoncic & Hisrich, 2004; Hornsby *et al.*, 2002; Bhardwaj *et al.*, 2011; Stevenson & Jarillo, 1990; Baruah & Ward, 2014). These Internal and external environmental dimensions significantly contribute to nurturing intrapreneurship in developed countries (Behram & Ozdemirci, 2014:264-276). The internal and external environmental dimensions refer to the business environment, which comprises forces, factors, or institutions that affect business activities and performance (Nasiripour *et al.*, 2012; Ting *et al.*, 2012).

7.5.4.1 Internal environment factors

The internal environment factors comprise two main internal dimensions that facilitate an intrapreneurship orientation. This is referred to as the interactionist perspective, which suggests that intrapreneurial behaviour is a consequence of the interaction between personal or individual dimensions of intrapreneurs and those of the organisational context or the work environment conditions (Hornsby *et al.*, 1993). Both organisational factors and the individual self-determined behaviour of employees are vital for enabling intrapreneurial behaviour within established organisations (Åmo & Kolvereid, 2005).

7.5.4.1.1 The personal or individual dimensions

The personal or individual dimensions that stimulate intrapreneurial behaviour include individual entrepreneurial cognitions or motivational dimensions (Kuratko *et al.*, 2005b). These are considered the main dimensions in an organisation's intrapreneurial efforts, which must be assessed to determine an organisation's level of preparedness to stimulate intrapreneurial behaviour (Hornsby *et al.*, 2013; Croneen *et al.*, 2016). Given the potential that the individual dimensions bring to the organisation, they are conceptualised and measured in three main ways. Firstly, work behaviour is proactivity,

risk-taking, and innovativeness (Rigtering & Weitzel, 2013). Secondly, through intrapreneurial output or contributions to the employer, such as developing new products or services (Guerrero & Pe~na-Legazkue, 2013; Stam, 2013). Thirdly, through the employees' agentic and strategic work behaviours whose purpose is to create new businesses for the organisation (venture behaviour) and to progressively improve an organisation's potential to respond to internal and external advancements (strategic renewal behaviour) (Gawke *et al.*, 2019).

7.5.4.1.2 Organisational context or the work environment conditions

The dimensions that represent the organisational context in which employees operate include organisational support or the support of the top management team; the organisational structure and culture; reward and reinforcement systems for employees; a transparent promotional system for the intrapreneurs; work discretion; time availability; organisational boundaries and resource availability (Hornsby *et al.*, 2013; Rekha *et al.*, 2014; Kuratko *et al.*, 2014a; Hughes & Mustafa, 2017). Therefore, The organisational refers to strategy and leadership methods used by large organisations to adapt to the growing market turbulence (Blanka, 2018).

Both the individual and organisational dimensions demand a radical shift in the internal way of working in an organisation. This is reflected in the universities. The internal environment, which is under the control of the managers and their universities, significantly influences and impacts the academics' intrapreneurial behaviour through a range of factors that fall under the personal or individual dimensions of intrapreneurs and the organisational context or the work environment conditions. These internal environment factors are crucial in an organisation's business planning and decision-making processes (Otache & Mahmood, 2015:527) because they enhance entrepreneurial activities within an organisation (Markuerkiaga *et al.*, 2014). Further, these factors are key in influencing a university's disposition toward actualising the entrepreneurial university concept and fostering an entrepreneurial culture (de Moraes *et al.*, 2020).

7.5.4.2 External environment factors

The external environment comprises forces outside the organisation that have an uncontrollable impact on business activities and performance through diverse dimensions that are ideal for developing and implementing intrapreneurial initiatives (Bradley *et al.*, 2011). These forces or factors are classified as political, economic, social and technologically advanced environments (Kasturi *et al.*, 2019; Behram & Ozdemirci, 2014). However, other complex, hostile and volatile external environmental factors can potentially affect organisational operations (Behram & Ozdemirci, 2014). These environmental complexities comprise diverse and complex information organisations need to survive an environment (Otache & Mahmood, 2015:527). Further, factors such as dynamism, munificence, organisational growth, technological opportunities and the industry life-cycle stages have been identified as being among the four positive external environmental factors that are seen to influence intrapreneurial initiatives in an organisation (Behram & Ozdemirci, 2014).

The external environment conditions are considered essential factors that influence intrapreneurial behaviour within an organisation because the external environment provides the opportunities and resources needed to undertake intrapreneurial initiatives. Therefore, external environmental conditions are seen as moderators of intrapreneurship's influence on business performance (Otache & Mahmood, 2015). This environment is therefore, crucial to intrapreneurial behaviour's impact on organisational performance.

Both internal and external environmental factors are vital for the growth and success of intrapreneurial initiatives (Baruah & Ward, 2014). There, however, must be congruence among the main internal and external environmental factors if optimum organisational performance is to be achieved (Otache & Mahmood, 2015:525). The internal and external environmental factors must be suitably aligned to effectively and efficiently achieve business objectives (Otache & Mahmood, 2015:525).

7.5.5 Intrapreneurial behaviour's contribution to organisational performance

Intrapreneurial behaviour (IB) is defined as voluntary employee behaviour involving identifying, advancing and implementing opportunities, producing ideas, creating new products and new business lines and creating economic value within an existing organisation (Antoncic & Zorn, 2004; De Jong *et al.*, 2011:4-8; Bau & Wagner, 2015:231) Intrapreneurial behaviour, therefore, refers to employee behaviour in which employees identify business opportunities and come up with innovations that benefit the organisation without being asked to do so (Antoncic & Hisrich, 2001:495). Through their intrapreneurial behaviour, employees demonstrate their skills and competencies, which are of great importance to organisational performance.

The employees' intrapreneurial behaviour explicitly contributes to organisational performance and productivity through the identifying and exploiting of opportunities and establishing of innovations from within an existing chain of command (Camelo-Ordaz *et al.*, 2012; Baggen *et al.*, 2016) and the resultant competitive advantage of organisations, leading to the success of ventures (Guerrero & Pena-Legazkue, 2013; Parker, 2011). Innovative employee behaviour further affects an organisation's performance through strategic business renewal and new resources and skills (Kuratko & Audretsch, 2013; Rigtering & Weitzel, 2013; Neessen *et al.*, 2018). Pinchot (1985) states that these intrapreneurs control the innovation process that transforms ideas into profitable realities.

Apart from establishing innovations, the employees' intrapreneurial work behaviour enhances an organisation's entrepreneurial orientation in terms of proactivity and risk-taking abilities (Rigtering & Weitzel, 2013). This builds an organisation's brand and positions it as an aspect of strategy development (Wales, 2016) and strategic posture (Miller, 1983:771; Miller, 2011:873). Organisations, therefore, need to provide a supportive environment for intrapreneurial behaviour to thrive as it is critical to an organisation's ability to remain competitive, profitable and relevant (Pinchot, 1985; Van der Sijde *et al.*, 2013).

7.5.6 Challenges in the support for intrapreneurial behaviour

According to Buekens (2014), the support for intrapreneurial behaviour is hampered by several challenges in the organisation's internal and external environment. One of the challenges has to do with the ineffectiveness of traditional management techniques in organisations regarding the development of new ventures. Several reasons mainly cause this. Firstly, organisations fail to align their visions to the realities of the marketplace (Loveday & Ogidi, 2015). Secondly, organisations fail to adopt a flat management structure and maintain small project teams (Loveday & Ogidi, 2015). Thirdly, managers in organisations tend to inhibit the parallel development of projects and the development of ideas across traditional functional lines. This includes discouraging groups from functioning outside traditional lines of authority (Loveday & Ogidi, 2015).

Another challenge specific to universities is that universities cannot effectively engage in entrepreneurial activities due to insufficient resources (Tatarski *et al.*, 2020). According to Bysted and Jespersen (2014), stimulating employees' intrapreneurial behaviour is a complicated process that demands an internal climate that encourages generating and realising ideas through financial, participative and decentralisation mechanisms. This is because the third mission has meant the managerial reorganisation of university resources to create capabilities that enable the generation of transferable knowledge, especially in creating new organisations with which their value can be exploited. Further, this challenge also arises because Botswana, like many other developing countries, has inadequate resources to foster entrepreneurial orientation in its universities (Foss & Gibson, 2015). The available resources are also insufficient due to the poor engagement and support of the industry and stakeholders in general. The active engagement and support of the business sector and stakeholders are critical for generating social and economic benefits from university research (Etzkowitz, 2012).

Other challenges are social, economic, legal and technological. All these are environmental in nature (Kasturi *et al.*, 2019). Social values and norms extensively

affect the innovative approaches that different organisations adopt, and they tend to influence different political, economic, social and technological changes, which are also vital for the growth and success of intrapreneurial initiatives (Baruah & Ward, 2014). Intrapreneurs, therefore, need to be constantly engaged with current and future conditions of the market by acquiring knowledge on the different cultural aspects of the target market and customer base, ensuring that their innovations are mainly aimed at offering more excellent customer value and satisfaction to gain a superior competitive advantage (Baruah & Ward, 2014). However, organisational leaders tend not to be flexible and adaptable to cope with these external environmental factors. As a result, intrapreneurial organisations face the challenge of meeting the rapidly changing trends and demands of the market by not adapting and evolving quickly (Guyen, 2020; Czerniachowicz & Wieczorek-szymańska, 2019; Tatarski *et al.*, 2020).

Further, regarding economic challenges and with specific reference to Botswana, the country will have a small economy with a population of 2.4 million in 2021 (International Finance Corporation, 2022). This presents the challenge of the small product markets that hinder the innovative and research potential in the universities. Legally, there are still no clear policies or structures for facilitating the effective transfer of academic knowledge, the setting up of incubations for new businesses and how all these are to contribute to socio-economic development (Czerniachowicz & Wieczorek-szymańska, 2019). All these challenges can be seen through the difficulties faced in maintaining research skills, lifelong learning, and building a community that can sustain and expand vital knowledge alongside social principles and ethics (Aldawod & Day, 2017).

7.5.7 The findings and conclusions of the research questions

The study contributes to the literature on how the support for intrapreneurial behaviour contributes to improved organisational performance through its enriched findings and conclusions, which align with the research questions.

What is the nature of the intrapreneurial behaviour in Botswana's large tertiary education institutions?

The intrapreneurial behaviour in the universities involves opportunity identification, the production of ideas and the creation of new products and business lines. The academics' intrapreneurial behaviour is demonstrated through their skills and competencies in specific activities that include identifying and exploiting opportunities, entrepreneurial education and initiatives, employment creation, industry engagement and stakeholder engagement through community service, inter-varsity partnerships, research and knowledge transfer, consultancies and incubations as well as business start-ups. All these activities are of great importance to improved university performance.

What are the managers' interpretations of university support for intrapreneurial behaviour in Botswana's large tertiary education organisations?

The research found that the managers' interpretations of university support for intrapreneurial behaviour can be placed in four categories. The first category is top management support and resource availability, which comprises support for process improvement, support for initiatives, business development and revenue generation, policy and strategy development, and enabling industry engagement. The second category is training programmes, including training, policy, and strategy development. The third category is organisational boundaries, which consists of enabling industry engagement, inter-varsity collaborations and developing policy and strategy. The fourth category is transparency and open communication, which involves setting up structures and policy and strategy development. All forms of university support for intrapreneurial behaviour must have one aspect in common: policy development. Policies are very important in supporting intrapreneurial behaviour and successfully executing academic entrepreneurship activities that improve organisational performance.

What are the internal and external environmental factors influence the support for intrapreneurial behaviour?

The internal environment factors that influence the support for intrapreneurial behaviour in the universities include individual entrepreneurial cognitions and motivational dimensions such as product development, staff welfare and support and incentives and rewards. There are also organisational work environment conditions that include process improvement, inter-varsity collaborations, a conducive environment, professionalism and enthusiasm for intrapreneurship, financial provision and available resources, organisational vision and culture, provision of training, and the various challenges that the universities face. On the other hand, the external environment factors that influence intrapreneurial behaviour include a conducive business environment, a technological environment, process improvement activities, and the dynamism in the environmental factors, namely political, economic and social. There is also a degree of industry and government funding as well as stakeholder engagement and support through training. The government's vision and strategic direction also influence the university's support for intrapreneurial behaviour. There is a degree of environmental munificence. The internal and external environment, therefore, align to influence organisational performance.

What are the major challenges experienced in the support for intrapreneurial behaviour?

The findings show that the universities face internal and external organisational support challenges. The main internal support challenges include limited access to resources, lack of rewards, no work discretion, delayed change, insufficient knowledge of the entrepreneurial university concept, low university capability, low staff intrapreneurial behaviour, low idea generation, poor human resource management, staff and student resistance, low levels of industry collaborations, heavy workload and high staff turnover. The main external organisational challenges, on the other hand, include the small economy and market in Botswana, the failure of industry partnerships, academia not

meeting industry expectations, academics not seen as entrepreneurial, corruption and theft in government research funding for the universities, low entrepreneurial behaviour in Botswana, no to few industry collaborations, financial, technological and legal challenges. All these challenges make nurturing intrapreneurial behaviour difficult as the pressure they exert on the universities' structures and processes limits their innovative capabilities and, consequently, the improvements in organisational performance.

How does intrapreneurial behaviour contribute to improvements in organisational performance?

The academics' intrapreneurial behaviour is contributing to improvements in organisational performance through the development of a university entrepreneurial strategy, the setting up of consultancies, the development of technologies, the establishment of collaborative partnerships with organisations in and out of academia, the offering of entrepreneurial education, the resultant financial gain and survival, the increase in student placements in the industry, the winning of research funding, the generation of spin-offs and the gaining of competitive advantage and distinctiveness. All these contributions lead to improved performance and growth.

What are the recommendations for improving support for intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and improving performance through intrapreneurial behaviour?

This study enriches the available literature on the support for intrapreneurial behaviour and its effect on organisational performance by focusing on the challenges in the support for intrapreneurial behaviour and providing recommendations. These recommendations are in three areas: improving the support for intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour and improving performance through intrapreneurial behaviour. These recommendations are discussed in sections 6.13 and 7.3 of the study.

7.6 ETHICAL CONSIDERATIONS

The researcher made several ethical considerations in this study, as these are mandatory in designing a research study (Neuman, 2014:145). To begin with, the researcher obtained approval for the research from the North-West University Ethics Committee, and the Ethics clearance number is NWU-00623-22-A4. Further, a research permit was granted by the Department of Research, Science and Technology, which falls under the Ministry of Tertiary Education, Research, Science and Technology in the Government of Botswana. The Ethics committees in the five participating universities also issued the researcher with letters of permission to conduct research or Ethical Clearance Certificates.

The researcher ensured that acceptable levels of integrity and quality were attained by providing all the details on the nature of the research, such as any potential risks and benefits, to uphold the participants' human dignity (Du-Plooy Cilliers *et al.*, 2014:262). The researcher prepared contingencies to maximise the benefits, reduce the study risks, and manage incidents. This was done by ensuring that all interviews were conducted in spaces that ensured privacy and no harm. The study was also conducted independently and impartially to ensure further integrity and quality.

Participants were selected equitably, and informed consent was acquired from them to ensure voluntary participation (Neuman, 2014). The participants' confidentiality and anonymity were upheld and informed of their right to ask questions. Further, participants were allowed to withdraw from the study at any time (Huang *et al.*, 2016).

7.7 LIMITATIONS OF THE STUDY

This study was limited by the very few prior research studies in Botswana on the research topic. This presented a limitation in laying a foundation for understanding the research problem under investigation, especially in the context of Botswana. However,

literature on the support of intrapreneurial behaviour in other African universities, such as South Africa and Nigeria, provided a reliable and adequate reference point.

Further, the universities that were sampled to participate in the study are all located in Gaborone. This potentially limits the scope, outcome and generalisability of the study's findings. However, the researcher endeavoured to sample a diverse range of universities within Gaborone by including both government-owned and private-owned universities, all with diverse management styles, structures and resource availability.

Access to the managers in these selected universities proved not to be easy as these people had busy schedules and also because of the COVID-19 social Distancing regulations that were in place during the data collection. Therefore, access was dependent on the goodwill of the participating universities. This was achieved by negotiating formal and firm interview schedules. The interviews were conducted in person and online via Google Meet or WhatsApp. However, the use of online applications also limited the length and quality of the interviews at times because of intermittent internet connectivity or background noise on the side of the participants. Some managers work from open-plan staffrooms at some of the participating universities. To address the situation, the researcher emailed the interview schedule to the participants for them to also complete it in writing and email it back so as to supplement the data collected during the verbal online interviews.

The researcher provided the sampling criteria to the contact person in the Ethics Committees of each of the participating universities. However, some of the participants assigned to be in the sample in some universities seemed not to be very aware of their universities' intrapreneurial initiatives and support for intrapreneurial behaviour. This was addressed by requesting another participant with adequate knowledge and experience to answer the interview questions.

Time was yet another limiting factor as the researcher was studying full time while at the same time being a full-time employee. However, being a lecturer provided time for the research during semester breaks.

7.8 CONSIDERATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The following considerations and recommendations are suggested for future research:

This study's researcher interviewed only ten research participants. Future research may involve a larger sample size to generate richer qualitative insights. Further, only universities in Gaborone were purposefully sampled for this study. Future research may sample universities from different parts of Botswana to widen the study's scope and outcome.

Internal environment dimensions are under management control, unlike the external environment. However, these dimensions of intrapreneurial intentions continue to lack empirical studies in the literature (Marchiori *et al.*, 2018). Further, research on the specific conditions under which internal entrepreneurial initiatives of firms can prosper in particular types of organisations is also scarce (Rigtering & Weitzel, 2013). A recent stream of research even shows that different intrapreneurial conditions may explain employees' intrapreneurial behaviour in SMEs and large firms (e.g. Zellweger & Sieger, 2012; Hughes & Mustafa, 2017). As such, more studies, like this one, that look into the internal environment dimensions that influence the support for intrapreneurial behaviour in large tertiary education institutions within the context of developing countries must be carried out.

Further, a few studies have empirically studied the dimensions that influence the intentions of individuals to become intrapreneurs (Marchiori *et al.*, 2018:916). Research on the review of individual-level intrapreneurship is not standard, and so there is a need for more research at this level (Blanka, 2019:921). This is because entrepreneurial employees and their human capital are vital to the success of intrapreneurial initiatives.

As such, intrapreneurial dimensions that influence intrapreneurs must be closely studied (Blanka, 2019:921).

With specific reference to the entrepreneurial university, It is noted that this university model is a complex phenomenon that consists of diverse academic traditions, research values, levels of decision-making and sub-organisational cultures (Guerrero *et al.*, 2016a; Klofsten *et al.*, 2019; Phillips, 2018). In an attempt to address the complexities, research on this phenomenon has been done in different contexts and countries (Dalmarco *et al.*, 2018; Elia *et al.*, 2017; Riviezzo *et al.*, 2017; Sperrer *et al.*, 2016). The research has, however, not provided in-depth and exhaustive insights into the dimensions of the entrepreneurial university phenomenon (Farrukh *et al.*, 2019). There is a need for more studies that will provide sufficient knowledge on the micro-foundations of the entrepreneurial university and its faculty members' engagement in the third mission (Freel *et al.*, 2019), especially in developing countries (Elert *et al.*, 2019).

Further, although scholars have developed theoretical models that explain the entrepreneurial university phenomenon (Clark, 1998a; Gibb, 2012; Markuerkiaga *et al.*, 2014.; O'Shea *et al.*, 2007.; Salamzadeh *et al.*, 2011), not much has been covered on the elements that lead to the development of an entrepreneurial university (Guerrero & Urbano, 2012). There is a need for more research to be done on what exactly influences the roles, motivations and perceptions of entrepreneurship among academics (Göktepe-Hulten & Mahagaonkar, 2010; Clarysse *et al.*, 2011).

There is also a knowledge gap on how a university can effectively react to the entrepreneurial imperatives. Extended research is needed to provide vital knowledge for establishing a framework derived from theory, which would guide policymakers and foster an understanding of the wider consequences of increased socio-economic engagement (Nelles & Vorley, 2010).

There is also very little in-depth research on the effects of the changes in university governance on teaching and research, which are a consequence of the university's involvement in entrepreneurial activities (Muscio *et al.*, 2017). More research in this area is of great importance mainly because most academic staff have not widely accepted the standards and establishment of an entrepreneurial culture (Etzkowitz, 2003a; Sá *et al.*, 2018).

It has been further noted that policymakers' and academics' interest in intrapreneurship has grown in the last decade, focusing on diverse aspects (Alam *et al.*, 2020). However, intrapreneurship is not as widely practised as expected. There is a need for more empirical evidence on the internal and external environmental factors that foster intrapreneurial behaviour within an organisation and its positive impact on organisational performance to encourage practical support for intrapreneurial behaviour.

7.9 REFLECTIONS OF THE RESEARCHER

On the 18th of August 2008, I was employed as a lecturer in the Faculty of Communication, Media and Broadcasting at Limkokwing University of Creative Technology. I was amazed at the nature of this university as I had never experienced any university that operated in that manner. I walked into a campus that was a hype of business activities amidst the teaching and research that was happening. The campus had a fully-fledged restaurant, a hair salon and a Centre for Content Creation that catered for both internal and external customers, run by staff and students. The students were also involved in incubations, most of which became registered companies in areas such as Event Management, Digital Film, Fashion and Design, Music and Sound Engineering, to mention but a few. There were fashion parades, filmmaking events, film festivals, costume and film make-up parades, architectural and built environment designs, and computer graphic designs of products and marketing materials that created a frenzy on the campus grounds. The university was performing at its best with over 11 000 students in enrolment, who were being highly sought after by the industry.

The university founder and president also coined the concept "Industry", which was elaborated on in our staff meetings and lecture rooms. This concept is a merger of two words: Industry and University. The emphasis was on industry engagement and collaborations that would ensure that a Limkokwing graduate and lecturer would provide solutions for the industry before the industry even realised they had that need. The university president made it a rule that no programme would be developed without the involvement of industry captains and that the university must have a group of industry advisors for each faculty in the university. I became very passionate about how Limkokwing University operated. It awakened something deep in me that made me want to fully understand and embrace the university's philosophy. I began to learn that Limkokwing University was an Entrepreneurial University through the set of a department called Learners' Entrepreneurial Acceleration Platform (LEAP), whose main mandate was to facilitate internships and incubations for students as well as to engage various stakeholders such as the industry, government and community in the entrepreneurial initiatives within the university's academic and administrative departments.

However, as I continued to work at this university, I noticed that something was amiss in the actual implementation of the entrepreneurial university model and the nature of the support for the academics' intrapreneurial behaviour. The nature of the intrapreneurial behaviour that I found when I joined the university was no longer evident, and consequently, student numbers dropped to less than 4000, and enrolment kept dwindling. Most of the intrapreneurial initiatives had stopped, and most intrapreneurs had left the organisation. The talk in the university was now more on low finances and the need to retrench and not renew staff contracts. Next door to the Limkokwing University Campus was the University and across town, the University, to mention but a few, which had adopted the Limkokwing University model or rather the entrepreneurial university model, and they are thriving despite the difficult post-covid situation in Botswana. My doctorate topic was therefore inspired by Limkokwing University's failure as an entrepreneurial university and the improved performance of the competing

universities that have adopted the entrepreneurial university model and are practically supporting their academics' intrapreneurial behaviour.

My passion was driven further by the fact that the Botswana government is calling on the tertiary education sector to improve its performance in developing skills that are relevant to the industry and developing an entrepreneurial nation. In this regard, the success stories of these universities deserve to be well-told so that their impact can be well captured.

Through God's grace and favour, I was granted the main research permit from the Government of Botswana and other research permits by the various Ethics Committees in the five large tertiary education institutions sampled. Through these permits, I was able to secure interviews with low and middle-level managers in these universities who have been actively involved in intrapreneurial initiatives. I was humbled by the managers' willingness to set aside time to answer my interview questions amidst their busy work schedules. They shared how hectic their schedules were but expressed their commitment to ensuring that I got the help I needed. They welcomed me with joy, and when the interviews began, we lost track of time because, in their words, it felt more like a lovely introspective chat and not an interview. I was captivated by both their insight into the support for intrapreneurial behaviour and its great impact on organisational performance if well implemented and their lived experiences of this phenomenon.

As a qualitative researcher, I also became the research instrument, as I assumed the posture of capturing all these details on how the support for intrapreneurial behaviour can positively influence organisational performance through several enablers and facilitating mechanisms. I immersed myself in the world of the entrepreneurial university and the intrapreneurial academic and came back to tell the profound stories of both the challenges faced and the positive contributions of intrapreneurial behaviour on organisational performance. This journey has left me with a great zeal to share these findings with not only the universities that participated in this study but also with many other universities in Botswana and other parts of Africa, as well as the world as a whole.

7.10 SUMMARY

This final chapter provided a summary and conclusion of the study. It summarised both the secondary and primary research findings. It also presented recommendations for improving the support for intrapreneurial behaviour, dealing with challenges in supporting intrapreneurial behaviour, and improving performance through intrapreneurial behaviour. This chapter further discussed the theoretical base and the contributions of this study. The considerations and recommendations for future research were presented and the reflections of the researcher were shared.

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ANNEXURE A: RESEARCH PERMITS AND INFORMED CONSENT CORRESPONDENCE LETTERS

To begin the data collection, a research permit was obtained from the Department of Research, Science and Technology (DRST) under the Ministry of Tertiary Education, Research, Science and Technology in Botswana. A letter of introduction was delivered by hand to the DRST for this purpose. Once the research permit was issued, it was also delivered by hand together with the letter of introduction and the NWU Ethical Clearance to the Ethics Committees in the five large tertiary education institutions that were selected using the purposive sampling method. Once the Ethics Committees responded and issued letters or research permits for the collection of data, an interview date and means for the interviews (virtual or in person at the university) were set as this was during the Covid-19 pandemic social distancing protocols. The signed written consent was either obtained or emailed and kept safely for identity protection.

1. Letter of Introduction

TO WHOM IT MAY CONCERN

Dear Sir/Madam

RE: PERMISSION FOR MOONO MM KAPAMBWE TO CONDUCT RESEARCH

Moono Kapambwe is conducting a study titled **“Exploring the support of intrapreneurial behaviour for improved performance: a case of Botswana’s large tertiary education institutions”** under the North-West University Business School. The study explores how managers in academia implement and evaluate important internal and external organisational factors that enhance employees’ intrapreneurial behaviour.

The study will contribute to the body of knowledge on the entrepreneurial university, specifically on the importance of an internal and external environment that influences employees’ entrepreneurial mindsets and, consequently, intrapreneurial behaviour. It is anticipated that the results will benefit managers and employees in tertiary education institutions in Botswana and elsewhere with knowledge on innovative internal environments that lead to the creation and sustenance of intrapreneurial behaviours for improved organisational performance regarding competitiveness, profitability and survival. Policymakers in the Ministry of Education and other ministries that build Botswana’s knowledge economy will also have some guidelines from the study for policy formulation and implementation linked to the entrepreneurial university. Further, the study will promote the vital linkage between tertiary education institutions, the government and the industry, who are all critical players in enhancing the entrepreneurial university’s role in national economic growth.

We ask you to kindly allow her to access data from managers and employees who have been involved in your university's intrapreneurial activities. The data on the perspectives of the academic intrapreneurs will be collected through face-to-face interviews, in person or online.

Please feel free to contact me at any time should the need arise.

I am looking forward to your favourable response to our request.

Kind regards



PROF STERPHAN VAN DER MERWE
STUDY PROMOTER

Date: 21 April 2022

2. Research Permit from the DRST

Telephone : 3655400 / 3655483

Fax: 3914271

E-mail: botsamote@gov.bw



Block6, Government Enclave, Headquarters
Private Bag 00517 Gaborone

MINISTRY OF TERTIARY EDUCATION, RESEARCH, SCIENCE AND TECHNOLOGY

REF: MOTE 1/18/6 X (27)

11th April 2022

Mrs Moono M.M. Kapambwe
P O Box 1225 ABG Sebele
Gaborone

Dear Madam,

Application for Research Permit: Proposing a framework to support intrapreneurial behaviour for improved performance: A case of Botswana's large tertiary education institutions

Reference is made to your application on the above captioned matter.

Your application for Research Permit for the proposed research titled: ***'Proposing a framework to support intrapreneurial behaviour for improved performance: A case of Botswana's large tertiary education institutions.'*** has been granted with proposed amendments. The permit is valid for one (1) year. You are kindly advised to peruse section 4.4 to 5.0 of 'Guidelines for Application for Research Permit' in Botswana.

Any changes in the proposed research should be communicated, without fail, to the Permanent Secretary, Ministry of Tertiary Education, Research, Science and Technology citing above reference. You are advised to submit final research report to the Department of Research, Science and Technology.

By copy of this letter, the Director of Research Science and Technology (DRST) is advised to take note of this development and ensure that deliverables to government are timely met. Furthermore, you are requested to deposit completed research report to DRST.

Yours faithfully
Lesego M Thamae
For/Permanent Secretary

cc: Director of Research Science and Technology



Achieving Prosperity for All

3. Research Clearance Letter from one of the five purposively sampled universities



Head Office /
Gaborone Campus
11 Koi Street,
Ditlhamodimo, Gaborone, Botswana
T (+267) 3957744
F (+267) 3957709
gaborone.campus@baisago.ac.bw

BA ISAGO University
11 Koi Street
Peolwane, Gaborone, Botswana
Private Bag BR 94
Gaborone
25th May 2022

Dear Ms. Moono Kapambwe

REF: PERMISSION FOR MOONO MM KAPAMBWE TO CONDUCT RESEARCH

This serves as a response to your letter dated 21st April 2022 as a request to conduct research in BA ISAGO University. BA ISAGO University through the School of Graduate Studies and Research (SGSR) has accepted your request. You are therefore allowed to administer your questionnaires/interviews as per your request.

Should there be any changes in the process of your request, it is advisable to communicate with the SGSR. Our hope is that all the responses collected from BA ISAGO University premises will be kept confidential by adhering to research ethics. Please, kindly submit a hardcopy of your report to the SGSR as this may benefit the University. Thank you.

Yours Sincerely

A handwritten signature in blue ink, appearing to read "L. Abidile", with a stylized flourish at the end.

L. Abidile Research
Assistant

**Cc: Manager Research and Innovation – School of Graduate Studies and Research
Chairperson – Research Ethics Sub-Committee**

4. Informed Letter of Consent

22 April 2022

To: Potential interview participant

INFORMED CONSENT TO PARTICIPATE IN AN INTERVIEW

Date: _____ Participant code: _____

My name is Moono Kapambwe, and I am a doctoral student at the North-West University Business School. This study aims to explore the support of intrapreneurial behaviour for improved performance in Botswana's large tertiary education institutions.

This research contributes to the body of knowledge on the entrepreneurial university, specifically on the importance of an internal and external environment that influences employees' intrapreneurial behaviour in the tertiary education sector. It aims to provide evidence on how managers in academia can implement and evaluate important internal and external organisational factors that enhance employees' intrapreneurial behaviour.

The findings on supporting these factors will enable managers and employees in tertiary education institutions in Botswana and elsewhere to become committed to supporting innovative internal environments that lead to improved organisational performance. Further, the results of this study will guide managers in assessing their own interpretations and those of their employees toward the organisation's internal and external environment that are critical to the creation and sustenance of intrapreneurial behaviours.

This study will contribute to the possibility of tertiary education institutions' successful implementation of an innovative strategy through a framework for enhancing intrapreneurial behaviour generated from the findings. This framework will guide tertiary education institutions in identifying areas of the internal and external environment that require continuous focus and development effort. These organisations will further become aware of the organisational factors that influence individual intrapreneurial behaviour and how this leads to organisational outcomes. Therefore, the tertiary education institutions will be equipped to take action to stimulate the process as they face today's times of increased competition and economic downturn when most companies are sceptical about investing in the future, let alone in their employees.

The study may also have implications for government policymakers, mainly in the Ministry of Tertiary Education, Research, Science and Technology and other ministries that build Botswana's knowledge economy. It may further have implications for various industry stakeholders who are critical players in enhancing the entrepreneurial university's role in national economic growth. By assessing the nature and support of intrapreneurial behaviour in Botswana's large tertiary education institutions, recommendations will be put forth on promoting internal and external organisational factors that

moderate intrapreneurial behaviour. This could lead to improved organisational performance regarding competitiveness, profitability and survival.

This study forms part of a thesis to be submitted in partial fulfilment of the requirements for the Doctor of Philosophy in Economics and Management Sciences with Business Administration at the Potchefstroom campus of the North-West University. An internationally accredited degree requires adherence to strict ethical standards as a prerequisite to conducting this research.

I appreciate your willingness to participate in the interview. Your participation is voluntary, and you do not have to answer any questions you do not want to answer. If you do not wish to continue with the interview at any time, you may decline.

Limited demographic information will be collected to form a profile of the participants but will not be used to make comparisons between groups or for further statistical analyses.

Your time and involvement are profoundly appreciated. The entire interview will take approximately 90 minutes. To maintain the essence of your words for the research, I will record the information. You may request to see or hear the information I collect at any time. Although the interview will be voice-recorded, your name will not be recorded. The interviewer will take notes. This is done for data analysis. The interviewer will transcribe the recording and kept confidential on a password-protected computer. The transcripts and recordings will be destroyed after three years.

Furthermore, all individual identification will be removed from the hard copy of the transcript, and participant identity and confidentiality will be concealed using coding procedures. Please note that excerpts from the interview may be included in the final dissertation report or other later publications. However, under no circumstances will your name or identifying characteristics appear in these writings. If biographical data were relevant to a publication at a subsequent date, a separate release form would be sent to you.

Your input is of great value to the research, and I appreciate your help in providing the information. I would be grateful if you would sign the form on the below line to show that you have read and agree with the contents. Please return it by email to me at kmoono@mail.com. An electronic signature is acceptable.

Your electronic signature above

The supervisor of the thesis is Professor Stephan Van der Merwe. He can be reached at 018 299 1414 (Email address: stephan.vandermerwe@nwu.ac.za) for further questions or concerns about the research project.

Your input is of great value to this research, and I appreciate your help in providing this information.

Sincerely,

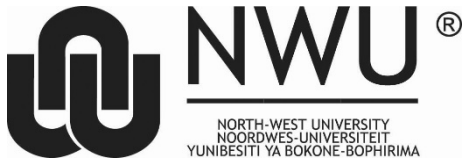
MOONO MILLIE MUUNGO KAPAMBWE

31428010

NWU Business School

North-West University, Potchefstroom Campus

ANNEXURE B: ETHICS APPROVAL LETTER



Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222

Fax: 018 299-4910

Web: <http://www.nwu.ac.za>

Senate Committee for Research Ethics

Tel: 018 299-4849

Email: nkosinathi.machine@nwu.ac.za

25 April 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Economic and Management Sciences Research Ethics Committee (EMS-REC)** on 22/04/2022, the Economic and Management Sciences Research Ethics Committee hereby approves your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-RERC) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Proposing a framework to support entrepreneurial behaviour for improved performance: A case of Botswana's large tertiary education institutions

Study Leader/Supervisor (Principal Investigator)/Researcher: Prof SP van der Merwe – PhD in Business Administration

Student: Kapambwe, MMM (31428010)

Ethics number:

N	W	U	-	0	0	6	2	3	-	2	2	-	A	4
Institution				Study Number					Year		Status			

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Application Type:

Commencement date: 25/04/2022

Risk:

Low

Expiry date: 25/04/2023

Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.

Special in process conditions of the research for approval (if applicable):

•

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

- The study leader/supervisor (principle investigator)/researcher must report in the prescribed format to the EMS-REC:
 - annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and
 - without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.
- The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the EMS-REC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.
- Annually a number of studies may be randomly selected for an external audit.
- The date of approval indicates the first date that the study may be started.

n the interest of ethical responsibility, the NWU-SCRE and EMS-REC reserves the right to:

 - request access to any information or data at any time during the course or after completion of the study;
 - *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
 - *withdraw or postpone approval if:*
 - *any unethical principles or practices of the study are revealed or suspected;*
 - *it becomes apparent that any relevant information was withheld from the EMS-REC or that information has been false or misrepresented;*
 - *submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or*
 - *new institutional rules, national legislation or international conventions deem it necessary.*
- *Please note that the ethics approval of this application is subject to the Covid-19 protocols.*

The EMS-REC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the EMS-REC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely,

MARK
Rathbone

DIGITALLY SIGNED BY MARK RATHBONE
DN: cn=Mark Rathbone, o=North-West University, ou=Business management, email=mark.rathbone@nwu.ac.za, c=ZA
Date: 2022.04.25 16:58:33 +02'0

Prof Mark Rathbone

Chairperson: NWU Economic and Management Sciences Research Ethics Committee

ANNEXURE C: SEMI-STRUCTURED INTERVIEW GUIDE

NORTH-WEST UNIVERSITY

PhD Research Project

Researcher: Moono Millie Muungo Kapambwe (+267 72 859 960)

Supervisor: Prof SP van der Merwe (+27 82 335 0578)

TITLE: Proposing a framework to support intrapreneurial behaviour for improved performance: A case of Botswana's large tertiary education institutions

INTERVIEW SCHEDULE

i. INTRODUCTION

This study seeks to establish a framework and infrastructure to support intrapreneurial behaviour for improved performance in Botswana's large tertiary education institutions. This study will inform the future strategies to be employed by managers and employees to increase the success of the academic intrapreneurial initiatives.

ii. PARTICIPANTS:

- Managers/Directors/Heads of tertiary education institutions/universities

iii. INTERVIEW PROCESS

OPENING

- **Introductions:** I am Moono Millie Muungo Kapambwe. Welcome to the interview.
Thank you for taking the time to be part of this study.

- **Outline the purpose of the interview and provide motivation to explain why the interview is essential:** The objective of this study is to develop a framework and infrastructure for the support of intrapreneurial behaviour for improved performance in Botswana's tertiary education institutions. By intrapreneurial behaviour, I mean the intentional and perpetual behaviours to transform the organisation and frame its range of business ventures through recognising and exploiting entrepreneurial possibilities. I would like to get your experience as a Manager/Director/Head of the university, and to assist in this regard, I will be asking you a few questions as probes to our discussion.
- **Timeline:** This interview will not take longer than 1.5 hours of your time (90 minutes)

iv DEMOGRAPHIC INFORMATION

Before we start with the interview, I would like to get your demographic information as this will assist me in creating a profile of the participants and the university

Please state the following:

1. Your marital status
2. Your gender
3. Your age during the last birthday
4. Your highest level of academic education
5. The length of your work experience in an entrepreneurial university
6. When was your university founded?
7. Where is your university located?
8. How long has your university been entrepreneurial?
9. How many employees does the university have?

v. INTERVIEW QUESTIONS

This part of the study seeks to understand the manager's experiences of the intrapreneurial activities in the university. This semi-structured interview intends to address the following areas:

Q1: As someone in a managerial position, what are your views and/or perceptions about the entrepreneurial university?

- **Probe:** Considering these perceptions shared, how and to what extent do these relate to this university? (Can you please share some examples).
- **Probe:** How do these aspects manifest within this university? (e.g. policies, strategies and the environment, also include some of the examples given by the participant in this probe).

Q2: Reflecting on the academic as an employee. How would you, as a manager, describe the concept or idea of an “intrapreneurial academic” within the context of this university?

- **Probe:** How would you describe the behavioural traits of a high performing intrapreneurial academic?
- **Probe:** How would you describe the behavioural traits of a low performing intrapreneurial academic?

For the following questions, I would like you to reflect on this university context, specifically the university's strategic intent, organisational structure, environment, stakeholders, and policies, to name a few factors.

Q3: In your experience, how does the university support intrapreneurial behaviour?

- **Probe:** Which factors would you highlight as key in supporting intrapreneurial behaviour?

- **Probe:** Which factors would you identify as lacking or missing within your current context?

Still reflecting on these factors and the support for intrapreneurial behaviour within your university,

Q4: What environmental factors can you identify as influential in supporting intrapreneurial behaviour within the context of this university?

Probe: Apart from the factors already mentioned, what other factors can you identify within the university's environment?

- Internal organisational dimensions
- External organisational dimensions

Q5: Considering the factors mentioned, in your experience, can you please describe how and to what extent these factors impact the intrapreneurial behaviour within this university?

- **Probe:** Impact of the internal organisational dimensions
- **Probe:** Impact of the external organisational dimensions

Q6: What do you consider to be the major challenges experienced by the university in the support for intrapreneurial behaviour?

- **Probe:** Internal organisational support challenges
- **Probe:** External organisational support challenges

Thank you for your valuable contributions this far. There are only two more questions that I would like to ask you.

Q7: Considering everything we have discussed this far, can you please describe the contributions made by intrapreneurial behaviour on the university's performance?

- **Probe:** What factors do you include for determining high or low performance?

- **Probe:** Is there a specific measure used by the university, and if so, can you give some examples?

Q8: If given the opportunity and platform, what recommendation on intrapreneurial behaviour will you give to key role-players within the university context about?

- Supporting intrapreneurial behaviour
- Dealing with challenges in supporting intrapreneurial behaviour
- Improving the university's performance through intrapreneurial behaviour

Thank you, this then brings us to the end of the interview. Before we conclude,

- Is there maybe something you would like to add regarding the different aspects we have discussed during the interview?
- Is there maybe something you would like to ask me regarding the research or anything else relating to it?

vi. CLOSING

Action to be taken:

The interviewees will be advised that the results will be published in the PhD thesis and how they can access these if they wish to do so.

Thanking the interviewee for his/her time.

Confirming if the interviewee may be contacted if something is unclear.

ANNEXURE D: TRANSCRIBED AND CODED INTERVIEW AS AN EXAMPLE

CODING DONE BY MOONO MILLIE MUUNGO KAPAMBWE

KEY

Red – Entrepreneurial University

Light green – Intrapreneurial Academic

Green – Support by the university/Enablers

Dark red – Hindrances to intrapreneurship

Light blue – Influence of the environment/Enablers

Orange – Impact of the environment

Gold, Accent 4 - Challenges

Purple - Contributions

Pink – Recommendations

INTERVIEW: PARTICIPANT #2		
Notes	Transcription	Codes
	Before we start with the interview, I would like to get your demographic information as this will assist me in creating a profile of the participants and the university. Please state the following: 1. Your marital status – PARTICIPANT 2: Married 2. Your gender – PARTICIPANT 2: Male	Demographic information

	3. Your age during the last birthday – PARTICIPANT 2: 39 years old 4. Your highest level of academic education – PARTICIPANT 2: PhD 5. The length of your work experience in an entrepreneurial university – PARTICIPANT 2: 15 years 6. When was your university founded? – PARTICIPANT 2: 1997 (25 Years) 7. Where is your university located? – PARTICIPANT 2: Botswana, Gaborone 8. How long has your university been entrepreneurial? – PARTICIPANT 2: 15 Years 9. How many employees does the university have? – PARTICIPANT 2: Over 200	Married Male 39 years old PhD qualification 15 Years of experience in an entrepreneurial university The university was founded in 1997. University located in Botswana, Gaborone The university has been entrepreneurial for 15 years. The university has over 200 employees
	This part of the study seeks to understand the manager's experiences of the intrapreneurial activities in the university. This semi-structured interview intends to address the following areas: INTERVIEWER: As someone in a managerial position, what are your views and/or perceptions about the entrepreneurial university?	Question 1
	PARTICIPANT 2: From how you have explained it, I think is quite an important	Further research into something tangible

	concept because it tries to further research into something that is tangible, something that would benefit the university, the individual and the economy at large. So it is quite an important concept because it promotes innovation and this idea of putting the entrepreneurship mind-set in staff, students and even in management is good for the economy at the end of the day.	Benefits the university, the individual and the economy Promotes innovation Promotes the entrepreneurial mind-set in staff, students and management. Good concept for the economy
	INTERVIEWER: Considering these perceptions shared, how and to what extent do these relate to this university? (Can you please share some examples).	Probe 1
	PARTICIPANT 2: If I understood your conception of an entrepreneurial university, I would say to a greater extent this university is trying to push into that direction. I believe that Botho University is quite driving in that direction. First of all, by ensuring that there is an entrepreneurship module that runs across the university. Secondly, by trying to promote those students who appear to have an innovative mind-set through nurturing them through our E-Lab. And also, we have a module called the ISD, Innovation for Sustainable Development. I think in itself, it is a module that promotes an entrepreneurial spirit. And maybe above all, we have the Botho Graduate Profile, the BGP. And one of its tenets is to create and emphasise the element of entrepreneurship in the university community.	University pushing to become entrepreneurial Entrepreneurship module in all university programmes Nurturing students with an innovative mind-set through an E-Lab Offer of Innovation for Sustainable Development (ISD) module ISD module to promote an entrepreneurial spirit Set up of the Botho Graduate Profile (BGP)

		BGP creates and emphasises entrepreneurship
	INTERVIEWER: How do these aspects manifest within this university? (e.g. policies, strategies and the environment, also include some of the examples given by the participant in this probe).	Probe 2
	PARTICIPANT 2: I would not say we have a strategy or policy for an entrepreneurial university but I would say we have strategic objectives as a university. And one of the key issues in these strategic objectives is to ensure financial viability and I think it takes an entrepreneurial mind-set for one to be economically sustainable or to have that financial viability. So I think within that document, our strategic plan, elements of entrepreneurship can be derived from what happens within the university based on the 2018 to 2022 strategy that we have. The activities within the internal environment of this university, like I said earlier, include the entrepreneurship module that runs across the university, promoting and nurturing of students with an innovative mind-set through staff-led activities in the E-Labs, the module called Innovation for Sustainable Development (ISD) and through the Botho Graduate Profile (BGP) which all aim to promote an entrepreneurial mind-set in the university community.	No strategy or policy for an entrepreneurial university. The university has strategic objectives. Strategic objectives are to ensure financial viability. The university has a five year strategic plan. Entrepreneurship elements exist in university activities.
	INTERVIEWER: Reflecting on the academic as an employee. How would you, as a manager, describe the concept or idea of an “intrapreneurial academic” within the context of this university?	Question 2

	PARTICIPANT 2: I think an intrapreneurial academic is someone who utilises their academic knowledge, research, in order to earn a living out of it. For instance, I would say if I am a researcher and I am invited to make a presentation and I cost my time and charge for it for doing so, I become an intrapreneurial academic because I am commodifying my abilities, my competencies, what I can do best.	Employs academic knowledge and research to earn a living. Commodifies abilities and competencies.
	INTERVIEWER: How would you describe the behavioural traits of a high-performing intrapreneurial academic?	Probe 1
	ANSWER: I think I just said that someone who really values their worth as an academic and ensures that they do not give away themselves for free, but out of what they have, they can earn something. And also someone who does not depend on a salary. An academic who, over and above the paycheck, can use their academic abilities to earn passive income. I think that means a high-flying intrapreneurial academic. Of course, one who does it in an ethical way, without compromising the principles of ubuntu, maintaining their dignity as an academic	One who values their worth as an academic Does not work for free Earns a living for expertise Does not depend on salary Earns passive income using academic abilities “High flying “ Ethical Humane Maintains dignity as an academic
	INTERVIEWER: How would you describe the behavioural traits of a low-performing	Probe 2

	intrapreneurial academic?	
	PARTIPANT 2: I will also answer in the opposite. So a low performing intrapreneurial academic is someone who does not recognise the opportunities that surround him as an academic and focuses perhaps on just working for the paycheck at the end of the month. To me that is a low performing intrapreneurial academic. I do not know if they are even intrapreneurial in the first place.	Does not recognise existing opportunities Only works to earn a salary Not intrapreneurial at all
	For the following questions, I would like you to reflect on this university context, specifically the university's strategic intent, organisational structure, environment, stakeholders, and policies, to name a few factors. INTERVIEWER: In your experience, how does the university support intrapreneurial behaviour?	Question 3
	PARTICIPANT 2: Maybe the first thing is since as of now the university does not disapprove engagements outside the university as long as it does not compromise one's performance in their core duties, so I think that way it is a support for entrepreneurship. Maybe also through exposing the academic staff to training that benefits them. Because remember when one gets training, it's not the property of the university. It is one's property and they can utilise it for their own gain at the end of the day. And also these collaborations with other universities; locally, regionally and internationally. I think while they are also doing that, an entrepreneurial mindset is	Approval of external engagements Training that benefits academic staff. Collaborations with local, regional and international universities.

	promoted. And all our staff members undergo what we call the Botho Graduate Profile (BGP) trainings. While it is meant for training the students, but normally you do not give what you do not have. So when one is trained on entrepreneurship, they are also empowered to empower the student. So I think by so doing, the university is also supporting or promoting an entrepreneurial spirit among academics.	Promotion of an entrepreneurial mindset. Staff undergo the Botho Graduate Profile (BGP) training. Staff receive entrepreneurship training. Staff are empowered to empower students.
	INTERVIEWER: Which factors would you highlight as key in supporting intrapreneurial behaviour?	Probe 1
	PARTICIPANT 2: I think the first and foremost is empowering the staff members. When staff members are empowered, they are able to take advantage of opportunities. They will actually be able to see opportunities because one of the issues is sometimes as staff members, we do not see the opportunities and the reason is they are not empowered. Once they are empowered by training, by exposure, they can see the opportunities and jump on them. I think that is the most important factor to help academics to become entrepreneurial. Second thing is not to prevent them. I know of some institutions where you are actually punished for trying to seek other sources of income apart from your paycheck. Unfortunately even if you do that, people will continue to do it behind your back but if you openly say if you have any other side hassle, maybe you can declare it or do it without affecting your day to day performance in the institution. So when you have that, if you give	Empowering staff members to identify opportunities. Empowering staff through training and exposure.

	employees that freedom, they will respect the institution while at the same time they have a hassle that gives them additional income.	Not preventing staff from being entrepreneurial.
	INTERVIEWER: Which factors would you identify as lacking or missing within your current context?	Probe 2
	PARTICIPANT 2: Maybe to a large extent they are supporting but maybe it needs to be said openly. I heard of some companies, I think in South Africa, that actually are promoting side hassles, saying if you cannot be an entrepreneur on your own, how can you be entrepreneurial in the organisation. So perhaps if the university will say that we are now training you on entrepreneurship so that you can be entrepreneurs yourselves, not just for the sake of teaching students. Because sometimes lecturers who cause a lot of problems are those that are struggling to make a living because the salary is not adequate. But if you empower them and say no, do such researches and then at the end of the day these researches will promote you; financially, economically. I think that is something that can be improved in our context. I know it is a bit difficult in the sense that this is a private university, and if you do it a little bit too much, you may end up losing the employees also because when their side hassle begins to earn them more than their earnings, then they would rather leave the job and go for their private consultancies or something like that. Another way that I think can improve, we have it but I think it can be expanded: the Consultancy	Support for intrapreneurship is not openly stated. Training staff in entrepreneurship only for teaching purposes Problems from staff due to inadequate income No support for staff research

	Policy, where the employees who engage in consultancy, they declare certain percentage to the university but they remain with the larger chunk. When that happens, they will see that the university is promoting us, is supporting us because we are using university time to do this but we are earning out of it. Also I would say we have had to form the Corporate Training Division and staff members are engaged there to train the corporates but I think here and there I hear of complaints that we are not earning much out of it. This is outside our contractual obligations but what we are getting is not meaningful out of this. So I think if the university could incentivise those who participate in corporate training more then by so doing they would really promote the entrepreneurial spirit.	Fear of retaining staff University's earning of the larger portion of the monies from the consultancies Staff complaints of low earnings from the Corporate Training Division Incentives given do not fully promote the entrepreneurial spirit
	Still reflecting on these factors and the support for intrapreneurial behaviour within your university, INTERVIEWER: What environmental factors can you identify as influential in supporting intrapreneurial behaviour within the context of this university?	Question 4
	PARTICIPANT 2: I think internally I would say again the issue of policies. We need more of policies that support entrepreneurship. Yes we have policies that support entrepreneurship, maybe from a student perspective but I think we need more policies. I mean to strengthen the element of academics as entrepreneurs in our policies. And maybe evaluate it at one point as we do our performance evaluations. Then externally more like-minded external stakeholders are required. Stakeholders who value entrepreneurship. Because sometimes when we deal with many of these	Policies More policies

	stakeholders, they always want us to give out as corporate social responsibility, even our skills, without rewarding them.	To evaluate policies Like-minded external stakeholders are required Work with stakeholders who value entrepreneurship Corporate social responsibility using staff's skills
	INTERVIEWER: Apart from the factors already mentioned, what other factors can you identify within the university's, o Internal organisational dimensions	Probe 1
	PARTICIPANT 2: We also need to try and say what else have you done to earn a living outside the teaching line that will promote the entrepreneurial spirit? Maybe we may fear in the beginning that people will leave but I think as people see that you care about them and that as their pockets get fatter, they actually become more loyal to you than they were before. So I think that element, as we foster it, it may help.	Enquire of lecturers on their entrepreneurial skills Care for lecturers and increase in monetary incentives
	INTERVIEWER: Apart from the factors already mentioned, what other factors can you identify within the university's, o External organisational dimensions	Probe 2

	PARTICIPANT 2: The externals, be it government, be it communities, be it the corporate world's view of academics as an asset or as a commodity that can actually sell on the market. I think that helps to improve this entrepreneurial mindset.	External stakeholders' view of academics as commercial assets
	INTERVIEWER: Considering the factors mentioned in your experience, can you please describe how and to what extent these factors impact the intrapreneurial behaviour within this university? ○ Impact of the internal organisational dimensions	Question 5 Probe 1
	PARTICIPANT 2: I think to a very large extent, especially the issue of the reward system. It really affects intrapreneurial behaviour. <i>Whenever one sees that they are being rewarded for their skill, for their performance, then they put in more effort and do more than the ordinary, the normal. So I think to a very large extent, this factors improves the entrepreneurial spirit.</i>	The reward system is improving the staff's entrepreneurial spirit
	INTERVIEWER: Impact of the external organisational dimensions	Probe 2
	PARTICIPANT 2: Again we have had cases where <i>staff members go out there and train the external stakeholders</i> . So already it is motivating the staff members to see the worth of being intrapreneurial	Staff provide training for external stakeholders
	INTERVIEWER: What do you consider to be the major challenges experienced by the university in the support for intrapreneurial behaviour?	Question 6

	Internal organisational support challenges	Probe 1
	PARTICIPANT 2: Maybe the most important thing is instilling that behaviour in the staff members. When it happens that the staff themselves have an entrepreneurial mindset, it is very easy for them to actually even transfer it to students and others. So I think the major challenge is to instil the entrepreneurial mindset among academics. I think academics generally think that well ours is to teach, we cannot make business out of this. I remember this guy, is called what, Professor Mbingi. Yes this is one guy who taught me that you must be an intrapreneurial academic. Value your time, value your skills, value your competencies, someone needs them and when they need them, you need to make money out of them, then you are an entrepreneur. But many academics have not reached that point.	Instilling intrapreneurial behaviour into the academics. Academics do not think entrepreneurially about their skills.
	External organisational support challenges	Probe 2
	PARTICIPANT 2: I think they also do not all understand that academics can actually be entrepreneurs. They think that because we were trained and we acquired this and the government sponsored this or that, then all we have to do is to give it back to the society for free and no value may be achieved by the one who is performing those duties. So I think some in the community, even some of the externals, be they corporates, government, or the local communities need to be conscientised more that, just like engineers or other people, academics are also a commodity that can be marketed and earn a living out of it.	Limited understanding that academics can be entrepreneurs. Externals stakeholders to be informed of academic entrepreneurship
	Thank you for your valuable contributions this far, there are only two more questions	

	that I would like to ask you. INTERVIEWER: Considering everything we have discussed this far; can you please describe the contributions made by intrapreneurial behaviour on the university's performance?	Question 7
	PARTICIPANT 2: I would talk about myself and my faculty. Since I have managed to collaborate with a German university and managed to get some substantial amount as a grant. While the grant is used for student and staff exchange, it has raised the status of the university. I also have colleagues who applied for some consultancy and the money that comes from the consultancy, the university gets a certain percentage and by so doing the university is gaining, is benefiting out of an intrapreneurial behaviour within its staff members. And I want to understand it is not only me and my faculty, even others in other faculties are also having several. I know we have a project in the Faculty of Engineering where one Professor, together with students, has designed an electronic vehicle and It is all over the press. So the status of the university as a research university is raised by such intrapreneurial behaviour.	Collaboration with international university. Earning a substantial grant amount. Raising of university status internationally. Staff applying for consultancies. Earning of revenue from consultancy work. The designing of an electronic vehicle in the Faculty of Engineering. Improved publicity in the press. Improved status as a research university

	INTERVIEWER: What factors do you include for determining high or low performance?	Probe 1
	PARTICIPANT 2: I think at the moment we do not have a rating system for intrapreneurial behaviour moment as a university. Perhaps that is something we may need to consider on checking whether our staff members are intrapreneurial. Or perhaps it may be put under our Research Performance Index because mainly that is where most of these intrapreneurial issues are coming from.	No rating for intrapreneurial behaviour Need to come up with measures for staff's intrapreneurial behaviour. The Research Performance Index to measure intrapreneurial behaviour.
	INTERVIEWER: Is there specific measure used by the university and if so, can you give some examples?	Probe 2
	PARTICIPANT 2: So we have a Research Performance Index, which measures one's performance in terms of publications, consultancy, innovation, patents and the likes. So perhaps we can say that is the measure that is currently in place.	Research Performance index Publications, consultancy, innovation and patents etc.
	INTERVIEWER: If given the opportunity and platform, what recommendation on intrapreneurial behaviour will you give to key role-players within the university context about?	Question 8
	Recommendation on supporting intrapreneurial behaviour	

	PARTICIPANT 2: I think they need to allow and promote intrapreneurial behaviour in any way. And it can be in form of consultancy, it can be in form of innovation, it can be, you know, in form of even developing new business models and the likes. So I think that. And it should be very clear and open that the university has a policy on promoting and supporting intrapreneurial behaviour among staff members in particular or among academics in particular. Yes it is true we have very strong entrepreneurial mind-sets which we are instilled in students but staff members are still lacking.	Allow and promote intrapreneurial behaviour in any way. Clarity and openness on policy for promoting intrapreneurial behaviour among academics. Instil the entrepreneurial mind-set in the staff.
	Recommendation on dealing with challenges in supporting intrapreneurial behaviour	
	PARTICIPANT 2: I think the university has to benchmark with those universities that are supporting and promoting an intrapreneurial behaviour and see how they are doing it and we may not even need to reinvent the wheel, we can take from what others have already done.	To benchmark with entrepreneurial universities. Adopt what the entrepreneurial universities have done.
	Recommendation on improving the university's performance through intrapreneurial behaviour	
	PARTICIPANT 2: I think we need an index, just like the Research Performance and the indices or maybe within the Research Performance Index. We need an index which specifically talks about intrapreneurship. Which staff member has been the	Come up with an index for intrapreneurship. Come up with an award for intrapreneurship.

	most intrapreneurial during the year. We receive awards for being the best teacher, for being the best researcher but maybe we may need one on being the most intrapreneurial staff member.	
	Thank you, this then brings us to the end of the interview. Before we conclude, is there maybe something you would like to add regarding the different aspects we have discussed during the interview?	
	PARTICIPANT 2: Not necessarily but just to comment that I suppose this is an area that has not been really ventured into by institutions of higher learning. I think we have looked at entrepreneurship mainly from a commodities point of view, one who starts a new business etc etc but I think we need to redefine and expand our definition or understanding of entrepreneurship from an academic point of view and try to promote and support such among academic staff members. I am looking forward to seeing the framework or model that this study will recommend, which may actually be used by institutions of higher learning to promote that spirit among their staff members. This study will make a difference.	Intrapreneurship is not fully explored by tertiary educational institutions. Need to redefine and expand the understanding of academic entrepreneurship. Need to promote and support intrapreneurial behaviour among academics.
	Is there maybe something you would like to ask me regarding the research or anything else relating to it?	
	PARTICIPANT 2: When do you expect to graduate?	
	Thank you very much for your time.	
	PARTICIPANT 2: Thank you.	
	Action taken:	

	The interviewees advised that the results will be published in the PhD thesis, and how they can access these if they wish to do so. Thanked the interviewee for his/her time and confirmed if the interviewee may be contacted if something is unclear and the interviewee agreed.	

ANNEXURE E: EXTRACT FROM THE CODE BOOK

A total of 855 codes were generated, hence only a shortened version is supplied below, a full text is available on request.

[illegible]