

Investigating the experience of change management in the transformation of the curricula of selected undergraduate programmes

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DECLARATION

I, LeRoux Malan, hereby declare that *Investigating the experience of change management when transforming selected undergraduate curricula of a higher education institution* is my own work. Furthermore, the sources and literature used in this study are duly acknowledged in the reference list. Lastly, this dissertation has not been submitted at any other higher education institution for a degree.

ABSTRACT

An organisation's success hinges on its adeptness in managing change amid internal and external influences. In the rapidly evolving landscape of science, technology, societal norms, and global politics, organisational environments demand continuous adaptation. The South African higher education sector, over the past two decades, has undergone substantial changes driven by socio-economic shifts, increased globalisation, technological advancements, and evolving student populations.

This study explores the imperative for Higher Education Institutions (HEIs) to manage change effectively, particularly in transforming undergraduate curricula to meet the demands of internal and external dynamics. A quantitative research strategy, employing a structured survey, assessed the change management experiences of academic employees at a prominent South African University. Convenience sampling, purposive sampling, and snowballing sampling techniques were utilised, resulting in a 201-respondent dataset.

Data analysis included Cronbach's Alpha for reliability, exploratory factor analysis for validity, and descriptive statistics for understanding data patterns.

Results indicate general support for change, with a consensus on the importance of frequent communication and the pivotal role of organisational managers in driving change. Stakeholder involvement, including academic staff, students, the local community, and industry partners, emerged as crucial. Managerial implications stress the need for a multi-stakeholder approach and the implementation of a continuous monitoring and evaluation plan.

Noteworthy is the scarcity of research on change management within higher education institutions, particularly in the context of curriculum transformation. The study contributes theoretically by establishing links between management, strategic management, and change management. Four principles crucial to change management in HEIs were identified, culminating in a proposed cohesive framework for change management specific to academic curriculum transformation. These theoretical contributions and recommendations provide valuable insights for organisational managers in navigating future change initiatives within higher education.

Key words:

Change management, higher education institutions, undergraduate curricula, management, strategic management.

LIST OF KEYWORDS

Change management: The structured activity towards managing the process whereby an organisation transitions from its current state to a desired future state, thereby achieving predetermined objectives and obtaining clearly defined benefits (ACMP, 2019:6).

Higher Education Institutions: Higher Education Institutions (HEIs) are defined as *institutions* providing higher education with a scope and range of operations, including undergraduate and postgraduate higher education programmes (Higher Education Act 101 of 1997).

Undergraduate curricula: Undergraduate curricula refer to a complex combination of formal and informal dimensions which include predetermined educational objectives, outcomes, course content, structured plans, documents and assessment and evaluation processes (Mulenga, 2018:20; Su, 2012:155).

Management: Management refers to the planning, organising, leading and controlling of an organisation and its resources, remaining conscious of the internal and external influences of the organisation's competitive environment, as well as the limitations and potential which exist within the organisation, with the overall aim of achieving predetermined objectives to ensure survival and a competitive advantage (Kaehler & Grundei, 2019:22).

Strategic Management: Strategic management refers to the complex process whereby top-level management of an organisation analyses an organisation's competitive environment, both internal and external, and thereafter formulates and implements the strategy with the aim of achieving predetermined goals and objectives, whilst continuously managing the process (Harrison & St. John, 2014:4).

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CHAPTER 1

INTRODUCTION

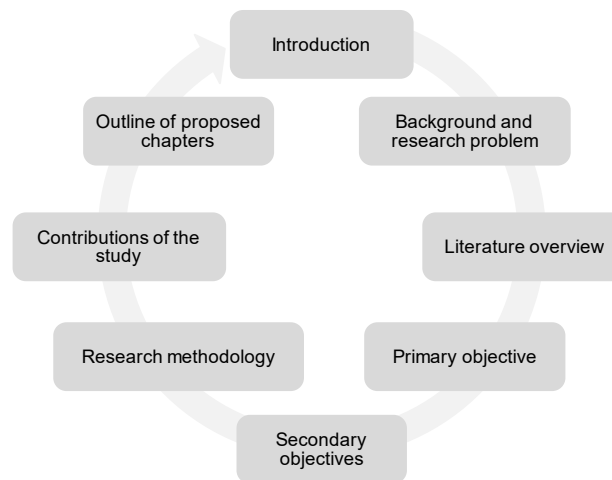
1.1 INTRODUCTION

The ability of an organisation to successfully adapt to a changing environment can be the difference between failure and success (Erasmus *et al.*, 2019). This ability becomes essential when considering the continuous and rapid development of science and technology which has created a dynamic and competitive global environment, demanding organisations to continuously adapt and augment the manner in which they function and perform to maintain a competitive advantage and ensure survival (Jick & Sturtevant, 2017:52). The higher education sector is not immune to such rapid developments of science and technology and therefore requires similar abilities towards adaption and survival (Ramoroka *et al.*, 2017:315).

During the past two decades alone, the higher education sector of South Africa has experienced rapid – and often violent – changes brought on by changing socio-economic climates, increased globalisation, robust political movements and evolving government legislation (Akbar *et al.*, 2019:113). This has, in turn, led to demands for the overall transformation of the higher education sector related to student demographics, the decolonisation of Higher Education Institutions (HEIs), increased access to such institutions and the reform of university governance, not to mention revolutions of information technology (Bitzer & Costandius, 2018:1). Therefore, HEIs have had to proactively adapt to ensure their survival by effecting changes to their internal functions, informed by the external environments (Chitanand *et al.*, 2018:168). This overall storm of change within the sector has resulted in an increased emphasis being placed on the responsibility of HEIs to ensure that graduates are equipped with the necessary tools and skills to achieve success after graduation (Martin *et al.*, 2014:2). This emphasis has, in turn, required changes in the curricula presented to students, requiring HEIs to manage and guide the changes required (Padayachee *et al.*, 2018:291).

Managing change is imperative to ensure that HEIs are able to successfully transform their academic curricula in accordance with the demands of both internal and external environments. Therefore, the purpose of this study is to investigate the manner in which change management processes are experienced by academic staff and academic support staff, when transforming undergraduate academic curricula of HEIs, to better understand possible future change management processes for HEIs. The subsequent sections of Chapter 1 focus on the background and research problem of the study. Thereafter, a literature overview will provide a theoretical framework for this study, followed by the research objectives and proposed research methodology. Chapter 1 concludes with an outline of the expected contributions of the study, and a chapter outline of the dissertation. The main sections are concisely depicted in Figure 1.1.

Figure 1.1: Research synopsis



Source: Researcher's own depiction.

1.2 PROBLEM STATEMENT

Change management is described as a complex process (Kickert, 2014:694), influenced by numerous variables making it difficult to determine a one-size-fits-all approach, consequently resulting in frequent criticism for failing to achieve the envisaged outcomes (Al-Haddad & Kotnour, 2015:235, 254). In comparison, HEIs are described as multi-faceted organisations with complex structures functioning in even more complex environments that have experienced rapid sectoral changes over the past two decades, often being criticised for failing to execute the required changes that could ensure organisational survival (Cicmil *et al.*, 2017:294; O'Donnel, 2016:103).

The complexity of change management in terms of HEIs is further exacerbated by how little is understood of change management processes suitable for HEIs, and how such processes are experienced by those tasked with the execution thereof (Kuipers *et al.*, 2014; Van der Voet, 2013:373). Such poor understanding of change management creates a bleak outlook for the survival of HEIs where authors report the difficulty experienced by managers in HEIs when it comes to managing change related to the transformation of academic curricula (Awuzie & Emuze, 2017:1180).

It is therefore necessary to investigate how change management is experienced within HEIs when transforming undergraduate academic curricula, by investigating the challenges and components related to such a change management process.

1.3 LITERATURE OVERVIEW

To enable the researcher to understand the complexity of change management and how it relates to HEIs, the literature review aims to place change management within the overarching discipline of management, niched within the subdiscipline of strategic management. Therefore, change management is ultimately viewed as a result of strategic management, adding to the competitive advantage and overall survival of the organisation. As background, a brief overview is provided on HEIs, and the changes experienced over the past two decades within the higher education sector.

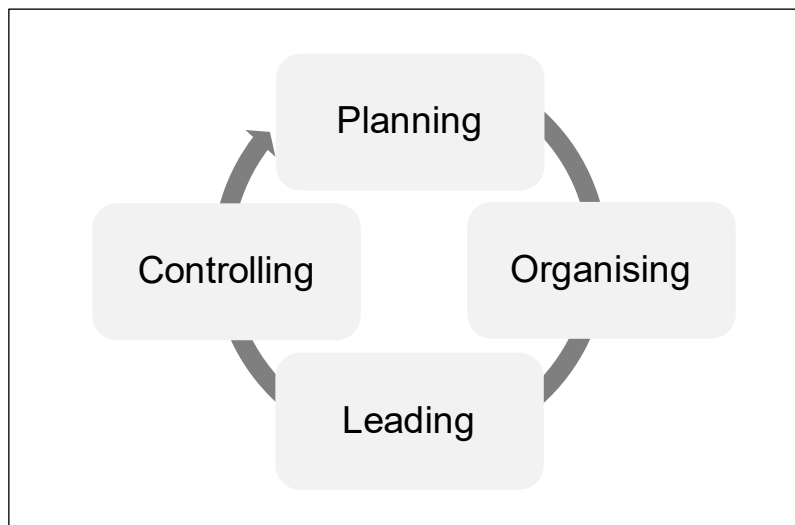
1.3.1 Management

The concept of management has been widely studied and developed over the last century, being directly influenced by continuous advancements in science and technology. Throughout the course of this development, the purpose of management was refined to culminate concepts referring to a process towards the attainment of specific goals and objects, through the productive harnessing of human behaviour (Godwin *et al.*, 2017:78). Management is therefore founded within the notion that organisations must continuously remain aware of the environments they function in, and should be able to proactively respond to the changes within their environments, thereby ensuring survival (David, 2013:37).

To achieve this proactive response to changes, which comprise various resources harnessed to achieve specific goals through dedicated tasks (Erasmus *et al.*, 2019), organisations must evaluate the environment they function in (referred to as the macro level environment), identify threats and opportunities within said environment and determine appropriate strategic reactions which would be to the benefit of the organisation (Mullins, 2018:11). Similarly, to enable successful functioning of the organisation, the internal abilities (commonly referred to as strengths and weakness and often related to resources) must be fully understood and leveraged to the advantage of the organisation (CIMA, 2016:141).

Looking at the origin of management, Henri Fayol (1841-1925) is regarded as one of the key contributors ("father of modern management") to the field of management (Godwin *et al.*, 2017:79), having created the foundation for primary management concepts such as planning, programme, organisation, coordinating, reporting and corporate body (Hatchuel & Segrestin, 2019:399-400). The functions defined by Henri Fayol have been refined, expanded and condensed over the past century to include functions and concepts such as planning, organising, controlling, coordinating, staffing, reporting, command, discipline, unity of direction, division of work, authority, etc. (Godwin *et al.*, 2017:80; Hatchuel & Segrestin, 2019:400). Further refinement condensed management into four primary functions (see Figure 1.2), with these four management functions regarded as continuous, often overlapping in different areas of the organisation (Conkright, 2015:15).

Figure 1.2: Continuous functions of management



Sources: Erasmus *et al.* (2019); Robbins *et al.* (2011:34).

These four management functions are performed by managers of the organisation and can be described as depicted in Table 1.1.

Table 1.1: The four management functions

The four management functions	
Planning	Planning is described as the initial step in the management process, during which the managers involved must aim to evaluate and understand their current environment and position within it, to enable them to determine goals to work towards.
Organising	Organising remains dependent on the existence of a plan (therefore planning), and involves determining the required tasks and actions that must be completed to ensure that the plan is executed, by using the various organisational resources at hand.
Leading / Activating	Leading is described as actions of motivating and enabling people (the employees of an organisation or human resources) to perform specific actions, or achieve specific goals in a specific manner and time.
Control	Control is regarded as a continuous process of measurement and evaluation, whereby managers must determine whether the organisation is still on course with the predetermined plan. Control also accounts for the necessary corrective action to ensure that the organisation achieves its predetermined goals and objectives.

Sources: Conkright (2015:16-17); Erasmus *et al.* (2019); Robbins *et al.* (2011:35).

Therefore, for the purposes of this study and based on the above-mentioned discussion, management is regarded as:

"The focussed actions and tasks performed by managers of an organisation, aimed at the completion and achievement of the predetermined plans and goals, harnessing organisational resources and continuously monitoring - and if, required correcting - the progress made".

1.3.1.1 Linking management and strategic management

Strategic management is founded on the core functions of management and includes the processes of planning and consultation, implementation and execution, analysis and evaluation, and continuous monitoring and adjustment (David, 2013:35). This therefore means that strategic management describes the process whereby an organisation generates plans that enables it to move from its current state to its desired future end-state through a process of change, based on specific and predetermined goals (CIMA, 2016:5). One can therefore concede that strategic management encompasses several disciplines, aiming to ensure the long-term success of an organisation, guided by strategic decisions which direct the overall course of the organisation (Ocvirk, 2018:85). In order to better understand strategic management, an overview of strategic management is provided in the following section.

1.3.2 Strategic management

Strategy can be described as the process whereby a plan is created based on predetermined goals, that will guide the actions of an organisation in moving from one position in its environment to another, whilst maintaining a competitive advantage (WenJun, 2019:30-31). Henry Mintzberg is regarded as one of the prime strategic management theorists of the past century. It was Mintzberg who contributed towards the understanding of strategy and the continuous adaption required through the strategic process. Mintzberg specifically contributed to the strategic management theory by coining the five Ps of strategy executed by managers when developing strategies. According to his theory, strategies must be seen as a plan, a pattern, a ploy, a position and a perspective, with Table 1.2 describing the nature of each.

Table 1.2: Mintzberg's 5 Ps of strategy

Henri Mintzberg's 5 Ps of strategy	
Strategy as a plan	Strategy must be viewed as a plan that provides a clear direction towards where the organisation intends to move.
Strategy as a pattern	Strategy should provide predetermined patterns that guide the behaviour and reactions of the organisation.
Strategy as a ploy	Strategy should be aimed at gaining a competitive advantage in relation to competitors within the environment or market where the organisation operates.

Table 1.2: Mintzberg's 5 Ps of strategy (cont.)

Henri Mintzberg's 5 Ps of strategy	
Strategy as a position	Strategy must clearly indicate to clients and competitors where the organisation places itself within the market.
Strategy as a perspective	Strategy must provide an internal view of the organisation and the culture that influences the behaviour of employees and ultimately the organisation as a whole.

Source: Agwu and Onwuegbuzie (2017:340-341); WenJun (2019:30-31).

Based on the five Ps, Mintzberg (2007:21-22) further studied how strategies had to be adapted as they were executed by managers, and determined three types of strategy, namely the *intended strategy*, which is supported by deliberate strategic processes, the *unrealised strategy* caused by changing environments, and the *emergent strategy* stemming from an ongoing learning experience. Mintzberg and Waters (1985:259) argue that some combination of strategies would always be experienced, which implies that the final divergence of different strategies forms the *realised strategy*, which would not match the initial strategy plan developed by managers. These types of strategies emphasise the importance of flexibility and adaptability required by managers tasked with strategic management when developing and executing strategies, as it is inevitable that change will be experienced throughout (Andersen, 2013:97). Change is consequently denoted as a continuous factor which can be managed through strategic management (Ionescu *et al.*, 2014:295).

Building on the strategy theory of Mintzberg and Waters, strategic management is viewed as both the creation and the execution of the strategic plan, comprising five stages executed by the top management of organisations. These five stages include the external analysis, the internal analysis, formulation of the strategy, the execution of said strategy, and lastly, measuring results and making the necessary corrections (Parnell, 2014:3). Therefore, the core of strategic management is described as the strategic plan(s) the organisation develops and implements to achieve specific outcomes as well as a competitive advantage (Agwu & Onwuegbuzie, 2017:340), with these plans being based on well-formulated and realistic goals which in turn guide the focussed actions of the organisation (David, 2013:35).

In conclusion, strategic management can for the **purposes of this study** be defined as:

"The functions of management to achieve a competitive advantage for the organisation by continuously analysing the environment wherein the organisation functions, creating a purpose-driven strategic plan guiding possible reactions, executing said plan and finally measuring and evaluating the outcome of the reactions" (Analoui & Samour, 2012:476).

1.3.2.1 Linking strategic management and change management

Strategic management aims to create strategies and a focussed strategic direction based on analysis of the internal and external environments of the organisation, which will allow for the achievement of objectives and goals to ensure survival within the functional environment (Harrison & St. John, 2014:4). Similarly, change management is broadly described as a mechanism towards ensuring the survival of the organisation within the market or environment, and comprises planned reactions (or changes) based on internal and external environmental analysis (Sujova & Rajnoha, 2012:1286). Analysing the theory of strategic management and change management, the similarity can be drawn where both have the objective to guide the manner in which organisations function and react to changes, enabling the organisation to successfully adapt to the changing environments and retain its competitive advantage (Bashar *et al.*, 2013:1; Parker *et al.*, 2013:535).

Consequently, the link between strategic management and change management lies in the similar goal of ensuring the survival of the organisation. Strategic management focuses on the continuous monitoring of the environment wherein the organisation functions and creating reactionary plans. In contrast, change management aims to facilitate the process whereby purpose-driven change actions guide the execution of reactionary plans (strategies) enabling the survival of the organisation and retention of a competitive advantage (David, 2013:37).

1.3.3 Change management

Change management has been widely studied in the context of corporate sector organisations. However, uncertainty remains on how the lessons learned from change management processes in corporate sector organisations could be transferred to public sector institutions (which include HEIs). This uncertainty is partly attributed to the bureaucratic nature of public sector institutions, aggravated by the fact that public sector institutions are often subject to political influences and experience an increased sense of public accountability (Aher & Luoma-Aho, 2017:27). Thus, to better understand the concept of change management within the higher education context, the core components of change management must be investigated.

1.3.3.1 Defining change management

According to Mitra *et al.* (2019:2070-2072), change management is the deliberate actions aimed at changing the organisation through the realignment, repositioning or the reorganisation of its internal functions, with such deliberate actions including existing management functions such as planning, initiation, control, assessment and evaluation. O'Donnell (2016:103) as well as Parker *et al.* (2013:535) further describe change management as a process comprising several stages aimed at facilitating change (modification of the current status quo) within the organisation. In addition, Hong *et al.* (2019:300) state that change management, which results from the changing environments in

which the organisation functions, will lead to organisational sustainability and growth if the desired outcomes are obtained - a view shared by Fraser-Arnott (2018:170).

In determining what is meant by the changing organisational environment, authors often refer to external threats and opportunities which in turn act as causes that create a need to change. These include, among others, changes related to economic and financial considerations, governmental and legislative changes, changing political environments, technological developments, evolving social dynamics as well as diversifying consumer demographics and profiles (Jick & Sturtevant, 2017:54; Rolland, 2018:4; Vargas *et al.*, 2019:471). Therefore, it can be said that considering the complexity of continuously changing environments in which organisations function, the successful execution of change management has become an important competency that managers need to master (Mitra *et al.*, 2019:2069). In summary, a relevant definition of change management applicable to **this study** can be phrased as:

"Change management is the alteration of internal functions and structures of an organisation facilitated through the use of focussed and deliberate management plans executed in reaction to the changing external environment".

1.3.4 Change management models and categories

Change management theories, it would seem, all retain some linkage to the seminal work of Kurt Lewin (Rosenbaum *et al.*, 2018). Changing a situation requires that positive drivers towards change must be mobilised, while negative influences which counteract change must be managed and defused (Rosenbaum *et al.*, 2018:291). The Association of Change Management Professionals (ACMP), a professional body providing guidance to organisations on change management within both public and private sector organisations, defines change management as a transitional process, whereby an organisation would move through various stages to achieve the goals and desired change (ACMP, 2019:6). Vora (2013:626) identifies four common components forming part of change management models:

- a need to determine and understand what should change and why it must change;
- preparing and planning for the envisaged change;
- executing the various plans and strategies aimed at achieving the change; and
- embedding the changes made into the organisational culture and identity.

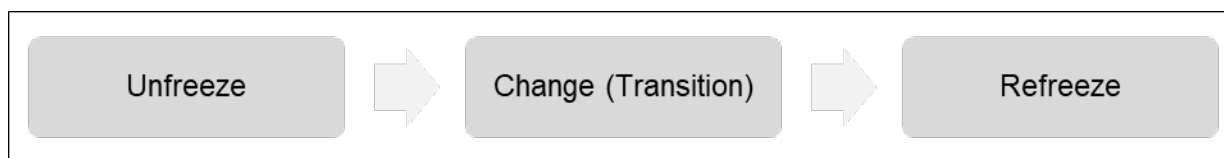
However, Rosenbaum *et al.* (2018:295) ultimately concede that the notion of a one-size-fits-all approach is discounted when various change management models are reviewed, and that in the end, aspects such as situational relevance, organisational context and the notion of "best-fit" for the organisation should guide the choice when deciding on the appropriate model or combination of change management models to apply.

Informed by the notion of "best-fit" aspects of situational relevance and organisational context, three of the most prevalent change management models as derived from existing literature are discussed below as possible guiding models of change. These models relate to one another, in that each based their adaption on the work of the preceding author, therefore culminating in commonly accepted change management model components.

1.3.4.1 Kurt Lewin's three-step change management model

Kurt Lewin (1890-1947) is widely regarded as the seminal author and founding theorist on change management (Cummings *et al.*, 2016:34). Lewin's work has been broadly described as the study of how people respond (or behaviours react) to changes within organisations (Hong *et al.*, 2019:299). Discussing the relevance of Lewin's change management model, Cummings *et al.* (2016:36) affirm that it remains evident that his model formed the basis on which future change management theories would be developed. Lewin's three-step process towards change management is illustrated in Figure 1.3.

Figure 1.3: Lewin's three step change management model



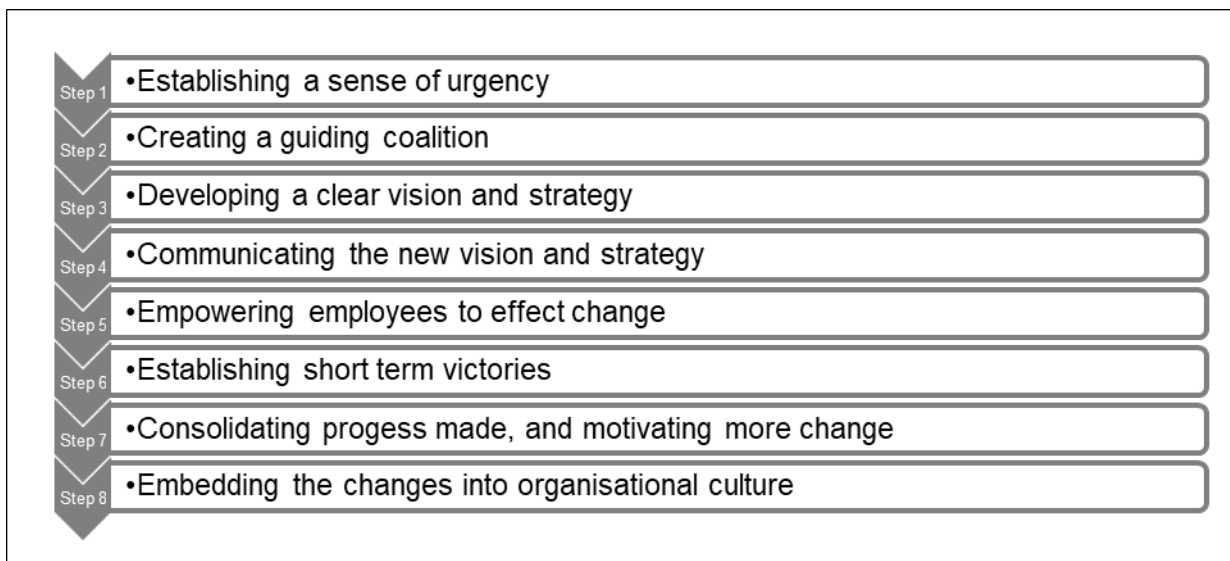
Source: Cummings *et al.* (2016:34).

Lewin's change management process consists of three steps: (i) the process of unfreezing an organisation – thereby readying the organisation for change, (ii) the change (transition) whereby the required or predetermined changes are effected, and lastly (iii) the refreezing whereby the changes made are inculcated into the organisational culture, policies and processes (Rolland, 2018:4). Brisson-Banks (2010:244) summarised the initial process of Lewin as (i) the altering of existing stability within the institution (including behaviours and attitudes) and cultivating motivation towards accepting possible change(s), followed by (ii) a deliberate creation of "new responses" ("changing"), and finally ending with (iii) the "refreezing", where stability is re-instilled through the acceptance of the so-called "new responses". Lewin's theory of change management was based on the concept of equilibrium, whereby an existing condition had to be disturbed (unfrozen), before the necessary changes could be brought about successfully (Bashar *et al.*, 2013:2). Change management was regarded by Lewin as a group orientated activity, which correlates with current theory whereby change management frequently requires change to organisational cultures and requires support of the employees affected (Bashar *et al.*, 2013:2).

1.3.4.2 Kotter's model of change management

Developing on the three-stage model of Lewin, Kotter expanded it by creating an eight step model for change management that places the execution of behavioural change before that of altering the culture of the institution, thereby ensuring the support of the employee first, before changes are expected to be embedded into the organisational culture (Farkas, 2013:14). This significant expansion on the original three-step model followed after an extensive study of 100 organisations who were engaged in a process of change (Rosenbaum *et al.*, 2018:290). Kotter's eight step process for change management is depicted in Figure 1.4.

Figure 1.4: Kotters' eight step change management model



Source: Kotter (1995:61).

Kotter seems to allow for a more flexible application of the change management model indicating that the eight steps are not necessarily fixed, but that the order of the steps could be moved as required within the organisation (Farkas, 2013:18). Subsequently, several adaptations have been made by different authors (Aleixo *et al.*, 2018:1667; Appelbaum *et al.*, 2017:216; Brisson-Banks, 2010:242; Parker *et al.*, 2013:536; Vosse & Aliyu, 2018:1108), who have argued four key aspects that remain vital during the change management process:

- i. the creation of a sense of urgency for change – ensuring employees and change agents understand the change and need thereof;
- ii. the importance of strong leadership during the change management process;
- iii. the necessity of communication regarding the change management process; and
- iv. the incorporation of the effected change(s) into the organisational culture.

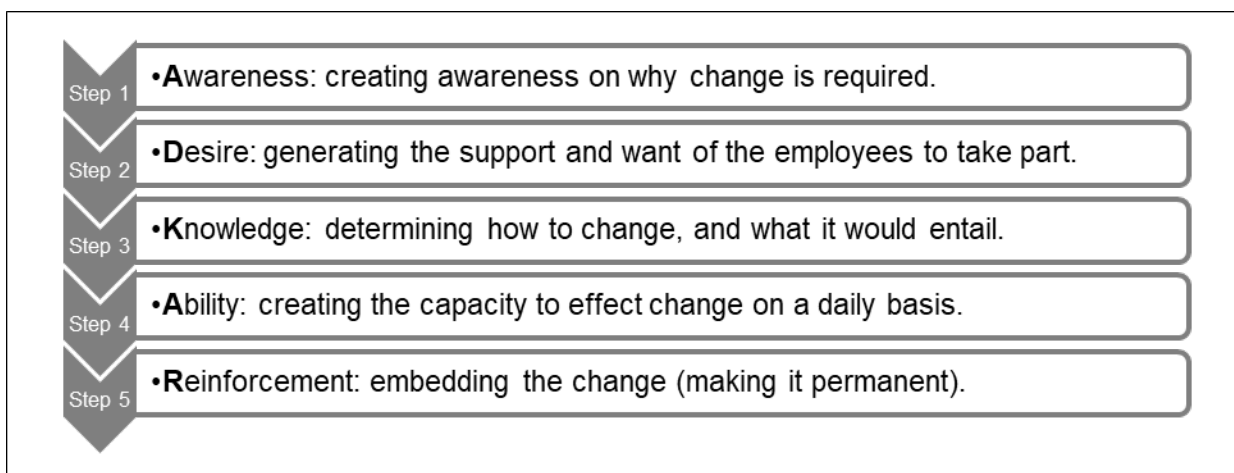
These four commonalities further inform the objectives of this study, towards determining how the change management processes are experienced by those affected by it.

1.3.4.3 ADKAR® model

The ADKAR® model was first developed by Prosci, an internationally renowned change management consultancy founded in 1994 by Jeff Hiatt (Prosci, 2020) and stems from further expansion of the change management models developed by Lewin and Kotter. It includes five purpose-driven steps that are followed, however, in the exact order as indicated (Al-Alawi *et al.*, 2019:118; Karambelkar & Bhattacharya, 2017:5-6).

The acronym ADKAR® represents the five tangible and concrete outcomes that people need to achieve for lasting change: *awareness*, *desire*, *knowledge*, *ability* and *reinforcement* (see Figure 1.5).

Figure 1.5: ADKAR® change management model



Source: Al-Alawi *et al.* (2019:118).

ADKAR® provides for a structured and comprehensive process providing a clearly defined plan which actively manages change within an organisation (Da Veiga, 2018:590). Effectively, the ADKAR® model is usually combined with existing change management functions, and further assists in mitigating employee resistance, aiding in the transition of employees and the development of change management and action plans necessary to successfully effect change (Prosci, 2020:6). Therefore, what makes the ADKAR® model useful for this study, is that it identifies the needs of the change participants which have to be addressed, that will improve the likelihood for a successful change management process (Pawl & Anderson, 2017:234). This subsequently can assist in managing and reducing resistance of those employees involved, thereby providing an insight into how the change is experienced by those involved.

However, whilst considering the theoretical guidance provided by the three aforementioned models for change management, managers within organisations still report that they are faced with the challenge of executing several changes all at once (Jick & Sturtevant, 2017:50). This challenge in

turn prompts the question of what the possible impact of several changes could be on the organisation, and how the simultaneous changes affect the experience of change management.

1.3.5 The impact of change management

Change management entails that organisations are required to alter some aspects, if not all aspects, related to organisational culture and identity, organisational processes, policies, functions, focus and structural configuration (hierarchy) (Fraser-Arnott, 2018:169). Therefore, to further understand change management, the impact of change management on the organisation must be investigated by examining the change experience, the impact of change management on the employees of an organisation, and the impact on the organisational culture, identity and the leadership.

1.3.5.1 The change experience

The change experience broadly refers to the manner in which the change participants - usually employees of the organisation - experience the various changes brought about (Holten *et al.*, 2020:395). The overall experience of the change participants can influence their level of resistance to change. Rosenbaum *et al.* (2018:287) argue that possible resistance to change by employees can be harnessed as a driving force by improving employee understanding of the change required and improving their involvement in the change processes. Therefore, the change experience is viewed in terms of the impact of the change on the employees, the organisational culture and identity, as well as the impact of change leadership.

1.3.5.2 Impact of change management on employees

The impact of change on employees and their reaction to the change should not be disregarded, as employees are largely considered to be one of the predominant contributing factors towards successful change management (Vandangeon-Derumez *et al.*, 2019:710). It must be emphasised that employees will experience change differently depending on their role, position or perceived value within the organisation (Aher & Luoma-Aho, 2017:29). The importance of employees during the change management process received great attention in the early work of Lewin (1890-1947) who placed a continuous emphasis on ensuring the support of "group dynamics", or simply put, the role of employees during the change process, thus indicating the importance of positioning employees as advocates for change, which in turn increases the possibility of a successful change management process (Rosenbaum *et al.*, 2018:289). The role of employees in the change management process can thus not be discounted, as failure in obtaining their cooperation, trust and support will result in the creation of employee resistance, ultimately resulting in a failed change management attempt (Aher & Luoma-Aho, 2017:29).

The strategic importance of employees during the change management process is therefore a natural take-away due to the fact that change management inevitably impacts on the workplace environment, consequently affecting the way in which employees may relate to the organisation and support its decisions (Fraser-Arnott, 2018:170). Since the success of change management is largely dependent on the reaction of the employees to the change (Holten *et al.*, 2020:394), employees must rather be regarded as change agents, who should be motivated towards facilitating and embracing the processes of change (Al-Alawi *et al.*, 2019:117).

1.3.5.3 Impact of change management on organisational culture and identity

Organisational culture and identity refer to the existing values, attitudes and behaviours of employees in the workplace which should be based on the values and vision of the organisation (Farkas, 2013:16). Appelbaum *et al.* (2017:217) further describe organisational culture as the shared beliefs and practices of stakeholders, and argue that organisational culture directly affects employees' commitment towards the change. Aleixo *et al.* (2018:1666) attribute the resistance to change (which is a main contributor towards failed change management processes), as a failure in altering the existing behaviours and belief systems. These behavioural and belief systems are often enshrined within rigid institutional structures such as public sector institutions which are notoriously bureaucratic, making it difficult to effect change, thus creating a barrier towards change (Aher & Luoma-Aho, 2017:28). It has also been noted that an organisational culture that has developed over a long period and is well established, is often difficult to change as employees might interpret changes to the culture as changes to themselves (Da Veiga, 2018:588).

We can therefore deduce that, to enable the process of change to commence, organisations must factor in the augmentation of the organisational culture. To ensure that the changed organisational culture does not lapse backwards, Boling *et al.*, (2017:27,30) indicated that the desired effected change must be enshrined into the institutional culture through structure and policy, as failure to do so will result in the rejection of the envisaged change. Hong *et al.* (2019:300) conclude that embedding the desired institutional changes (referring to changes in policies, behaviours and practices) into the institutional culture will render these changes permanent.

1.3.5.4 Impact of change management on change leadership

Leadership is a core component to management and is frequently identified as essential to the change management process. Strategic leadership further assists in minimising the resistance to change, as well as fostering motivation towards accepting change (Al-Alawi *et al.*, 2019:117). The change management process must hence be driven by identified change leaders assuming the roles of transformational leaders, who advocate and facilitate change through the implementation of purpose-orientated developments that result in the achievement of the desired change(s) (Boling *et al.*, 2017:28-29; Hong *et al.*, 2019:300; Kempster *et al.*, 2013:153).

To understand change leadership competencies that are required to enable change agents that motivate change throughout the organisation (Vora, 2013:630), Holten *et al.* (2020:395) provide four main activities of change leadership namely, the establishment of a vision, developing human capital, executing the established vision as well as determining and measuring vision outcomes. Leadership which is decisive and communicates clearly remains indispensable when an organisation moves through a process of change (Conkright, 2015:18), as strategic leaders assist in ensuring the realisation of the change vision (Aslam, 2017:78).

1.3.6 An overview of higher education

The international higher education sector has experienced considerable change over the past two decades, brought on by developments in research and science, information sharing, technology, societal norms, socio-economic climates and the like. Bitzer and Costandius (2018:3) highlights the impact of these global changes in the higher education sector and summarises them as:

- i. Increased sectoral competition – caused by internal and external changes in demands/needs of students and society requiring transformation of higher education institutions.
- ii. The need of ensuring desirable graduate attributes and outcomes, producing graduates "fit for purpose" within the employment industry.
- iii. The global demand to produce graduates equipped with skills which enable them to contribute to society – the creation of "critical citizens".
- iv. Rapidly changing societal norms and priorities, which require adaptation of previous stagnant academic curricula (specifically considering the South African context).

Within this background, further analysis of the global changes in higher education is presented with the focus placed on the possible impact thereof on the South African higher education sector, whilst remaining conscious of the unique South African nuances.

1.3.6.1 A global overview

The higher education sector is broadly defined as institutions which provide education related to research, teaching and learning, social services, community service, reporting, assessments and extracurricular activities, presented at various levels to under- and postgraduate students (Aleixo *et al.*, 2018:1665; Ofoegbu *et al.*, 2018:394). Higher education institutions take on numerous forms including traditional universities, business schools, Further Education and Training (FET) colleges and teaching orientated colleges, with all of the aforementioned further divided into specific sectors including public (or state), semi-state, private or "mixed" (Collins, 2013:28-29).

HEIs function within a unique environment, influenced by both internal and external factors. Looking at possible external factors, it is noted that such include influences due to social, economic, political and technological changes, at both an international and national level (Martin *et al.*, 2014:2; Shah & Nair, 2014:153).

Focussing inwardly, internal factors are defined by Aleixo *et al.* (2018:1866) as:

- i) University leaders (those regarded as management, driving the process of change).
- ii) Faculty (staff involved in the teaching and learning environment).
- iii) Administrative staff (staff that support leaders, academic staff and students in the ongoing day-to-day functions of the university).
- iv) Students (those enrolled at the institution).

It is observed that HEIs' external challenges can further include (i) rapidly growing student populaces, (ii) economic and financial pressures (influenced by government policy and internal higher education structures), (iii) changing societal norms and standards, as well as (iv) increased competition within the sector (Shah & Nair, 2014:146; Todnem *et al.*, 2008:22; Vosse & Aliyu, 2018:1106).

1.3.6.2 An overview of the South African higher education sector

For the purposes of this study, Higher Education Institutions (HEIs) are confined to the definition of the South African Higher Education Act 101 of 1997, namely: "*...any higher education institution that is established, deemed to be established, converted or declared as a public higher education institution under the Act*". Additionally, the focus is placed on **universities** as defined within the Higher Education Act (1997) as "*...a higher education institution providing higher education and with a scope and range of operations, including undergraduate and postgraduate higher education programmes...*".

Within the South African context, academic curricula taught within HEIs had remained largely stagnant, and did not fully transform in accordance with the substantial societal and legislative changes that had occurred post-1994 (Padayachee *et al.*, 2018:289). HEIs had attributed this to existing academic practices where academic staff remained resistant to change within HEIs (Padayachee *et al.*, 2018:301). Subsequently, South African HEIs have over the past two decades been witness to mass student protests voicing their demand and need to have existing curricula within these institutions transformed to adequately prepare them for post-university life (Fomunyan, 2017:45). In reaction to these often violent and nation-wide demands, it is noted that HEIs had indicated their collective desire to transform the existing teaching and learning environments (including academic curricula).

However, few HEIs have reported a completed or successful implementation of such transformation, thereby clearly displaying the lack of change management abilities required to transform the HEI sector of South Africa (Awuzie & Emuze, 2017:1177). Inevitably, leadership has been identified as a primary downfall in the attempted change management process in HEIs (Domingues *et al.*, 2017:297,300) with Mader *et al.* (2013:266) also indicating the absence of strong leadership roles within HEIs, specifically amongst the academic leader cohort. Consequently, the future of HEIs in South Africa seems dire if such institutions do not actively seek to determine how they can successfully execute change, to meet the changing needs of their students and society.

1.4 TRANSFORMING ACADEMIC CURRICULA IN UNDERGRADUATE PROGRAMMES

The purpose of HEIs is the creation of environments where students acquire the relevant (and desirable) skills, knowledge and competencies to ultimately function within the workplace (Ramoroka *et al.*, 2017:316), with the majority of these students enrolled at HEIs usually forming part of the undergraduate student group (Tanga & Maphosa, 2018:197). These HEIs are responsible for creating teaching and learning environments that remain suitable for students from different socio-economic backgrounds (Karunaratne *et al.*, 2016:492). Adding to this, HEIs experience an increased demand to provide access to education through renewed delivery methods, including online (e-learning), open distance and non-traditional education delivery methods (Boling *et al.*, 2017:30; Samkin & Stainbank, 2016:295).

When further accounting for the continuously evolving workplace, industries and graduate employers who have expressed the urgent need for HEIs to transform existing curricula in such a manner that it equips graduates with relevant skills and tools to successfully function within the employment industry (Padayachee *et al.*, 2018:290), the need for transforming undergraduate curricula cannot be underestimated. The process towards designing a curriculum that adequately prepares students for workplace demands remains difficult due to the rapidly developing employment industry linked to the environments wherein graduates are expected to eventually function (Chitanand *et al.*, 2018:171-172). The transformation of undergraduate academic curricula therefore requires more than the mere adaptation of existing programmes - it necessitates reconstruction of previous and existing pedagogy to achieve relevant curricula that remain relevant and desirable for both student and employer (Cicmil *et al.*, 2017:295; Fomunyan, 2017:46; Mader *et al.*, 2013:266).

1.5 CHANGE MANAGEMENT IN SOUTH AFRICAN HIGHER EDUCATION INSTITUTIONS

From the preceding discussion, it seems that public sector organisations like South African HEIs often struggle to facilitate a process of change, due to their often complex hierarchical configuration, susceptibility to political changes, and high measure of public accountability (Al-Alawi *et al.*, 2019:113). Nonetheless, South African HEIs are still expected to continuously move through processes of transformation (change) that strive to ensure that their offering, more specifically the undergraduate curricula remains relevant to the expectations and demands of an increasingly globalised community and employment industry (Aslam, 2017:79). Over the past few decades HEIs have aimed to include such processes into their institutional strategies, thereby attempting to solidify the practice thereof (Adams *et al.*, 2018:434). Unfortunately, as Mader *et al.* (2013:266) report, there is still little clarity as to the possible change management processes within HEIs which may assist in ensuring transformation of academic curricula, with Martin *et al.* (2014:2) providing the core thought indicating the importance of change management within the higher education environment, by stating:

"Adopting a 'whole institution' approach itself raises a number of questions. Change on this scale cannot occur organically. It requires explicit and skilful management along with a strategic emphasis on institution-wide communication to raise awareness of the need for change, and then to gain commitment to the widespread embedding of the curriculum change process."

Therefore, the need to investigate the appropriate approaches towards facilitating a process of change management within South African HEIs is envisaged. Viewed through the lens of strategic management, the manner in which change management has been experienced when transforming undergraduate academic curricula will be investigated.

1.6 RESEARCH OBJECTIVES

From the discussion on change management within HEIs when transforming undergraduate academic curricula, the following research objectives were proposed for this study.

1.6.1 Primary research objectives

The primary objective of this study is to investigate the experience of change management when transforming selected undergraduate curricula of a higher education institution.

1.6.2 Secondary research objectives

The secondary objectives of the study are to:

1. Compile a sample profile of the respondents within the HEIs who participate in the change management process when transforming undergraduate curricula.
2. Conceptualise change management from existing literature as an element in the strategic management discipline.
3. Determine the need for change management when transforming academic curricula.
4. Identify the role-players who participate in the transformation (change) of academic curricula.
5. Measure the experience of the respondents who participated in the change management process.

1.7 RESEARCH METHODOLOGY

The following sections provide a brief overview of the structure and layout of the empirical methods and data collection tools that will be harnessed to investigate the experience of change management when transforming undergraduate curricula in HEIs.

1.7.1 Literature investigation

Literature investigation comprises the collection of secondary data, sourced from the existing research outputs of other researchers within the relevant field of interest (Burns *et al.*, 2017:116). Various online databases of academic journals were consulted to obtain the secondary data, including EBSCOhost, Emerald Insight Journals, ScienceDirect, Web of Science, Wiley Online, Springer Online, Boloka (NWU Institutional Repository) and Google Scholar. Additional secondary data was acquired from e-books as well as books and printed works published by relevant authors.

1.7.2 Empirical investigation

Empirical investigations refer to the research methods used to investigate specific research questions, and can be grouped into two main categories, namely qualitative research and quantitative research (Myers, 2013:7,11). The aim of empirical research is to obtain primary data for a specific study (Burns *et al.*, 2017:116), therefore the research methods are dependent on data collected from a specific target group, or sample. Quantitative research is focussed on the collection and the analysis of numerical data (or statistical information) collected by means of predetermined questions directed at a large group of respondents forming part of the study (Babin & Zikmund; 2016:111-113; Burns *et al.*, 2017:143). In comparison, qualitative research will include data collected by means of interviews, observations and to some extent questionnaires, thus qualitative research denotes to the analysis of what participants have said and will generally provide deeper insights to the research question than pure quantitative measures (Myers, 2013:8).

For the purpose of this study, the researcher aimed to investigate the experiences of employees during the change management process when transforming undergraduate curricula in HEIs. Therefore, quantitative research questionnaires were harnessed to gain a larger sample group of respondents, which allows for a general view of experiences during such a change management process.

1.7.2.1 Research design

Research designs consist of three categories, namely exploratory, descriptive and casual research, with each category aiming to achieve a specific goal through research (Burns *et al.*, 2017:93). Exploratory research aims to acquire a better understanding of background information and terminology, as well as to conceptualise the problem at hand, usually achieved by means of focus groups, in-depth interviews, ethnographic studies, and observations of participants (Mooi *et al.*, 2018:15,16). By comparison, descriptive research aims to acquire data from larger groups of respondents, through focussed questions originating from the previously identified problem, often based on exploratory research (Burns *et al.*, 2017:99), with researchers focussing on short or long term periods, respectively referring to cross-sectional (once-off sampling) or longitudinal studies (repeated sampling over a period of time). Finally, causal research intends to determine the relationship that might exist between variables, and is conducted through a range of experiments either in controlled environments, test markets or field experiments (Mooi *et al.*, 2018:21-22).

Following the abovementioned analysis, **this study implemented** a combined approach through completing exploratory research which clearly defines the identified problem, as well as obtaining background information pertaining to the HEIs that will be investigated, followed by a descriptive research approach where data is collected from identified respondents, to gain insight into their experience of change management when transforming academic curricula. Lastly, causal research approach was implemented to determine the relationship between identified variables.

1.7.2.2 Sampling

Sampling refers to the selection of specific participants (or cases) from the population to be studied, and must be representative of the population as a whole (Mooi *et al.*, 2018:42). The specific components included in sampling are the target population, sample frame, sampling method and sample size (Burns *et al.*, 2017:258), which are discussed in the sections below.

1.7.2.2.1 Target population

The target population refers to the population to be studied and draw analyses from (Mooi *et al.*, 2018:42). **For the purpose of this study**, the target population includes all change management stakeholders at a reputable South African based university. These stakeholders include all academic and support staff involved in the change management process of undergraduate curricula.

1.7.2.2.2 Sample frame

A sample frame is described as the "master frame" of those participants the researcher will target to form part of the target population (Burns *et al.*, 2017:239). **For the purpose of this study**, the sample frame is narrowed down to include those permanent staff members who form part of the academic cohort and academic support staff cohort of the reputable South African based university. However, some form of sample frame error is considered as the provided data as derived from university sources and the database can exclude respondents who do form part of the target population, but not the sample frame (Babin & Zikmund, 2016:344).

1.7.2.2.3 Sampling method

Two forms of sampling methods exist, namely non-probability and probability sampling. Non-probability sampling refers to sampling where the inclusion of a participant is not due to a known chance (as is the case with probability sampling), but participants form part of the sample due to some form of biased influence or decision of the researcher (Burns *et al.*, 2017:253). Probability sampling by comparison refers to instances where each participant has an equal or known chance to form part of the sample (therefore the study) and is usually linked with an accurate sample frame (Mooi *et al.*, 2018:43). Consequently, **for the purposes of this study** non-probability sampling was used when conducting the quantitative research. Several types of non-probability sampling exist, as explained in Table 1.3.

Table 1.3: Non-probability sample types

Non-probability Sampling type	Description
Convenience sampling	Convenience sampling stems from some form of easy access that the researcher has to the sample participants, and can be linked to specific locations or areas frequented by participants. This sampling methods would naturally exclude possible participants who are not frequent visitors to such sites, for example.
Purposive sampling	Purposive sampling refers to instances where the researcher selects the participants (or sample) to form part of the study, based on a judgement informed by prior knowledge of the participants, or informally called an "educated guess".

Table 1.3: Non-probability sample types (cont.)

Non-probability Sampling type	Description
Chain referral sampling	Chain referral sampling methods allude to instances where the respondents themselves are requested to provide names of additional respondents who might provide useful insights.
Quota sampling	The quota sampling method refers to instances where the researcher determines specific targets that should be reached when considering the profile of the sample group – i.e., a set amount of respondents must be of a certain gender, race, hair colour, etc.

Source: Burns *et al.* (2017:254-256).

For the purpose of this study, the type of non-probability sampling that was incorporated was non-probability purposive sampling and non-probability convenience sampling. The researcher had prior knowledge regarding the respondents, as well as convenient access to the envisaged sample respondents making these two non-probability sampling methods the most appropriate. Furthermore, the questionnaire was only be circulated to those permanent academic staff and academic support staff who would have experienced the change management process when undergraduate curricula were transformed.

1.7.2.2.4 Sample size

For a sample size to be representative and therefore be valid, Fallon (2016:104) recommends that the larger the intended sample size, the more accurate the outcome of the data will be thus increasing the representativeness thereof. He indicates that an accurate sample size ranges between 300 – 500 for a quantitative research approach. Therefore, **for the purposes of this study**, the researcher aimed to collect at least 200 responses from the sample group.

1.7.2.3 Measurement instrument

For the purposes of this study the measurement instrument was a self-administered questionnaire that consist of four main sections completed by respondents, combining nominal, ordinal scale measurements as indicated by Burns *et al.* (2017:206). Nominal measurement instruments are used to gather background information regarding the participants by gathering data linked to a specific label or category (Babin & Zikmund, 2016:272). Ordinal data in turn requires the participant to rank, or place the provided options, in a specific order (Burns *et al.*, 2017:207), with scale measurements providing the respondents with fixed scales presented as continuous variables, requiring the respondent to select the most appropriate option to them (Mertens *et al.*, 2017:2).

The questionnaire consists of a preamble and screening questions, followed by two main sections: Section A which serves to collect background information and Section B – G that comprises several question clusters measuring specific aspects of the change management experience. A combination of nominal and scale measurements are used, requesting the respondents to indicate their relevant answers as per predetermined options and scales (Burns *et al.*, 2017:207).

The preamble provides the introductory statement to the questionnaire indicating the purpose of the study, confirming the anonymity of all respondents and the voluntary nature of the questionnaire. Additionally, three screening questions are posed to respondents, to further aid in ensuring that only those who have experienced change management at a higher education institution complete the questionnaire.

Following the preamble and screening questions, Section A comprises of six close-ended questions forming part of nominal measurement tools, to collect data related to highest qualification, category of employment, level of employment, number of years employed, as well as previous experiences related to undergraduate curricula and change management.

The structure of the questionnaire for this study is informed by the existing change management models discussed above, including the three-step 1947 change management model of Lewin, Kotter's eight step change management model (Kotter, 1995:61), and the ADKAR® model (Prosci, 2020). Based upon these theoretical models, existing change management frameworks were studied which further informed the questionnaire structure and content, indicated below in Table 1.4 and Figure 1.6.

Table 1.4: Extract of domains of core competencies forming part of curriculum change management

Management	Including functions related to planning, resource allocation, evaluation and monitoring of the change process.
Communication	Communicating with the stakeholders and creating an acceptance of the need for the change process.
Values and ethics	Ensuring that the change process retains integrity, consistency and transparency.
Leadership	Creation of a shared vision, motivating staff and auctioning of strategic objectives.
Policy and advocacy	Creation and amendment of governance and related rules and processes to support the change process.

Source: Author's adaptation from Amuguni *et al.* (2019:4).

Figure 1.6: Framework for curricular change



Source: Mahboob and Evans (2015:86).

Both the model of Mahboob and Evans (2015) and the domains of core competencies of Amuguni *et al.* (2019) display similarity with the existing theoretical models of Lewin, Kotter and Prosci. Subsequently, the following categories were identified for the questionnaire, and additional question formulations incorporated from existing studies related to change management (Boloko, 2018:133-139; Coertzen, 2015:55-60; Lemmer, 2018:72-75).

The sections forming part of the questionnaire testing the relevant change management experiences when transforming undergraduate curricula are summarised in Table 1.5.

Table 1.5: Main focus areas of questionnaire sections, and envisaged outcomes of data collected

Questionnaire section	Outcomes envisaged
Section B: Creating the need for change	- Clearly defining the purpose and extent of the change management process. - Obtaining the buy-in from staff on the envisaged change management process. - Determining the clear benefits of the change, and the risks associated with not effecting the envisaged change.

Table 1.5: Main focus areas of questionnaire sections, and envisaged outcomes of data collected (*cont.*)

Questionnaire section	Outcomes envisaged
Section C: Planning and resources	• The mobilisation of resources to effect change. • Identification of change agents to facilitate the change process. • Defining objectives, strategies and outcomes to be achieved.
Section D: Communication to role-players involved	• Relevance of the communication circulated to staff. • Frequency of the communication circulated to staff. • Establishment and nurturing of trust in the recipients on the change management process.
Section E: Change leadership	• Leadership provided by managers to staff. • Ability of institutional leaders to motivate, inspire and mentor staff. • Ability of managers (leaders) to guide staff through the change management process. • Managers' ability to positively influence the change management process and ensure retained buy-in of staff.
Section F: Evaluation and monitoring	• Continuous monitoring of progress and achievements. • Evaluation of implemented changes. • Determining if the initial outcomes of the change management process were achieved.
Section G: Embedding effected changes	• Supporting desired changes through institutional changes to values, policies, rules or processes. • Skills development and awareness related to changes in organisational culture, policies and processes. • Integration of systems and policies to ensure a smooth transition during the change process.

Adapted from: Amuguni *et al.* (2019:4); Chowthi-Williams (2017:244-246); Kaphe (2017:30-34); Mahboob and Evans (2015:85-86).

Based on existing questionnaires, the questionnaire for this study incorporates a six-point Likert scale which measures the experiences of the respondents relating to predetermined questions. The use of Likert scales assists to determine to what extent the participant agrees with a specific statement (ranging between strongly disagree and strongly agree, with no middle point or neutral option available) (Mooi *et al.*, 2018:73).

The question statements were constructed from existing questionnaires, while also incorporating existing components of change management indicated in the literature review. The main body of the questionnaire therefore consists of sections B – G which tests general experiences, manager specific experiences and non-manager specific experiences to change management.

1.7.2.3.1 Pilot study

A pilot study is usually conducted with a small group of participants to test the questionnaire and identify any shortcomings that would be required, in order to ensure a higher chance of valid data being received through completed questionnaires (Babin & Zikmund, 2016:64). If any errors, difficulties, ambiguous questions or biased questions exist, the questionnaire can be adapted accordingly and adaptations indicated as such. For the **purposes of this study**, a small pilot study including 10 respondents who did not form part of the study was completed in advance. This pilot study assisted in identifying possible errors or mistakes within the questionnaire which would otherwise have negatively impacted on the study.

1.7.2.4 Data collection

Data collection refers to the stage of the research project when respondents forming part of the sample frame provide their inputs on the questions posed to them (Burns *et al.*, 2017:290). **For this study** data was collected by means of an online, secure Google Survey questionnaire, circulated to the academic staff falling within the identified target sample frame, requesting them to participate. The researcher made use of a mediator who circulated the questionnaire on behalf of the researcher, with the researcher having no direct contact or access to the participants or their contact information. This assists in ensuring that the voluntary nature of participation to the study is protected. Provision was made for a follow-up request to be circulated to academic staff falling within the identified target sample frame if the researcher noted a poor response rate after a period of two weeks. The questionnaires were collected over a period of one month during 2021.

1.7.2.5 Data analysis

The collected data from the questionnaires is edited, analysed and calculated through statistical programming, namely IBM Statistical Package for Social Sciences (version 28) and with AMOS. Data analysis entails the calculation, reasoning and summarizing of the data to provide better insight and understanding of the collected data (Babin & Zikmund, 2016:70). Such an analysis provides useful insights on the respondents' profile (informed by demographical information), as well as the measured objectives through the use of pre-determined questions.

The data analysis process commences with calculating the descriptive statistics which will include frequencies (F), percentages (%), means ($\bar{x}$), and standard deviations (SD) to describe the respondents' experiences of a change management process when transforming undergraduate curricula at an HEI. Thereafter, the psychometric properties are determined where the reliability of the scales will be tested by calculating the Cronbach's alpha coefficient values (α), with Babin and Zikmund (2016:281) indicating that a scale with a coefficient between 0.70 and 0.80 is considered to have good reliability. This is followed by an exploratory factor analysis (EFA) to ensure the validity of the constructs (i.e. tangibles, reliability, responsiveness, assurance and empathy). The inferential

statistics conducted in this study included multiple regression analyses, which are elaboratively discussed in section 4.9.5.

1.8 ETHICAL CONSIDERATIONS

This study measures the experiences of academic staff members during a change management process. The research proposal and envisaged questionnaire was submitted to the Scientific Committee of the North-West University, for ethical clearance prior to the commencement of data gathering. In addition to the aforementioned, the researcher applied for approval from the Research Data Gatekeeper Committee, to allow the researcher to conduct the study using the identified target sample frame as voluntary participants.

The identity of respondents remains anonymous, with background information structured in such a way as to protect the anonymity of respondents and their possible defining markers of characteristics. Each respondent is assigned a unique number following their completion of the questionnaire, which will only be used to distinguish between data sets and responses received.

1.9 CONTRIBUTION OF THE STUDY

This study aims to contribute towards the understanding of the change management process when transforming undergraduate curricula in an HEI. Through measuring the experiences of those involved in this change management process both at academic managerial and non-managerial level, it is aimed to holistically view the complex change process at a university, and identify the possible shortcomings during such a process at an HEI. This study will contribute towards defining the relevant stakeholders involved with the change management process, gaining insights into how HEI staff, specifically academic staff, experience change management processes. Through these insights a clearer understanding of challenges experienced during the change management process can be established, allowing for the identification of possible solutions. The study will increase the understanding of the various stages of the change management process garnered from existing academic models and literature, applied within the specific context of an HEI.

1.10 LIMITATIONS OF THE STUDY

This study will be limited to a single HEI in South Africa, and is not a representative view of a national trend of experiences of change management within HEIs. This study only measures experiences related to change management in general, and does not focus on a specific instance of change management (or specific change events), therefore respondents' experience can be influenced by a wide range of factors unknown to the researcher. The study will only focus on the change experiences of academic staff and academic support staff.

1.11 CHAPTER OUTLINE

The document commences with a clear outline of the study, and subsequently proceeds in further discussing and analysing existing literature and understanding of change management, higher education institutions and report back on findings of data gathered from respondents.

- Chapter 1: In this chapter the background and purpose of the study are discussed, and subsequent primary and secondary research objectives are provided. Similarly, an overview of the intended methodology guiding the data collection and analysis is provided.
- Chapter 2: Exploring the management and strategic management origins of change management.
- Chapter 3: Change management when transforming Higher Education curricula.
- Chapter 4: This chapter further explores the relevant methodology and data analysis methods harnessed for the purposes of this study.
- Chapter 5: Report on the quantitative research findings and an analysis of the data collected.
- Chapter 6: Report on the possible recommendations based on data findings, possible suggestions for future research endeavours, and concluding thoughts.

CHAPTER 2

EXPLORING THE MANAGEMENT AND STRATEGIC MANAGEMENT ORIGINS OF CHANGE MANAGEMENT

2.1 INTRODUCTION

Organisations today function within a continuously changing environment, with the constant evolution of societal, economic, political and technological landscapes (Belias *et al.*, 2019:38). Organisations are defined as complicated and multifaceted groups of systems, processes and people, functioning within an even more complex structural environment consisting of an intricate network of changeable and usually uncontrollable variables and factors which impact on the organisations therein (Mbengue *et al.*, 2018:8). An ever changing and increasingly globalised environment now requires organisational managers to successfully identify and manage strategic changes required to ensure organisational survival (Imran *et al.*, 2016:1097).

Organisations like Higher Education Institutions (HEIs) are not immune to these continuously changing environments and consequently face adverse uncertainties resulting in an increased need for such organisations to incorporate facets of management and strategic management that enable them to successfully navigate the changing environments in which they function (Pucciarelli & Kaplan, 2016:312). Although HEIs, as part of public sector organisations, can have different objectives and purposes to that of private sector organisations, HEIs stand to benefit from the application of private sector management principles, adjusted to suit the unique public sector environment (Felicio *et al.*, 2021:596).

Adding to the expectation that HEIs must traverse these two spheres of organisational types, where on the one hand pursuing the objectives of a profit driven organisation generating income, and on the other, performing the roles of a non-profit organisation tending to the interest of communities and stakeholders (Pucciarelli & Kaplan, 2016:312), HEIs currently experience additional pressure to establish and maintain a competitive advantage in relation to other HEIs both at a national, and even international level (Abbas *et al.*, 2021:2). Subsequently, HEIs today are required to successfully effect strategic changes to their processes, structures and offerings to obtain a competitive advantage, thereby securing their survival (Rashid *et al.*, 2016:423).

To better understand how change management as a component of strategic management has relevance for HEIs in South Africa, this chapter seeks to provide an in-depth analysis of management theory from which strategic management stems, thereby acting as the basis on which change management is founded. In doing so, it is anticipated that the theoretical realm of management theories can expand from corporate organisations to HEIs, consequently enabling

HEIs to successfully execute management of change. This chapter will therefore encompass a discussion of the management theories deemed relevant for this study.

2.2 MANAGEMENT THEORY

Management theories are described as sets of rules that act as frameworks guiding how managers of organisations interact with the organisation and its compositional components, with the aim of achieving the goals set for the organisation (Rana *et al.*, 2016:15). Management theories as they are generally accepted today, originated from classical theories on management, whereby seminal authors such as Henri Fayol (1841–1925), Frederick Taylor (1856-1915) and Max Weber (1864-1920) shaped the manner in which we perceive and understand management principles and theories today (Ferdous, 2016:2). The management theories of Fayol, Taylor and Weber, also known as classical management theories, further formed the foundation upon which subsequent management schools of thought and theories were developed, thereby retaining their relevance for the management of any organisation today (Kaur *et al.*, 2020:121). From these management theories, strategic management theories were developed, thus creating a fundamental interrelation between management and strategic management, with the prior giving rise to the latter (Nascimento *et al.*, 2020:2).

In pursuit of identifying this fundamental interrelation between management and strategic management, the following section seeks to define a theoretical foundation of management, and further unpack and relate the pertinent theories deemed relevant to this study within the overarching realm of management theory.

2.2.1 The origin of management theories

In defining management, the three classical management theories developed by Henry Fayol (1841–1925), Frederick Taylor (1856-1915) and Max Weber (1864-1920) are identified as relevant to this study. These classical theories on management came about at the turn of the previous century and focussed on three sub-categories, defined as administrative principles, scientific management and bureaucratic organisations (Khorasani & Almasifard, 2017:134; Kitana, 2016:17). Classical management theories largely focus on improving the efficiency and efficacy of the organisation by emphasising improved organisational structure and tasks execution, often at the expense of the employees of the organisation (Baykan & Uzunboyulu, 2018:22; Hussain *et al.*, 2019:162).

Henry Fayol, a French engineer by profession who is regarded as a seminal author in the field of management, developed fourteen principles of management which formed the basis of management theories and our understanding thereof (Godwin *et al.*, 2017:78). According to Hussain *et al.* (2019:157), Fayol defined management as the processes whereby the efforts and

resources of an organisation are harnessed to reach predetermined organisational goals through careful planning, organising, leading and controlling of such resources.

In contrast, Frederick Taylor viewed the tasks performed by employees in a scientific light, rather than merely a rule of thumb notion, consequently implying that decisions related to employees should be informed by careful analysis aimed at improving efficiency rather than mechanical practices of the past (Kaur *et al.*, 2020:124). Taylor therefore defined management as a means to improve and optimise organisational outputs through improving efficiency and applications of resources (Godwin *et al.*, 2018:78).

Max Weber, in turn, developed the Bureaucratic Management Systems that focus on fixed procedures and structures with a clearly defined hierarchy of authority, dependent on executable policies, rules and guidelines (Kitana, 2016:19). Consequently, Weber defined management as a rational process through which various layers within the organisation are created, supporting the organisation's functioning and dependent on clearly defined roles and responsibilities, fixed remuneration, specialised skills and structured rules (Dahlgaard-Park *et al.*, 2018:1114).

In digesting the aforementioned seminal authors' management theories, a detailed comparison of the primary components of the theories developed by each is provided, concluding with a summative table (see Table 2.3) highlighting key components observed in each theory.

2.2.2 Fourteen principles of Henri Fayol

Based upon his observations as an engineer, Henry Fayol (1841–1925) crafted fourteen management principles which are regarded as the origin from which contemporary management theories have been developed (Dahlgaard-Park *et al.*, 2018:1113). These fourteen principles are regarded as influential to the ability and manner in which managers view and execute management functions such as planning, organising, leading and controlling, and depend on the manager's, or organisational leader's, conviction to achieve predetermined goals of the organisation (Bacud, 2020:162; Krisnawati *et al.*, 2016:178). Fayol emphasised the outputs and functioning of the organisation as a whole, whereby the behavioural competencies of the managers within the organisation are harnessed to ensure maximum output by employees and optimal usage of organisational resources (Kitana, 2016:18,19). Fayol's theory places organisational leadership as a core driver towards achieving the desired outputs within the organisation (Bacud, 2020:166), thus establishing the concept of management. Furthermore, his management theory and the fourteen principles are regarded as applicable to various disciplines and groups of activities within an organisation such as administration, accounting and finances, commercialisation, technical and logistical matters and security, therefore implying its universal applicability (Hussain *et al.*, 2019:158).

Table 2.1 below provides a summary of the fourteen principles developed by Taylor, and indicates a short description on each principle.

Table 2.1: Henri Fayol's fourteen principles of management

Principle	Description
Division of work	Capitalising on the division of work of employees related to what they are most skilled for. Focussed on distributing the work amongst employees, rather than overburdening on a select few. This contributes towards effectiveness and efficiency of the organisation.
Authority	The requirement for organisations to have specific managers who can issue instructions or commands to subordinates, thereby aiding in how they perform their work or function, with a limitation placed on the number of persons who are equipped with this function.
Discipline	Acting in accordance with instruction given by managers. Such acts should be supported and enforced by well-formulated rules and regulations which further guide employees' behaviour and discipline.
Unity of command	To ensure consistent communication, communication must come from a single person, rather than numerous persons or supervisors. This consequently requires that an employee must only report to one supervisor or manager, and not receive instruction from numerous superiors, as this could lead to conflict.
Unity of direction	The overall direction of an organisation must result from a single manager, which is guided by a single vision or direction that supports the shared direction and unity.
Subordination of individual interest to the common good	The employees' goals and interests should not take priority over that of the organisation.
Remuneration	The equal and fair remuneration of employees by employers, which is harnessed as a reward system for employees.
Centralisation	The level of control held by individuals in an organisation should be carefully managed. Here, two types of categories are noted, namely centralised decision making (where a limited number of individuals have decision making authority), and decentralised decision making (where a larger group of individuals have this authority).
Scalar chain	Scalar chain indicates the principle of hierarchy which facilitates a clear unity of direction, thereby emphasising how decisions are made, executed and communicated.
Order	Ensuring order contributes to the overall efficiency and effectiveness of the organisation and its employees. Such order should be stipulated and ensure both the creation of social and material order within the organisation.
Equity	Equity encompasses the notion of impartiality, unbiasedness, and objectivity related to considerations on actions and rewards towards employees within the workplace. Such a principle should be applied consistently.

Table 2.1: Henri Fayol's fourteen principles of management (cont.)

Principle	Description
Stability of personnel tenure (job security)	This principle directs the creation of stability within the workplace environment by keeping employee turnover at a minimal rate, thereby allowing employees and managers sufficient time to master their various tasks and responsibilities.
Initiative	The creation of an environment where employees can contribute to an organisation through the application of innovation, or being allowed to apply their creativity in the execution of their tasks and functions.
<i>Esprit de corps</i> (Team-Spirit):	The notion of creating a singular team spirit within the organisation, by generating shared values which aid in motivating the group to achieve similar goals.

Source: Adapted from Ferdous (2016:4); Godwin *et al.* (2017:79); Hussain *et al.*, (2019:158); Khorasani & Almasifard (2017: 135); Kitana (2016:18-19); and Poperwi (2018:811).

2.2.3 Scientific management theory

In addition to Henry Fayol, Frederik Taylor (1856-1915) developed a methodology that through analysis prioritised the time-related outputs of employees, measuring the time it took to complete specific tasks with the resources available, without diminishing the quality of the employee's output (Kitana, 2016:18). Consequently, this approach allowed employees to be tasked with responsibilities and duties they were best suited to, based on their skills and an understanding of the complexity of the task itself, not based on mere assumption or historic precedence as had previously been the case (Savino, 2016:71).

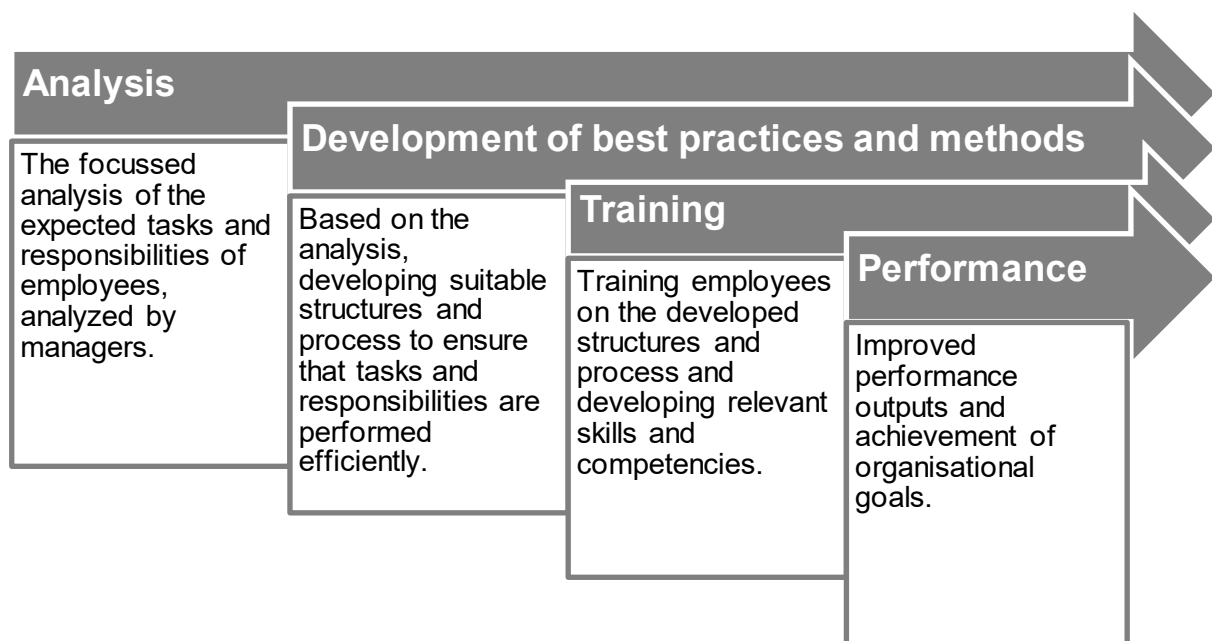
Subsequently, Taylor developed the four principles of scientific management, based upon the notion that both managers and employees collectively work towards a singular vision of the organisation, which in effect increases the outputs of their efforts (Ferdous, 2016:3). In pursuit of this increased efficiency, this theory requires that employees must have predetermined responsibilities which remain differentiated from one another (Khorasani & Almasifard, 2017: 135) and require the function of managers in their role as supervisors to ensure the performance of employees, with the performance measured against the predetermined responsibilities (Kaur *et al.*, 2020:124). This establishment of predetermined responsibilities and the pivotal role occupied by the manager increases the effectiveness of organisations, by optimising the outputs through the optimal harnessing of organisational resources (Savino, 2016:71).

According to Khorasani & Almasifard (2017:135) as well as Kitana (2016:18) the four principles as developed by Taylor account for:

- i. The creation of a scientific management method that determines the best methods for executing tasks.
- ii. The structured recruitment of employees who are assigned specific tasks to which they are best suited.
- iii. The scientifically based and focussed training and education of employees to successfully occupy their roles and execute their specific tasks.
- iv. The collaboration between employees and management or leaders, based on an agreed performance output level that is linked to a specific reward.

Consequently, Taylor's four principles enable organisations to develop mechanisms and processes that improve organisational outputs through changes in staff structures, procedures, policies and the reporting channels of the organisation (Pawl & Anderson, 2016:236). Conceptualised visually, the four management principles contained in Taylor's scientific management theory can be summarised as follows:

Figure 2.1: Taylor's scientific management theory principles



Source: Adapted from Dahlgaard-Park *et al.* (2018:1113); Godwin *et al.* (2018), and Tripathy and Raj (2021:328).

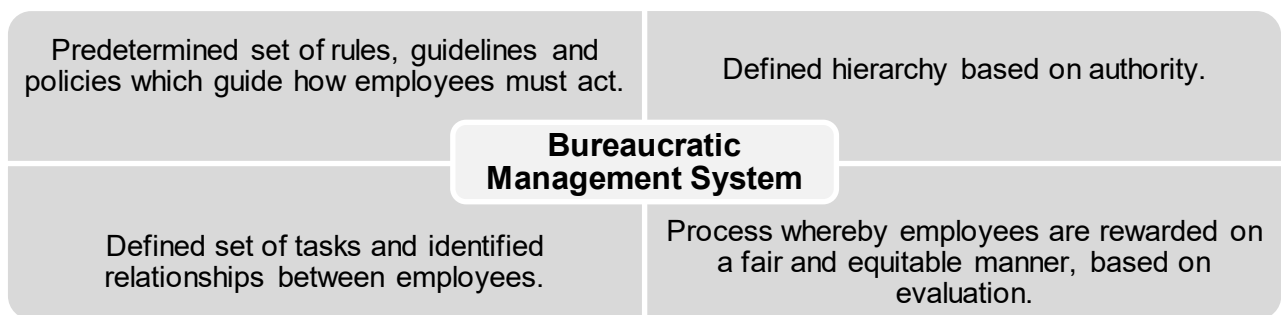
2.2.4 Bureaucratic management theory

The bureaucratic management theory developed by Max Weber (1864-1920) is based on the concept of rational management, whereby managers within organisations have specific functions and roles enabling them to give directives and tasks to subordinate employees, informed and

supported by the hierarchical position of the manager (Peltonen, 2016:38-39). Weber considered the concept of rational management as devoid of personal considerations or irrational emotions, arguing that bureaucracy remained a critical tool towards managing employees within an organisation in a manner which increased efficiency and outputs (Itani, 2017:38, 54).

Weber's macro-level approach to management placed management within a clearly defined structure (Önday, 2016:102) and was further refined to four core elements indicated in Figure 2.2 below. The bureaucratic management theory further enables organisations to continue functioning regardless of changes in employees and managers, thereby focussing the functioning of the organisation towards the achievement of the goals and tasks, regardless of the actual employees who may occupy certain positions within the hierarchy of the organisation (Hussain *et al.*, 2019:158).

Figure 2.2: Four core elements of Weber's bureaucratic management system



Source: Khorasani & Almasifard (2017:136).

Stemming from the four core elements of Weber's bureaucratic management, key characteristics are delineated which remain applicable to management theories, with these characteristics indicating how bureaucracy contributes towards the effective management of an organisation (Dahlgard-Park *et al.*, 2018:1114). The key characteristics of this system is summarised in below.

Table 2.2: Key characteristics of Bureaucratic Management System

Characteristic	Description
Hierarchy of authority	The organisational structure and decision-making routes are clearly defined and understood, with different decisions and tasks performed at different levels within the organisation.
Division of labour	A clear separation of tasks assigned to employees is required.
Impersonality	Rationality should prevail in decision-making, and not be influenced by personal convictions or emotions.
Technical qualifications	Tasks and responsibilities assigned to employees should be informed by their formal skills, as well as further employment possibilities within the organisation.
Procedural specifications	Reactions to specific situations should be guided by predefined policies, rules and guidelines.

Source: Baykan and Uzunboylu (2018:23); Peltonen (2016:40).

2.2.5 Summative representation of the respective theories

The three classical management theories developed by Fayol, Taylor and Weber contribute towards the current understanding of management (Dahlgaard-Park *et al.*, 2018:1113), from which contemporary management, strategic management and consequently change management emerged. Tenants of classical theories resonate with what has already been observed in relation to change management within HEIs as indicated in Chapter 1 of this study, with Table 2.3 below providing a summary overview comparing the main tenants of these classical management theories.

Table 2.3: Summary of the comparison between the three classical management theories

Administrative Management Theory - Fayol	Scientific Management Theory – Taylor	Bureaucratic Management Theory - Weber
Primary focus on the manager and managerial tasks guiding employees.	Focussed on standardizing the manner in which tasks are performed by employees.	Focussed on structures, policies and hierarchies that enable the continuation of organisational functions.
Dependent on four management functions of planning, organizing, controlling and leading which can be applied universally in numerous organisational contexts and environments.	Critically analysing the task, roles and responsibilities of employees and establishing a single best approach.	Dependent on the hierarchical roles within an organisation, rather than the specific individuals who perform such roles.
Allocating specific tasks to specific employees based on skill and competency.	Scientific analysis and formulation.	Rational management.
Organisational leader as core contributor.	Focussed on optimizing organisational outputs through leveraging employee deliverables.	Focussed on organisation as a whole.
Emphasis on top level management of an organisation.	Emphasis on the productivity of employees of an organisation.	Emphasis on the hierarchical structure of the organisation as a whole.

Source: Baykan & Uzunboylu (2018), Dahlgaard-Park *et al.*, (2018), Hussain *et al.* (2019); Tripathy and Raj (2021).

The classical management theories contribute towards the understanding of change management in that it forms the foundation on which the diverse field of management was built. Core theoretical principles, elements and frameworks are provided, that are still located within change management, including the role of the organisational manager, planning, coordination, communication and evaluation. As part of further investigating the development of change management and identifying additional management theories which contribute towards our understanding thereof, the following section discusses contemporary management theories that are regarded as directly linked to change management.

2.3 CONTEMPORARY MANAGEMENT THEORIES

Building on the theoretical foundation provided by classical management theory, contemporary management theories and their related activities are focussed on harnessing organisational resources to achieve predetermined goals that drive the organisation forward (Baykan & Uzunboylu, 2018:22). Contemporary management theories give recognition to the interdisciplinary theories of management that could account for complex management problems caused by the interplay that occurs between diverse groups of organisational stakeholders functioning within even more diverse organisational environments (Mbengue *et al.*, 2018:8). Theoretically, contemporary management theories were developed from classical management theories, and the classical management theories tend to regard employees as inanimate resources and materials, versus contemporary management theories that recognise the human factor of employees as persons and individuals with specific needs, desires and relationships (Muldoon, 2020:549). Furthermore, classical management theories have been criticized as overtly focussed on the mechanical functioning of the organisation and improving the effectiveness and efficiency of employees, disregarding the value and impact of employees and the social structures they function within (Hussain *et al.*, 2019:159).

A substantial shift therefore occurred between the two theoretical realms whereby employees under contemporary management theories are seen as more than inanimate resources, and rather studied as human beings with a variety of interactions and connections that in turn influence the organisation and organisational environment (Baykan & Uzunboylu, 2018:22). Contemporary management theories analyse the aspects related to the non-rational behaviour, group dynamics and social factors of employees, that in turn influence the organisation at several levels (Muldoon, 2020:550). This shift in management theory focus has, however, added to the complexity of factors and influences that should be considered by organisational managers, and also introduced new structural frameworks and principles that enable the attainment of specific organisational outcomes and objectives (Vlasenko *et al.*, 2019:37). Consequently, contemporary management theories are diverse in nature, having originated during the course of the twentieth and twenty-first century in a variety of fields of study (Dahlgaard-Park *et al.*, 2018:1110). The notable advancements in the fields of science, society and economics that occurred during this period further accelerated the growth of contemporary management theories by mobilising the adaptation and development of management theories that could adequately meet the demands of changing organisations and more dynamic organisational environments (Rana *et al.*, 2016:14).

In combining the multidisciplinary nature of contemporary management theories with the context of the increased globalised landscape wherein organisations function today, the need for dynamic management frameworks and approaches that enable organisations to effectively respond to their changing needs becomes self-evident (Hussain *et al.*, 2019:166). As part of expanding the

understanding of contemporary management theories and their relevance to this study, the contemporary management theories of **human relations theory** and **systems management theory** are discussed next, since these are regarded as relevant to this study due to their inherent transferability to organisations across different disciplines and contexts (Akpor-Robaro, 2018:2). Furthermore, human relations theory provides for a guide that contributes towards facilitating change amongst employees, while systems management theory provides a framework for managers to consider, plan, and react to complex sets of factors influencing their organisation, with both theories signalling relevance to the management of change (Williams *et al.*, 2017:867).

2.3.1 Human Relations Theory

Organisations comprise dynamic interactions that occur between employees and managers in a cyclical manner, with each interaction and subsequent reaction influencing the functioning of the organisation (Elujekwute *et al.*, 2021:84). These interactions form an intricate web of relationships between employees of an organisation and are influenced by an array of factors both internal and external to the organisation (Hussain *et al.*, 2019:159). The study of these interactions and relationships forms the foundation of human relations theory as a theory concerned with employees as psychological beings who have specific needs and interpersonal interactions that impact on their performance within the organisation (Dahlgard-Park *et al.*, 2018:1111). Therefore, employees and their interactions with the organisation and each other are recognised as influential to the organisation's overall performance and maintenance of a competitive advantage (Baykan & Uzunboylu, 2018:23). Consequently, and for the **purposes of this study**, human relation theory is defined as the interactions that occur between individuals who form part of organisational groups, with these interactions influenced by political, social, psychological and emotional factors, occurring both inside and outside the organisation (Elujekwute *et al.*, 2021:78).

Human relations theory was first described by the seminal author Elton Mayo (1880-1949), who shaped the contemporary understanding of human relations theory as a discipline of organisational management (Muldoon *et al.*, 2020:166; Tripathy & Raj, 2021:328). Primarily, the theory holds that the organisation is enabled to achieve the desired outputs and efficiency when organisational managers stimulate, encourage, and develop employees and their skills for the purposes of creating an internal organisational environment that supports and promotes employee performance (Elujekwute *et al.*, 2021:80). The theory regards employees as social beings that are driven to produce outputs by more factors than sole monetary gain, therefore signalling the importance of a conducive organisational work environment and the positive interactions and engagements that occur between employees (Tolibovna, 2020:3).

As part of the aforementioned stimulation of employees, Mayo investigates the ability of managers to increase the outputs of employees by stimulating their performance through carefully managing the socio-psychological needs of employees, driving them to achieve greater outputs and

cooperation that positively contributes towards organisational performance (Muldoon *et al.*, 2020:169; Tolibovna, 2020:7). This consequently requires that organisational managers manage employees in such a manner as to increase their efficiency without solely harnessing only financial gain and remuneration of the employee, as was the primary objective with classical management theories (Muldoon *et al.*, 2020:171). The implementation of non-monetary motivational factors and mechanisms consequently contributes towards enabling the sustainable change of employee behaviours and culture, that supports increased employee efficiency and outputs (Tolibovna, 2020:4; Tripathy & Raj, 2021:329). Subsequently, the notion of job satisfaction of the employee in relation to the organisation, their work-related tasks, and the relationship with the organisational manager is placed at the forefront of organisational management (Muldoon *et al.*, 2020:171), with the relationships that exist between employees as social beings regarded in the same light as the monetary incentives that can be provided to them (Dahlggaard-Park *et al.*, 2018:1114).

Mary Parker-Follett (1868-1933) further contributed towards the understanding of human relations theory, specifically studying the relationship that exists between employees and the organisational managers, as well as the importance of expanding on the understanding of leadership within the organisation context (Elujekwute *et al.*, 2021:78). She observed that manager-employee interactions occur due to the relationships that exist between employees and managers and could be managed in such a manner that they support and contribute to the achievement of shared organisational objectives, thereby improving organisational efficiency (Tripathy & Raj, 2021:325). Parker-Follett departed from the strong distinction in roles noted amongst scientific management theorists and advocated for the importance of both informal and formal organisational groups, as well as the harnessing of collectivism towards the achievement of organisational objectives and goals (Elujekwute *et al.*, 2021:78). As part of understanding these socio-psychological factors, employees are regarded as social beings that interact with one another at an individual and group level, connecting and communicating both in the formal and informal environments inside and outside the organisation (Binda, 2020:755). Considering that organisations are made up of a group of individuals, human relations theory postulates that employees must be managed and coordinated by means of a conducive organisational culture that also supports the functioning and vision of the organisation (Elujekwute *et al.*, 2021:80).

From the above-mentioned, a distinct shift in theoretical focus is noted whereby the dominant narrative of classical management theories, that regarded employees as rational beings detached from social and interpersonal engagements impacting on their performance, was made through human relations theories (Hussain *et al.*, 2019:159), in that the importance of socio-psychological factors as key contributors to organisational management and facilitating change was identified (Elujekwute *et al.*, 2021:77), therein resonating with the investigatory objectives of this study on change management.

The initial statements made by Mayo, where the organisational performance can be enhanced by improving the interrelations amongst employees and the non-financial gains, finds relevance in organisational management and the successful execution of change (Muldoon *et al.*, 2020:172). Human relations theory contributes towards this study as it provides for a holistic view of the organisation whereby the organisational manager is required to identify and harness those components that contribute towards the pursuit and achievement of a shared purpose and vision (Elujekwute *et al.*, 2021:81). Within the context of change management, organisations must continuously assess the changing factors that affect employee interactions and reactions which, as such, are not static, but continue to change and evolve requiring adjustments in how the organisation responds (Elujekwute *et al.*, 2021:81).

Furthermore, organisational managers stand to benefit from their understanding and management of the employee groups that form within the organisation, as these groups have the ability to influence the organisation and its performance (Binda, 2020:756), thereby impacting on change initiatives. Human relations theory is relevant to this study due to the innate nature of HEIs comprising of individuals with multi-dimensional relationships and interactions that influence the performance of such organisations (Elujekwute *et al.*, 2021:85). Human relations theory therefore contributes positively towards the understanding of creation a conducive organisational culture that provides for an environment where the skills and attributes of employees are recognised and harnessed optimally, and the values and interactions of employees are aligned with the overall organisational culture, that facilitates the motivation and stimulation of the organisations' employees and managers (Tripathy & Raj, 2021:326).

2.3.2 Systems Theory

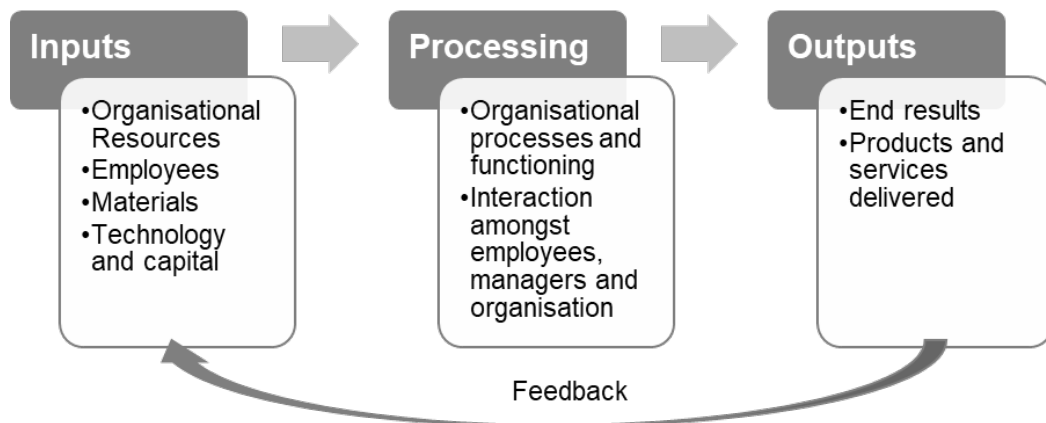
The concept of systems theory was first developed by Ludwig Von Bertalanffy (1901-1972), postulating that a system comprises several components that are interrelated to one another (Jung & Vakharia, 2019:258). In this light, organisations are systems comprising of sub-systems that are interrelated to one another, spanning the various aspects and components of the organisation itself, with the system ultimately susceptible to external influences (Gordon, 2021). Von Bertalanffy theorised that an organisation cannot be studied as its individual components functioning in isolation, but must be studied as a holistic whole of interrelated components (McMahon & Patton, 2018:229). Systems theory is defined as the study of the organisation as a whole, inclusive of the interactions amongst the internal components of the organisation and their reactions to external influences, both collectively and individually often occurring simultaneously (Jung & Vakharia, 2019:259; Mbengue *et al.*, 2018:5).

The organisation is regarded as a system within a larger environment, with inputs entering the organisation, the organisation processing the inputs using the resources at its disposal, and thereafter delivering outputs to the organisational environment, whilst impacted by the changes and interactions occurring within the environment itself (Dahlgaard-Park *et al.*, 2018:1116). Viewed through the systems management lens, an organisation can be defined as a system that consists of a combination of interrelated and connected components that function as a collective to achieve a predetermined goal (Krisnawati *et al.*, 2016:178), with systems theory studying the various levels, information sets, avenues of communication, and structural configuration of the organisation that influence the organisational functioning (Georgiou, 2019:140). This study of the organisations as a holistic system therefore includes the interactions that occur between internal components and external factors relevant to the organisation (Mbengue *et al.*, 2018:5; Rana *et al.*, 2016:15), as well as the interactions and processes that occur within and between the internal organisational systems and the sub-systems (McMahon & Patton, 2018:230).

Through applying the systems management approach, organisational managers are enabled to manage the internal and external factors influencing the organisation (Baykan & Uzunboyly, 2018:24), thereby signalling positively to this study that systems management theory is highly flexible and applicable to different organisational types and circumstances (Jung & Vakharia, 2019:257). Systems management theory further provides for identification of pragmatic solutions when managing complex systems within organisations by diverging management initiatives and integrating such into a co-operative and functional whole (Gaeta *et al.*, 2019:19). Convergent to the important role of the organisational manager in facilitating change, organisational manager acts as a core driver in systems management theory, tasked with managing the diverse groups of factors that impact on organisational functioning (Williams *et al.*, 2017:873).

Systems management theory identifies two types of overarching systems namely: (i) open systems and (ii) closed systems (Baykan & Uzunboyly, 2018:24). An open system is characterised by the ongoing flow of information and resources in and out of the organisation, whereas a closed system reaches a state of equilibrium when the flow of information and resources reaches a point of saturation (Valentinov *et al.*, 2019:290). Both types of systems are regarded as valuable to managers in solving management problems within organisations (Krisnawati *et al.*, 2016:178). When considering an open system, feedback on the system functions and impact, as well as the appropriate response leading to the adjustment of organisational tasks and changes in organisational behaviour, remains central towards ensuring successful management (Mbengue *et al.*, 2018:11). Figure 2.3 illustrates the functioning of an open system, noting the inputs, processing, outputs and continuous systems feedback.

Figure 2.3: Open System Type forming part of Systems Management Theory



Source: Dahlgaard-Park *et al.*, 2018:1116; Krishawati *et al.*, 2016:179.

Organisations are not limited to open and closed systems, as additional sub-systems exist within organisations originating from the interpersonal interactions and relationship that form between employees at an individual, societal, and socio-environmental level, all of which are further influenced by aspects such as age, gender, health, physical capacity, cultural structures and religion (McMahon & Patton, 2018:231). When considering an open organisational system, the interaction between internal components creates a sub-system, with the sub-system impacting on the performance of the overall organisational system and its reactions to the external environment (Mbengue *et al.*, 2018:6). Therefore, open organisational systems are affected by external influences, that do not per se cause new processes to commence within the organisation, but rather encourages a change in the reaction of the organisation through augmenting existing processes (Valentinov *et al.*, 2019:291).

These repetitive and ongoing interactions between the systems and sub-systems of an organisation and their interaction with the external environment, requires a dynamic management solution that accounts for a variety of factors and forces (McMahon & Patton, 2018:231). It is noted that closed systems remain short-sighted in the ability to act and react to organisational changes, as the organisation remains confined to its own systems process, views and structures and through these limitations, the external influences are not experienced (Valentinov *et al.*, 2019:292).

Since its development, systems theory has found relevance in a variety of academic disciplines including biology, natural sciences, communication sciences, health care and organisational management (Jung & Vakharia, 2019:258; McMahon & Patton, 2018:229,235). Due to its ability to view organisations holistically, managers from different fields and disciplines are enabled to explore multidisciplinary and integrated management approaches in managing their organisation (Hussain *et al.*, 2019:162). Noting the complexity of organisations emphasised by systems theory, the benefit is gained in the ability to view the organisation and its functioning within the organisational environment as a holistic whole, rather than a limited organisation with a myopic view of hierarchy and bureaucracy (Jung & Vakharia, 2019:260), similar to the way strategic management analyses organisations.

Consequently, systems theory provides a series of mechanisms for organisational managers to successfully manage organisation in continuously changing and dynamic environments influenced by external societal, economic, political and environmental factors (Williams *et al.*, 2017:867). Thus, managers are enabled to combine a complex set of organisational resources together with changing circumstances and processes in such a manner that will be to the benefit of the organisation (Mbengue *et al.*, 2018:12).

Therefore, and for the purposes of this study, organisations are regarded as open systems that actively interact and are influenced by the environments within which they function (Valentinov *et al.*, 2019:290), with open systems further regarded as most relevant, as they resemble the multifaceted nature of HEIs. The application of a systems based theory in organisational management contributes positively towards the manager's ability to react to changing organisational environments and maintaining a competitive advantage (Mbengue *et al.*, 2018:12), thus contributing towards the ability to manage change. In addition, a systems management approach enables managers to gain an understanding of the complex interactions and relationships that exist between internal and external systems of an organisation, and specifically leverage these relationships and interactions towards positively influencing the organisational performance and creating the desired competitive advantage (Williams *et al.*, 2017:871).

Systems management theory allows for a combination of various management models, adapted to suit the organisational situation and environmental context, as opposed to the principle of classical management theories that remained rigid to specific theoretical compositions (Baykan & Uzunboylu, 2018:24) displaying difficulty in adjusting to changing environments. Therefore, the theory can provide a framework for organisational managers drawing from several management schools of thought, focussing on contingent factors of the organisation that are taken into account when determining the most appropriate or best fit management approach for the organisation (Hussain *et al.*, 2019:163). In so doing, the contextually relevant factors inform the appropriate decisions and actions of the management approach taken, with a singular approach applied in a

rigid manner being regarded as undesirable (Dahlgaard-Park *et al.*, 2018:1116; Rana *et al.*, 2016:15).

Consequently, systems management theory allows for the application of management principles from various theoretical eras with the necessary flexibility, capitalising on the theories' most relevant principles, therein transcending different organisational contexts and environments (Poperwi, 2018:809) that will result in the best possible solution for the organisation. This ongoing process of observing and adjusting the management response of the organisation to the relevant organisational context remains advantageous to organisations placed within dynamic organisational environments (McAdam *et al.*, 2016:195), and ties in with the objective of change management.

The development of systems management theories further contributes towards the understanding that management theories cannot be regarded as a one sizes fits all approach, but that the contextual and organisational factors must be taken into consideration, which includes organisational managers, resources and environment (Abba *et al.*, 2018:40). Consequently, systems theory contributes towards the purpose of this study in that it provides a mechanism through which various theories of organisational management can be integrated towards a collective objective, combining a diverse composition of systems, influences and factors (McMahon & Patton, 2018:234). The focus of systems management theory in identifying appropriate management approaches to best fit the organisational circumstances and environments, signals towards the interrelationship between the theory and its applicability within the strategic management sphere (Abba *et al.*, 2018:41,42).

2.3.3 Contemporary management theories relevant to this study

Within the context of the modern day globalised organisational environment, organisations are subjected to various external influences and interactions that require of the organisations and their managers to improve their internal synergies, maintain a competitive advantage, and ensure sustainable management approaches (Baykan & Uzunboylu, 2018:25). Contemporary management theories go beyond the parameters of the organisation itself and identify and address external factors that interact with the organisation such as customers, suppliers and government (Krisnawati *et al.*, 2016:178). The ability of these theories to work towards management solutions for complex organisation management problems and challenges in a multidimensional manner – i.e. internal and external influences and changing organisational environments – complements the process of change management as investigated in this study (Hussain *et al.*, 2019:162).

Contemporary management theories, such as human relations and systems management theory, enable organisational managers tasked with managing change to identify the most applicable management theory that will benefit their organisation, therefore freeing them from the notion of a one-size-fits-all approach and empowering them to consider organisational elements such as

structure, size and resource availability (Dahlgaard-Park *et al.*, 2018:1116). Furthermore, strategic management is viewed as drawing from contemporary management theories such as those discussed above, and provide organisational managers with the necessary tools to appropriately navigate the required combination of organisational resources with the view of achieving a predetermined goal (Mbengue *et al.*, 2018:7).

2.3.4 Exploring the link between management and strategic management

Management theories enable organisational managers to increase the effectiveness and efficiency of the organisation, with the theories acting as knowledge-based frameworks guiding the operational execution of tasks performed by employees (Akpór-Robaro, 2018:2). This signals that management theories, and their foundational principles, should not be applied in a rigid manner but must rather be adapted to suit the contextual needs of the organisation, leveraged towards benefitting the organisation and enabling it to achieve its goals and objectives (Popper, 2018:809).

Based on management tasks such as planning, organising, instructing, coordinating and control, strategic management was developed and positioned as an important tool for organisational managers of commercial organisations, non-profit organisation and public sector organisations during the mid-twentieth century enabling them to more effectively manage their organisations (Kaehler & Grundei, 2019:11). The interrelated tasks noted between management and strategic management theories signal towards the fundamental relationship whereby the prior management gives rise to the strategic management (Nascimento *et al.*, 2020:2). Therefore, strategic management theories find their origin within management theories, signalling that management tasks are applicable to strategic management, including the formulation of the facets of a strategic plan, the execution and operationalisation of the strategy, and the evaluation of achieved objectives and completed processes (Kaehler & Grundei, 2019:12).

2.4 STRATEGIC MANAGEMENT

Organisations function in environments where competing organisations render similar services and products to the same consumers, with the addition of these environments being influenced by societal, political and economic forces that impact on organisational performance (Engert *et al.*, 2016:2834; Khorasani & Almasifard, 2017: 136). As an important survival tool, strategic management focuses on obtaining a competitive advantage for the organisation through improving the organisation's performance by means of maximising organisational resources and outputs to reach specific and predetermined goals (Pederzini, 2016:217). Subsequently, strategic management through a dynamic and self-reflective process enables managers of an organisation to evaluate their organisation's offerings, processes and performance, in comparison to the needs and expectations of the consumers viewed within the context of the organisational environment,

with the objective of ensuring organisational survival (Mahat & Goedgebuure, 2016:225). Consequently, strategic management can be defined as an organisational mechanism that enables the organisation to improve their performance and establish a competitive advantage in changing organisational environments by leveraging and adapting organisational resources to its own benefit (Engert *et al.*, 2016:2833). The following sections further investigate the composite elements of strategic management theory.

2.4.1 Strategic management and the organisational environment

Strategic management is a process that involves the creation of plans guiding the long-term functioning of the organisation, informed by predetermined goals and objectives (Höglund *et al.*, 2018:824), with this process being mainly led by top-management of an organisation, and the execution thereof being performed by lower lever management of the organisation (Fuertes *et al.*, 2020:9). Through the completion of such a critical analysis, managers can plan strategically, enabling them to establish a competitive advantage by optimally harnessing and advantageously positioning a broad spectrum of resources of their organisation, that can include matters related to the structure of the organisation, organisational culture, organisational resources, communication practices, performance and evaluation mechanisms (Amoo *et al.*, 2019:448). Organisations are therefore required to use a combination of strategies and adaptive mechanisms to ensure they position their organisation and its functioning in a suitable and desirable manner within the organisational environment (Ahlström *et al.*, 2020:1).

In navigating the changing organisational landscape, strategic management acts as a tool through which organisations can analyse their organisational environment with the objective of identifying possible competitive advantages and opportunities that would benefit the organisation, whilst remaining conscious of and avoiding existing threats surrounding an organisation (Nascimento *et al.*, 2020:2). To successfully identify the advantages, opportunities and threats in the organisational environment, the identification and evaluation of organisational strengths and weaknesses are required, where after such is leveraged to the benefit of the organisation in comparison to its competitors (Dogan, 2015:1291). These internal strengths and weaknesses often include the organisational structure, size and purpose, whereas the external forces can refer to organisational industry type, industry size and the current organisational positioning within the environment (Engert *et al.*, 2016:2839).

Considering the vast array of influences and variables involved in developing a suitable strategy, strategic management is often a long-term mechanism through which organisations can create and sustain a competitive advantage (Kulkarni *et al.*, 2020:81) capitalising on the organisation's internal strengths and mitigating its weaknesses, thereby exploiting external opportunities and managing possible threats to its own advantage (Strydom, 2016:76). When evaluating the organisational environment of public sector organisations, it is evident that context is not solely focussed on

financial gain and profit as is the case with private sector organisations, but rather requires a mastering of a complex collection of factors ranging from financial sustainability, political climates, and community development and engagement (De Haan, 2015:47).

In light of the above-mentioned discussion, it is understandable that strategic management remains a complex process that poses great difficulty to the managers tasked with its planning and execution, as managers need to account for a diverse combination of influencing factors such as technological developments, changing consumer behaviours, legal and regulatory changes, and often unpredictable economic and unstable social-political climates (Gavrilova *et al.*, 2018:370). Therefore, to further scaffold the theoretical framework towards understanding the interrelation between management, strategic management and change management, the following section investigates the strategic management theories related to the five Ps of strategic management, and the creation of a competitive advantage, with both concepts regarded as relevant to this study.

2.4.2 The Five Ps of Strategic Management

Henry Mintzberg (born 1939), regarded as one of the main contributors to the field of strategic management, developed what came to be known as the five Ps of strategic management suggesting that the core of strategic management entails the matching of the internal organisational capabilities with the demands of the organisational environment (Höglund *et al.*, 2018:824). In Mintzberg's view, the organisation is regarded as the coordination of work and tasks performed by employees with the objective of achieving the predetermined organisational goals (Fuertes *et al.*, 2020:6). Mintzberg indicated that strategy could be effected by means of a deliberate approach of strategy formulation, or by means of organic learning where the strategy emerges over time, or as a combination of both (Papke-Shields & Boyer-Wright, 2017:172). For Mintzberg, strategies are developed with the view of achieving a predetermined objective, with the strategy guiding the future actions of the organisation (Fuertes *et al.*, 2020:10).

To guide this performance of tasks and achieve the identified goals, Mintzberg put forward his strategic model of the five Ps, that include plan, ploy, pattern, positions and perspective (WenJun, 2019:30) (further described in Table 2.4 below). The five Ps are generally regarded as the primary tenants that should embody any strategy, with the five Ps interrelated to one another in a fluid and flexible manner (Jeve, 2015:112). The application of the five Ps in the development of a strategy must be done whilst remaining conscious of planned and emergent strategies, which contribute towards the overall realised strategy, or otherwise phrased, whether or not the envisaged goals and vision were accomplished (Engert *et al.*, 2016:2834), with this aspect being contextualised hereunder as part of strategy execution.

Table 2.4: The Five Ps of Strategic Management

Plan	A clearly defined plan guiding specific actions and reactions, that are aimed at a specific goal or objective.
Ploy	A tactic aimed at achieving an advantage over a competitor.
Pattern	A predetermined set of behaviours which can adapt to changing circumstances, and allow organisational managers to understand how to direct behaviours of the organisation towards a specific goal.
Position	The establishment of a competitive position within the organisation's environment. Therefore, the organisation is placed in the external environment amongst other organisations, and the predetermined services and offerings are placed within this competitive space measured against other organisations.
Perspective	An indication of how the organisation views itself within its specific environment. Strategy as a perspective underpins the manner and way in which the organisation will act when executing the strategy, like an organisational personality.

Source: Fuertes *et al.* (2020:10); WenJun (2019:31).

Although strategy is formulated by top management and organisational leaders, a successful strategy should also guide actions of and motivate the employees of the organisation to achieve the goals (Ongaro & Ferlie, 2020:361). Mintzberg further emphasised the importance of an organisation frequently evaluating and assessing itself to determine its own strengths and weaknesses, in relation to the external opportunities and threats (WenJun, 2019:31), thereby determining whether or not the strategy is resulting in the desired effect. For Mintzberg, the ploy of a strategy aided in guiding the short-term responses of the organisation, whereas the plan guided the long-term functioning and actions of the organisation with both plan and ploy functioning in unison with each other (WenJun, 2019:32).

By applying Mintzberg's strategic model, the long-term direction of the organisation is viewed in parallel with the achievement of predetermined goals and the continuous evaluation of organisational functions acting in support of the goal achievement (Höglund *et al.*, 2018:824). Contributing towards this study, Mintzberg's five Ps model is regarded as applicable to public sector organisations such as HEIs (Ongaro & Ferlie, 2020:360), due to its ability in guiding organisational responses for an extended period of time and guiding the behaviours of employees within the organisation.

2.4.3 The Competitive Advantage

Michael E. Porter (born 1947) argued that an organisation can best achieve success by establishing a competitive advantage within the organisational environment as it relates to its own competitors, directed by a clearly defined and flexible strategy (Hansen & Ferlie, 2016:7; Kharub & Sharma, 2017:136). Although Porter did not develop a specific definition for the concept of a competitive advantage, the concept of competitive advantage is linked to the organisation's ability to provide greater value to its consumers as compared to that of its rivals (De Haan, 2015:46). The competitive advantage of an organisation is thus determined in relation to other organisations within the same organisational environment, which gives rise to the notion of the competitive positioning of organisations in relation to one another (Kharub & Sharma, 2017:136).

Organisations often experience difficulty in determining the correct combination of organisational resources and offerings which will gain it a competitive advantage (Kharub & Sharma, 2017:133). Therefore, Porter developed the Five Forces model that acts as a tool enabling organisations to obtain a competitive advantage that is clearly distinguished from that of a rival organisation, by guiding the organisation towards presenting its own offering in a unique manner, compared to its known competitors (Mahat & Goedgebuure, 2016:226).

Consequently, the Five Forces model of Porter can be harnessed towards assisting the organisation to obtain a competitive advantage by carefully managing and leveraging factorial conditions, conditions related to demand, similar or related industries, the organisational structure, and the impact of government (Kharub & Sharma, 2017:138-140). These five forces were identified by Porter as: the threat of new entrants, bargaining power of suppliers, bargaining power of consumers, threat of substitutes, and the rivalry amongst competitors (Mahat & Goedgebuure, 2016:227), as illustrated in Figure 2.4 and further described in Table 2.5 below.

Figure 2.4: Porter's Five Forces Model



Source: Authors own depiction (Khurram *et al.*, 2020:4; Mahat & Goedgebuure, 2016:225-7).

Table 2.5: Description of the five forces of Porter's Five Forces Model

Force	Description
Threat of new entrants	Refers to the possible threat of new competitors to an organisation's environment. Profitable markets often lead to an increase in competitors, however, barriers to entry can assist organisations in maintaining a competitive advantage. Increased competition leads to a reduction of profitability in the organisational environment.
Threat of possible substitutes	The threat of possible substitutes directly impacts on the competitive advantage of an organisation, when similar offerings are available from different rival organisations. An increased availability of substitutes within the organisational environment can lead to consumers switching between different products and services offered by other organisations.
Bargaining power of consumers	Refers to the manner in which consumers can manipulate and influence the cost and quality of products and services rendered by organisations. Limited powerful buyers in an organisation can increase the bargaining power of the consumers.
Bargaining power of suppliers	Refers to the manner in which suppliers to organisations can manipulate and influence the cost and quality of products and services rendered by the organisation to consumers.
Competition amongst competitors	Refers to the products and services offered by organisations within the same industry, where undifferentiated products and services offered by rivals/competitors can reduce the overall desirability of the organisational environment.

Source: Khurram *et al.*, 2020:7; Mahat & Goedgebuure, 2016:226-227.

Porter's Five Forces model has been criticised for not fully taking into account organisational environment impacts such as political, societal and economic aspects which influence organisations. Nevertheless, the relevance of Porter's Five Forces model is of particular importance when viewed in the context of the increase in offerings and opportunities available to consumers in relation to the globalisation, with this resulting in increased pressure placed on organisations to ensure they retain their competitive advantage amidst uncertain and challenging circumstances (Kharub & Sharma, 2017:135). In addition, the Five Forces model is regarded as applicable within both private and public sector organisations (Khurram *et al.*, 2020:3-4) where it assists managers of organisations like HEIs to identify the forces impacting on HEIs, as it broadens the overall understanding of the complex environment and organisational structures of such organisations (Mahat & Goedgebuure, 2016:228).

2.4.4 Strategic Management Role-players

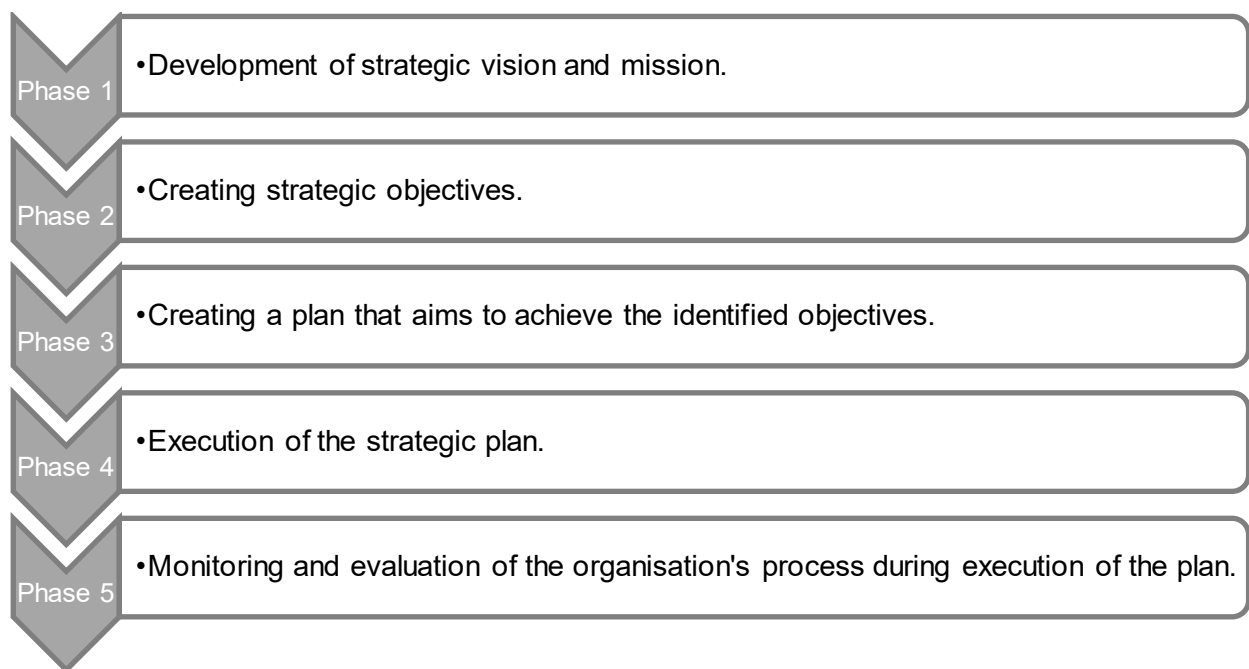
Strategic management can be regarded as a set of tools available to managers of an organisation through which they can expand their management knowledge, improve their understanding of their organisation and the environment, and coordinate resources of the organisation (Popperwi, 2018:809). Furthermore, organisational managers are the designated individuals tasked with the development and implementation of strategies through the coordination of the tasks and duties of subordinate employees, guided by the strategic plan (Vlasenko *et al.*, 2019:39). In performing this role, organisational managers perform the function of motivator, encouraging and guiding employees in understanding and executing the strategy within their relevant work environment (Hussain *et al.*, 2019:159). However, the strategic management process should not only focus on a top-down approach, but should include the involvement of all levels of organisational stakeholders in enabling these stakeholders to share their views and opinions in a bid to ensure the successful realisation of the strategy (Pearse, 2017:91). The difficulty experienced by managers in executing strategies is aggravated by changing organisational environments which in turn require specific reactions through targeted plans that are intended to assist in guiding the correct response from the organisation (Beynon-Davies *et al.*, 2016:677).

Strategic management involves a vast array of stakeholders within an organisation, who are continuously involved in a process of creating plans, executing such, analysing the effect, and adjusting as required (Johnsen, 2015:247). In pursuit of identifying a sensible framework that can guide strategic management within the HEI context, the following section works towards identifying a strategic management framework, consisting of five overarching phases.

2.4.5 Establishing a strategic management framework

In condensing the above-mentioned theories on strategic management, a five-phased strategic management framework has been identified, focussed on the development of vision and mission statements, strategic objectives, plans to achieve these objectives, the execution of said plans, and the final monitoring and evaluation of the impact of the strategies on the organisation's performance (Strydom, 2016:77). The identified five phases as indicated by Strydom (2016) are depicted in Figure 2.5, and further described below.

Figure 2.5: Five Phased Strategic Management Framework



Source: Author's own illustration adapted from Strydom (2016:77).

Phase 1: Development of strategic vision and mission

The creation of a vision and mission statement which positively impacts on the organisations ability to maintain a competitive advantage and growth, shapes a fundamental aspect of formulating a strategy (Kulkarni *et al.*, 2020:82). Therefore, the vision statement of an organisation must define the expected and desired future position of the organisation, with the vision statement then supported by subsequent mission statements aimed at achieving the vision (Dogan, 2015:1291). In developing these vision and mission statements, it remains critical to ensure that the members within the organisation understand and share in the vision and mission statements of the organisation (Amoo *et al.*, 2019:449). In building this understanding and support amongst members of an organisation, effective and efficient communication to organisational members forms a vital

component of this development phase in the strategic management process, without which the strategy will surely fail (Maree & McKenzie, 2015:606).

Phase 2: Creating strategic objectives

Clearly developed and well understood strategic objectives that function in support of the strategic vision and mission remain important building blocks in ensuring the successful strategic management of an organisation (Pearse, 2017:92). The identification of objectives for an organisation, regardless of whether or not they are public or private sector organisations, act as a measurement tool by means of which the performance and success of the organisation can be measured as the strategy is implemented over a period of time (Felicio *et al.*, 2021:595).

Phase 3: Creation of a plan that aims to achieve the identified objectives

Informed by the vision and the mission of the organisation and guided by the strategic objectives, organisations and in particular top-level management must create definitive and executable plans that will guide the execution and realisation of the strategy (Kulkarni *et al.*, 2020:81). The ability to leverage organisations' strategic plans consequently enable managers to control and guide operational processes when executing their managerial function and in so doing, give effect to the strategy (Felicio *et al.*, 2021:595).

It remains important, however, that as part of the strategic plan, provision is made for the necessary support required by all levels of employees in the execution of the components of the strategic plan, with such support often including changes in an organisational structure, human resource developments, adjustments in performance outputs and related tasks (Maree & McKenzie, 2015:606). As part of this support, managers are required to develop enabling mechanisms that identify the needs of the employees that will allow them to execute the strategy (Kraft *et al.*, 2016:72).

Phase 4: Execution of the strategic plan

As part of understanding the execution of a strategy, the distinction must be made between deliberate and emergent strategies (Höglund *et al.*, 2018:824), as mentioned above. This distinction is required due to the disconnect often experienced between the stages of creating the strategy, and thereafter implementing the strategy, during which a disconnect originates from the reality that role-players responsible for creation of the strategy, and the role-players responsible for the implementation of the strategy, are often separated – i.e. top-level management developing strategies and subordinate levels executing the strategies (Amoo *et al.*, 2019:447). In this regard, deliberate strategies refer to strategies fulfilled with specific intention and do not accommodate any adaption during the strategic plan, required by changing circumstances of the organisation (MacKay *et al.*, 1351). In contrast, and of more value towards ensuring the successful execution of strategy, emergent strategies account for the adaption of strategic plans enabling the organisation to adapt

to changing organisational circumstances as they emerge over time, thereby providing flexibility to ensure the overall successful execution and realisation of the strategy (Höglund *et al.*, 2018:825). Failure to understand and distinguish between the two aforementioned strategy types, often impedes the successful execution of strategy.

Phase 5: Monitoring and evaluation of the organisation's process during execution of the plan

Organisational managers who desire the realisation of their strategy, must continuously assess and evaluate the strategy and its impact during the execution, aiming to establish if the strategic plan is indeed achieving the strategic vision and mission (Savino, 2016:72). As part of the monitoring and evaluation of the strategy during the execution phase, managers are required to consider the strategic plans and their effectiveness towards achieving the strategy and make the necessary changes to ensure success (Felicio *et al.*, 2021:596).

2.5 THE GOLDEN THREAD LINKING MANAGEMENT, STRATEGIC MANAGEMENT AND CHANGE MANAGEMENT

As illustrated at the start of Chapter 2 of this study, the organisational environment demand of organisations to successfully manage change to ensure their survival, influenced by a diverse matrix of factors (Vandangeon-Derumez *et al.*, 2019:715). It is therefore important for organisations to carefully consider how they manage such a changing environment, with change management models providing viable solutions in successfully executing change (Subramoney & Matshabaphala, 2019:676). By strategically managing change guided by a change vision, objectives and a plan, organisations can transfer from their current state to a desired future state, thus growing by strategically adapting to changing organisational circumstances (Mitra *et al.*, 2019:2072).

The final section of Chapter 2 subsequently articulates the interdependencies that connect management, strategic management and change management, thereby affirming the theoretical foundation of this study. Figure 2.6 below illustrates the theoretical thread that links change management with strategic management forming part of the overall theoretical realm of management. For the purposes of this study, the origin of change management is viewed in a linear format, focussed on management, strategic management, and finally change management.

Figure 2.6: Visual linking management, strategic management and change management



Source: Author's own depiction.

2.5.1 Linking management with change management

The management functions of planning, coordinating, control and monitoring forms the essence of management theory and form an integral part of the change management process (Rolland, 2018:8). The correlation between management and change management is further noted in the importance of effective communication between organisational stakeholders, such as managers and employees, that contributes towards the common understanding of the envisaged change, thus affirming the presence of planning and coordinating within change management (Angela-Eliza & Valentina, 2018:337). In addition, the functions of management whereby resources are allocated and stakeholders are mobilised, form the cornerstone of the change management process, therein confirming the reliance of change management on management principles (Rohmah & Subriadi, 2022:54). Lastly, the management principles of control and monitoring link closely with change management with specific reference to the role of organisational managers, and their completion of monitoring and evaluation throughout the change management process. Thus, by completing these management functions, organisational managers are equipped with the necessary tools to execute the change through structure and stability, effective communication, and sufficient resource allocation (Holten *et al.*, 2020:396).

2.5.2 Linking strategic management with change management

The principles and functions of strategic management enable organisational managers to develop the vision, objectives and plans that guide and inform the change process (Rohmah & Subriadi, 2022:57). Therefore, the strategic analysis of the desired change, supported by the strategic vision, guiding objectives and plans, is required to execute the change management process, consequently linking strategic management and change management (Fraser-Arnott, 2018:171). This connection is further strengthened when considering that change management often requires the organisation to strategically adjust its position within the organisational environment by changing the organisational structure, operations and reactions, informed by planned analysis of external and internal forces that influence the organisation, (Mitra *et al.*, 2019:2069; Rolland,

2018:4) with these functions noted as primary elements and tasks embodied in strategic management.

Considering the strategic management principles discussed in this chapter, the change management process requires the formulation of specific monitoring and evaluation mechanisms that continue throughout the change process, measuring the level of change achieved, with this strategic management function noted in all three change management models discussed in this chapter (Fraser-Arnott, 2018:179; Mitra *et al.*, 2019:2084).

The aforementioned stages of linking between strategic and change management, such as strategic planning and development, execution, monitoring and evaluation based on the organisational environment and context, are all facilitated by the organisational managers, thus confirming the central role played by organisational managers as part of strategic management and change management (Al-Alawi *et al.*, 2019:117). Consequently, strategic management principles provide the necessary tools through which change management can be achieved, noting these interdependencies as strategic vision, guiding objectives, monitoring and control, strategic leadership and the development of plan and process which ensure the achievement of change (Fraser-Arnott, 2018:174).

CHAPTER 3

CHANGE MANAGEMENT WHEN TRANSFORMING HIGHER EDUCATION CURRICULA

3.1 INTRODUCTION

Over the past two decades, the South African higher education sector has experienced first-hand the difficulties in providing increased access to Higher Education Institutions (HEIs), while at the same time ensuring continued delivery of quality academic teaching and learning, enabling student success (Davids & Waghid, 2018:3). The influx into HEIs by a larger and diversified student population has mandated the transformation of academic curricula in HEIs to ensure the delivery of relevant and meaningful education, facilitated through a process of change management (Jollands *et al.*, 2022:4). In response, HEIs have endeavoured to achieve these changes through the transformation of the academic curricula offered in undergraduate programmes (Fomunyan, 2017:44).

However, the reported ability of HEIs to execute these changes successfully remains elusive, with research indicating a failure rate of 70% for organisations attempting a process of change management (Pearse, 2017:81). This high failure rate reported on organisational change management can possibly signal towards the lack of understanding amongst organisational managers related to the most appropriate change management models and approaches that would enable the successful change within their organisation (Chowti-Williams, 2018:243). Consequently, the interdependency between management, strategic management and change management identified in Chapter 2 of this study cannot be underestimated. This interdependency can be regarded as increasing the ability of HEIs to successfully execute change management, guided by a clearly defined vision and objectives that guide the transformation of academic curricula (Fraser-Arnott, 2018:170).

3.2 RELEVANT CHANGE MANAGEMENT THEORIES FOR HEI ENVIRONMENT

The identification of suitable change management models relevant to transforming curricula of undergraduate programmes in HEIs is required, as these models guide organisational managers in identifying, planning and executing the process of organisational change (Brock *et al.*, 2019:15). Within the available literature on change management, a variety of theories seem to have been developed over the course of the twentieth century, with these models ranging from rudimentary structured steps for change to broad frameworks facilitating change management at an individual and group level, all of which displaying overlapping change management process elements contributing towards this study (Rosenbaum *et al.*, 2018:289).

Using the existing literature as theoretical foundation for this study, change management will be investigated as a process whereby the organisation's strategic objectives, structure and direction are intentionally changed with the aim to ensure organisational survival through relevant product and service offerings (Subramoney & Matshabaphala, 2019:675).

3.2.1 Defining change management

As broadly established in Chapter 2 of this study, change management forms part of the strategic management process that requires the development of an organisational change vision, structures and culture, informed by the continuously evolving needs and influences of the organisational environment (Wan *et al.*, 2020:115). The strategic nature of change management implies that the behaviours, attitudes and identity of an organisation must be transformed to reflect the envisaged end state, in response to the requirement of remaining responsive to both internal and external forces impacting on the organisation (Odor, 2018:59). This process of effecting strategic change is led by a dedicated team of organisational managers and change agents, supported by plans and objectives guiding the activities of the management team and subordinate employees who are subject to change, with the process continuously being evaluated and analysed to measure performance and progress made towards its successful execution (Shonhe & Grand, 2020:44).

In guiding the change management focus of this study, change management is **defined** as (Al-Alawi *et al.*, 2019:116; Belias *et al.*, 2019:39; Holten *et al.*, 2020:394; Shonhe & Grand, 2020:44):

A process whereby an organisation is transformed from its current state into a future envisaged state to maintain a competitive advantage and ensure organisational survival. This transformation is executed when existing functions and processes are actively and strategically changed, informed by the changing organisational environment.

3.2.2 Change management theories contributing to this study

Considering the five domains of core competencies that form part of curriculum change management, identified in paragraph 1.7.2.3 of this study, combined with the focus areas of the questionnaire adopted for the purposes of quantitative research measuring the experience of change management in HEIs (see both Figure 1.6 and Table 1.4 in Chapter 1), the following paragraphs will critically analyse the three change management theories broadly discussed in paragraph 1.3.4.

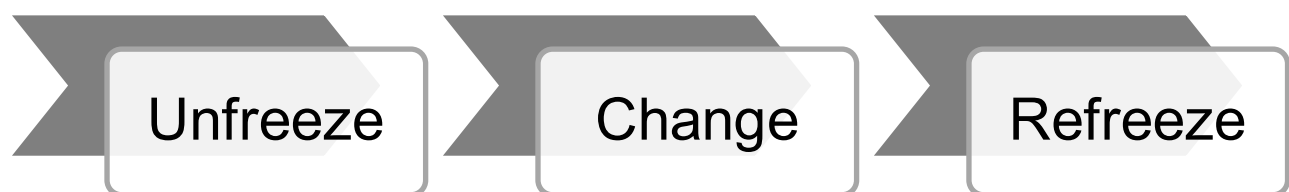
In building an understanding of the relevant change management theories, the three identified theories of change management developed by Lewin (1890-1947), Kotter (born 1947) and Prosci (1994) have been extrapolated from an extensive literature review. Additionally, it is noted that the six focus areas of change management overlap with the framework for curricular change illustrated in Figure 1.6. From these three theories, six overlapping focus areas of change management are identified and regarded as relevant to this study and its quantitative investigation (Galli, 2018:124).

3.2.2.1 Three-step change management model

Kurt Lewin (1890-1947), who is regarded as the seminal author on change management, first developed the fundamental *Three-step* theory of change consisting of unfreezing, changing and refreezing (see Figure 3.1) that guide the management of organisational change (Cummings *et al.*, 2016:34-35; Hussain *et al.*, 2018:125; Odor, 2018:60). The *Three-step* change management model, commonly depicted in a linear manner, is not solely limited to a simplistic linear application, but accounts for the inclusion of considerations of organisational environment, stakeholder engagements and external forces impacting on the organisation (Rosenbaum *et al.*, 2018:288, 290). Lewin's model is regarded as the simplest methodology towards effecting change within an organisation and as a result, has formed the foundation on which the change management models of Kotter and thereafter Prosci were developed, with the three core tenants of unfreezing, changing and refreezing still visible in these related theories (Rosenbaum *et al.*, 2018:299; Subramoney & Matshabaphala, 2019:675).

Lewin's *Three-step* change management model requires the clear articulation of the overall desired end-state and change objectives, that underpin the direction of the change process and organisational processes acting in support thereof (Rosenbaum *et al.*, 2018:291). Lewin maintained that to effect change, some form of catalyst is required to cause the need for change to occur (Galli, 2018:126). This catalyst initiates the change process by causing the unfreezing step, that consists of the identifying and defining the need for change, what aspects should be changed, generating support for the required change, and determining how this change should unfold (Da Veiga, 2018:588).

Figure 3.1: Lewin *Three-step* Change Management Model



Source: Author's own adapted depiction from Galli (2018:126), Pearse (2017:81), Rosenbaum *et al.* (2018:288).

This change process therefore serves as the opportunity when organisational managers must conceptualise the change needs, possible solutions, and commence with preparing the organisation and its stakeholders for the imminent change process (Odor, 2018:60). Lewin recognised that to enable and support change, adjustments were required in the organisational processes and structures, that further disrupt previous organisational routines and practices that might act contrary to the desired future state of change (Galli, 2018: 126).

3.2.2.2 Eight-step change management model

The contemporary authority on change management and leadership, John Kotter (born 1947), developed an eight-step change management model based on research conducted on more than 100 organisations that executed a process of change (Kraft *et al.*, 2016:73; Rosenbaum *et al.*, 2018:290). Kotter expanded the field of change management and built on the *Three-step* change management model of Lewin, developing his *Eight-step* process for leading change (Kotter, 2021) enabling organisational managers to successfully manage and lead the process of change (Al-Alawi *et al.*, 2019:119). The *Eight-step* model is considered as one of the most prominent models for facilitating the transformation of an organisation through change management, having been developed in such a manner that it remains suitable for the advancement of strategic change at an individual or organisational level (Mitra *et al.*, 2019:2071; Rohmah & Subriadi, 2022:53).

Although Kotter's change management model expanded on Lewin's model, greater consideration was given towards the role played by individuals and employees during the change management process, and the role of the organisational manager was placed at the centre of the change process resulting in a predominantly top-down approach when effecting organisational change (Galli, 2018:120,129). Kotter further emphasised that the *Eight-step* process must be executed in sequence, with minimal disturbance of the order in which the steps are executed, thus suggesting the rigidity of the model (Brock *et al.*, 2019:15) and the ultimate rigidity of the process. The *Eight-step* model is listed in the provided order and further described in Table 3.1 below.

Table 3.1: Kotter's *Eight-step* Model for Leading Change

Step		Description
1.	Establish a sense of urgency	Establishing a need and desire for change within the organisation and amongst employees and managers. Failing to establish the sense of urgency can result in a resistance to change which in turn can lead to a failure in the change management process.

Table 3.1: Kotter's *Eight-step Model for Leading Change (cont.)*

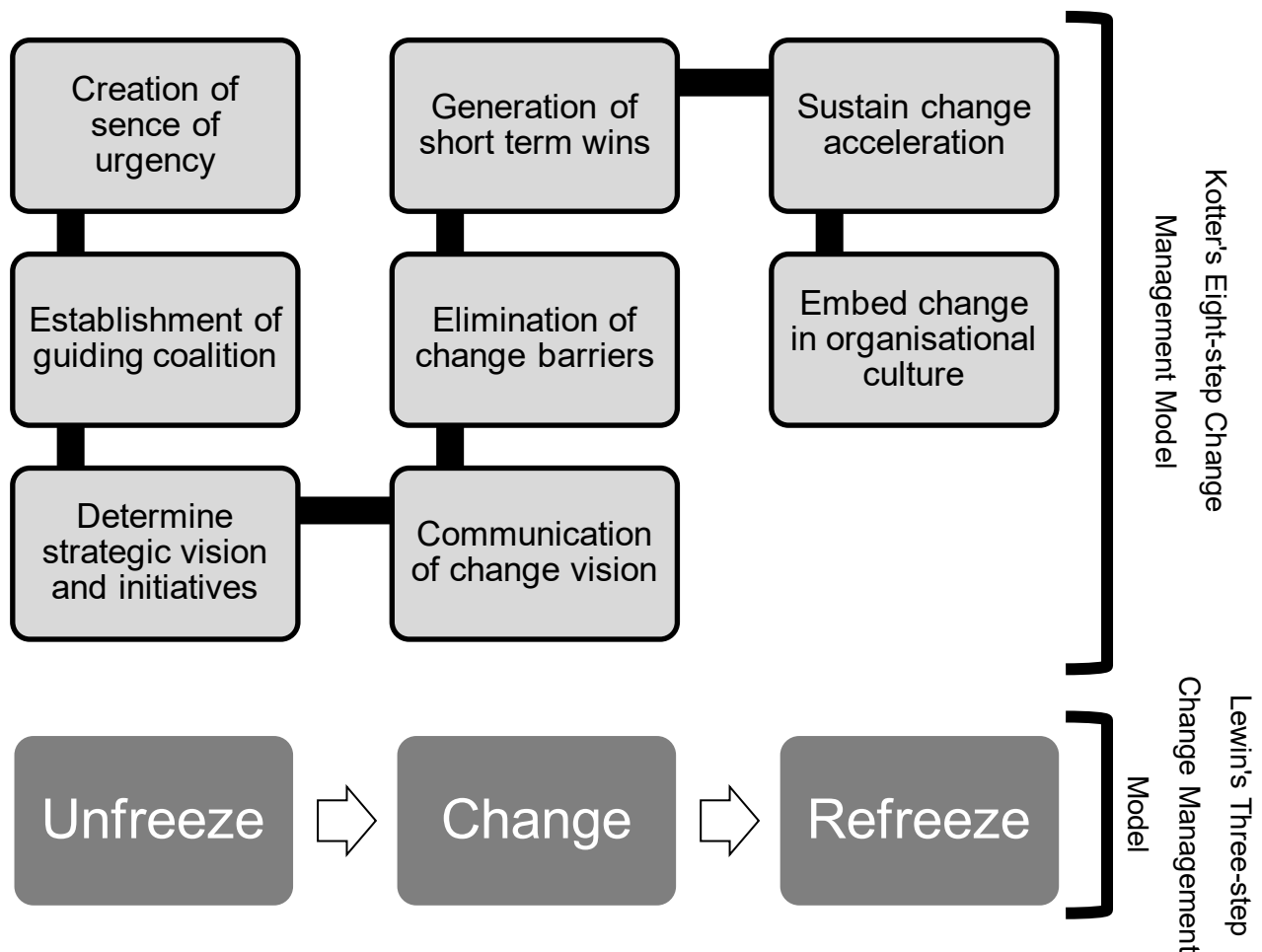
Step		Description
2.	Create a guiding coalition	Creation of strategic groups within the organisation who will be able to lead change and advocate for change amongst other employees. - Such groups must understand the envisaged change and what would be required to achieve such. - Organisational leaders – i.e., managers – must ensure that a shared understanding is built amongst the employees and organisational stakeholders.
3.	Develop a shared strategic vision and supporting initiatives	The formulation of a strategic vision that will guide the change process, as well as creating initiatives that will support the change management process. - This task is led by organisational managers. - The vision must be crafted and communicated in such a manner that it guides the actions of those participating in the change process.
4.	Communicating the vision of change	The communication of the need for change, the strategic vision and the supporting initiatives that enable the change process at all levels within the organisation. This requires the active support and participation of managers and identified change agents to gain buy-in from employees and organisational stakeholders.
5.	Enable action by removing barriers and empowering organisational stakeholders	The removal of barriers and obstacles that hamper the change process or deter buy-in from employees and organisational stakeholders. This can include alteration of existing organisational structures and processes seen as undermining the change management process.
6.	Generate short-term wins	Identifying and celebrating short-term successes related to the change management process that positively affirm the change process, related actions and activities performed by employees who support the change. These short-term wins act as mechanism to motivate employees to partake in the change process and further support its successful execution.
7.	Sustain acceleration	Emphasis is placed on the functioning of groups within the organisation reaching improved levels of function and change. Training of organisational employees must be provided to ensure that the execution of their activities and tasks support the effected changes.
8.	Institute change	Inculcate the institutional changes in the organisation through changes to organisational culture, policies and procedures. Organisational structures and bodies should further be reviewed and changed to ensure they support the change management process and its sustainment in the long term.

Source: Da Veiga (2018:589); Kotter Inc. (2021); Kraft *et al.* (2016:73); Pollack & Pollack (2015:56-61); Pearse (2017:82); Shonhe & Grand (2020:46, 48); Wan *et al.* (2020:120-121).

The *Eight-step* model recognises the emergent nature of change management in that the steps enable organisational managers to adjust the change process depending on contextual forces and changes (Wan *et al.*, 2020:115). Further clarifying the correlation that exists between strategic management and change management, it is observed that Kotter's change management model is dependent on a strategic vision, with the vision being indicative of the desired change that should occur (Galli, 2018:127). This strategic vision of the desired change thereafter contributes positively towards driving the change process and guiding the organisational employees and stakeholders tasked with effecting the change (Odor, 2018:60).

By visually overlapping the *Three-step* change management process developed by Kurt Lewin (1890-1947) with the *Eight-step* model developed by Kotter (illustrated in Figure 3.2 below), the interrelationship that exists between the two theories becomes evident, therein signalling the reliance of change management as we understand it today on the theory first developed by Lewin (Pearse, 2017:82; Shonhe & Grand, 2020:47). The observed correlation is supported by the notion that the eight steps provided by Kotter in essence entail the creation of a change climate (unfreezing), the process of enabling and driving change (change), and the implementation of change that is sustained over time (refreeze) (Galli, 2019:121; Odor, 2018:61).

Figure 3.2: Illustrated correlation between change management theories of Lewin and Kotter.



Source: Author's own depiction adapted from Odor (2018:61) and Pearse (2017:82).

3.2.2.3 The Prosci ADKAR® model for change management

The Prosci ADKAR® model was developed by Jeff Hiatt, the founder of Prosci - a change management consultancy firm founded in 1994 (Prosci, 2021) - and functions as a model guiding change (Al-Alawi *et al.*, 2019:119). Central to the model and supporting processes developed by Prosci are the seminally fundamental principles of change management, namely the transference of an organisation from its current state to a future desired state working through a series of interrelated steps (Prosci, 2021). This fundamental principle as first captured in the *Three-step* model developed by Lewin, has been further developed by Prosci to depict the transitioning of the organisation from its current state to its desired future state, further unpacking the variety of facets impacting on the change management process, illustrated in Figure 3.3 below.

Figure 3.3: Prosci's visual depiction of change management transitioning



Source: Prosci (2021). Author's own adapted depiction.

The Prosci ADKAR® model name itself is an acronym that refers to the five elements of the model namely: **a**wareness, **d**esire, **k**nowledge, **a**bility and **r**einforcement (Rosenbaum *et al.*, 2018:296; Rohmah & Subriadi, 2022:53) with the five elements of the Prosci ADKAR® model described in Table 3.2 below. The model is seen as valuable due to its inherent flexibility in application, being suitable as a change management model for both individual and organisational contexts (Karambelkar & Bhattacharya, 2017:5; Pawl & Anderson, 2017:234; Shonhe & Grand, 2020:47). The model further serves as a goal-orientated model that facilitates the change process relevant to the context of the organisation in which it is applied (Da Veiga, 2018:590).

Table 3.2: The five elements of the Prosci ADKAR® model for change management

Phase		Activities
1.	Awareness	The process of generating awareness of the current circumstances and environment of the organisation through information sharing and communication with managers, employees and stakeholders. This awareness raising must contribute towards the imminent process of change.
2.	Desire	Creation of desirability for change, and provisioning of support towards the mobilisation of the envisaged change. The mere creation of awareness is not sufficient, and organisational managers play an important role in presenting the envisaged change in a desirable manner, thus acting as a catalyst for change.
3.	Knowledge	Equipping employees with the necessary skills and information to enable them to perform their duties more effectively in executing the planned change. Assisting employees in understanding what to change within the organisation, and how this will impact and benefit the organisation.
4.	Ability	Including the implementation of knowledge and skills acquired in the pursuit of change and supporting such through further motivation and mentoring. Employees' ability to change and execute the change can be inhibited by their own personal skills, psychological limitations and intellectual abilities.

Table 3.2: The five elements of the Prosci ADKAR® model for change management (cont.)

Phase		Activities
5.	Reinforcement	Methods effected to sustain and reinforce the change effected. During this phase the effect of the change process is analysed, with necessary corrections made. As part of reinforcing the change, consideration should be given to both the external recognition as public displays of acknowledgment including rewards and accolades, as well as internal recognition related to personal gain and gratification of the employees and stakeholders.

Source: Da Veiga (2018:590); Karambelkar and Bhattacharya (2017:6-7); Rosenbaum *et al.*, (2018:296); Pawl and Anderson (2017:234-236).

The multi-level application of the Prosci ADKAR® model allows change to occur in two environments, namely at an organisational level inclusive of the structure, resources and processes, and at an individual or people-orientated level whereby individuals are influenced to change in culture, behaviour and actions (Al Khateeb, 2021:74). Thus, the model is useful to organisational managers in preparing organisational employees for the change process and assisting managers to develop the required tactics to plan, implement and evaluate change (Da Veiga, 2018:590). Further underscoring its relevance to this study, the model is deemed as suitable for enabling successful change management within the realms of corporate and public sector organisations (Galli, 2019: 119).

3.2.3 Universal application of change management to public sector organisations including higher education institutions

Change is regarded as a universal occurrence, however, the private or public sector context wherein change occurs informs the relevant set of organisational environment forces that guide the development and implementation of the vision, supporting objectives and anticipated outcomes of the change process (Aher & Luoma-Aho, 2017:25). Change management within private sector organisations has been extensively studied, but unfortunately the same cannot be said of change management theories and models applied in the context of public sector organisations like HEIs (De Haan, 2015:47; Holten *et al.*, 2020:398).

Public sector organisations like HEIs differ from private sector organisations due to their heightened sensitivity to political changes, overtly bureaucratic systems, low appetite for risk, and often non-profit nature (Aher & Luoma-Aho, 2017:26; Al-Alawi *et al.*, 2019:113). These are some of the main contextual differences between how public sector organisations function compared to private sector organisations, further influencing their structures and organisational purposes. The contextual differences between private and public sector organisations are viewed as complex sets of processes, factors, and forces functioning within dynamic and continuously changing environments, which require such organisations and their managers to react to the changing organisational

environments and needs to ensure their survival (Shonhe & Grand, 2020:43). Fortunately, due to its flexible nature, most management principles and mechanisms are applicable within both private and public sector organisations inclusive of HEIs, which in turn creates potential for the organisations and managers leading the organisational change (Felicio *et al.*, 2021:595).

The increased competition amongst HEIs on the international stage has motivated the need to transform academic curricula to meet the requirements of the continuously developing academic disciplines, international perspectives and changing global societal perspectives (De Wit & Altbach, 2020:34). As part of the transformation of academic curricula, the change management models of Lewin, Kotter and Prosci discussed above have relevance in guiding the multi-dimensional process of curriculum development (Moradi & Zarezadeh, 2022:4). Therefore, the following section proceeds to pursue the deepening of the researcher's understanding of the requirement to manage change specifically noted in HEIs and the transformation of academic curricula.

3.3 ACADEMIC CURRICULA PROVIDED BY HIGHER EDUCATION INSTITUTIONS

The bureaucratic nature and dependency on hierarchy displayed by HEIs create barriers that give rise to uncondusive environments that can hinder the change management process (Holten *et al.*, 2020:398). As noted in paragraph 3.2.2 above, a variety of change management models and frameworks are noted as applicable to HEIs thus signalling that no one-size-fits-all solution is available due to differing circumstantial and structural configurations of HEIs (Jollands *et al.*, 2022:4).

However, gaps remain in the available change management literature that provide concise guidance towards the understanding of how change in relation to the academic curricula of undergraduate programmes can be executed by HEIs (Chowti-Williams, 2018:243). Within this still developing theoretical field of change management relevant to HEIs, and accounting for the continuously changing environment wherein public sector organisations function, the requirement to undergo change by incorporating management principles from the corporate sector to the private sector has become a necessity (Felicio *et al.*, 2021:594).

3.3.1 Defining academic curricula

The academic curricula taught to students at HEIs include a variety of aspects that are related to theory, practice, philosophy, topical matters, problem solving skills and relevance to reality (Masenya, 2021:3). This is indicative of the multifaceted and comprehensive relationship that exists between the curricula content, methods of delivery, academic staff and students (Duran & Mertol, 2020:385). The curricula provide for a learning experience related to the relevant discipline topics and focus areas, learning activities and education experiences that seek to achieve the programme objectives and outcomes (Posillico *et al.*, 2021:2).

Depending on the extent of the knowledge base and the teaching and learning objectives, the academic curricula can be presented over varying periods of time, from single-period learning experiences to multi-year programmes (Chen *et al.*, 2019:678). This requires that the curricula taught to students be presented in a structured, planned manner, guiding the process of learning, based on specific predetermined learning outcomes and objectives that students are required to achieve (Kaviya *et al.*, 2022:230).

For the ***purposes of this study***, the academic curricula is defined as (Cahapay, 2020:1; Duran & Mertol, 2020:385; Posillico *et al.*, 2021:1):

The teaching and learning content and information conveyed to students at HEIs through a structured plan. The curricula are focussed on developing students' understanding of discipline specific content and the development of relevant skills that in turn enable their future employment prospects.

Specific curriculum discipline content can be subdivided into categories of learning, that have specific objectives and learning outcomes focussed on the learner gaining a specific skillset and knowledge base (Khoza & Mpungose, 2020:4). As part of the academic curricula, the manner and methods applied when determining the student's mastering of the programme content must also be appropriate and relevant in the context of the teaching and learning methods implemented (Lewis, 2021:63). Consequently, the understanding of the teaching and learning experience presented through curricula has grown from a solely knowledge acquisition-based approach towards an approach focussed on the development of personal aptitudes and skills related competencies of students including attitudes, identity and community orientation (Lubicz-Nawrocka & Bovill, 2021:4).

The curricula taught in HEIs can therefore not be stagnant or fixed to a single moment in time but are required to be reflective and inclusive of changing societal needs and global perspectives (Masenya, 2021:6). When developing academic curricula, challenges arise in the appropriate framing of learning outcomes, the description of skills acquired at the end of the learning process, and the ability to create a balanced programme that contributes towards the academic success and completion of curricula by a diverse group of students (Lewis, 2021:63).

3.3.2 Understanding transformation in the context of academic curricula

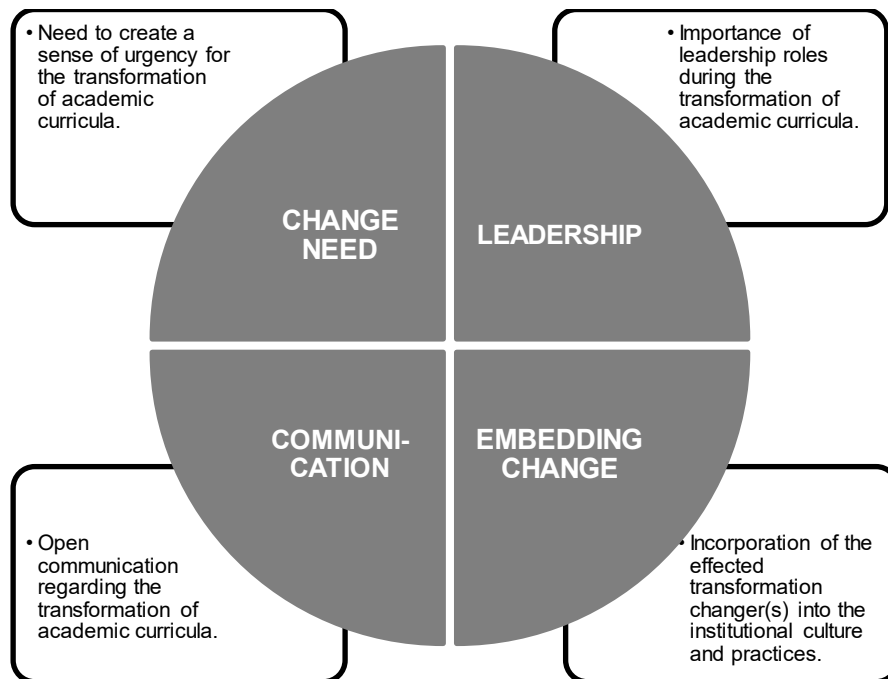
Transformation entails a disturbance of an existing status quo, followed by an evaluation of the current knowledge and understanding thereof, whereafter the information is processed, reorganised and integrated into the new reality (Lubicz-Nawrocka & Bovill, 2021:4). In the context of academic curricula, its transformation cannot be viewed as a singular or once off activity but must receive attention as a long-term and continuous process through which frequent self-reflective exercises measure academic success and student satisfaction (Kasnakoğlu & Mercan, 2020:76).

Consequently, the transformation of academic curricula requires the development and changing of the content that is taught to students either through theory, practice or a combination thereof, with the transference of knowledge and skills enabling students to succeed within a specific discipline of work (Masenya, 2021:3). Thus, the focus of transforming academic curricula is to ensure the achievement of graduate outcomes and employment industry success of student graduates by changing the teaching and learning services and products offered to students (Padayachee *et al.*, 2018:290).

Considering the rapid growth and increased globalisation experienced by HEIs already highlighted above, the need to transform HEIs and their composite functions, activities and behaviours has become a necessity with this only attainable through successful change management (Belias *et al.*, 2019:39). However, establishing the correct blend of teaching and learning services and products relevant to the changing profile of students enrolling at HEIs aggravated by the requirement to present such in a multi-model manner, further exacerbates the existing challenges related to change management of academic curricula in HEIs (Lewis, 2021:64).

To enable the successful development of academic curricula, scholarship from the academic staff tasked with its transference and development is required, but a disconnect between educators' involvement in scholarly activities has been noted that in turns inhibits their involvement in the development of valuable and relevant academic curricula (Moradi & Zarezadeh, 2022:3). Learning from the management theories indicated in paragraphs 2.2-2.4 of this study, read in conjunction with the change management theories provided in paragraph 3.2, a plausible model starts to materialise that guides the transformation academic curricula focussed on the process of assessment, the learning process, teaching methods, and finally evaluation thereof (Bitzer & Costandius, 2018:4). Extracting from the aforementioned literature, four principles emerge that contribute positively to curricula development through change management in HEIs, displayed in Figure 3.4 below.

Figure 3.4: Four principles of change management in HEIs



Source: Authors own depiction adapted from Aleixo *et al.* (2018:1667); Appelbaum *et al.* (2017:216); Vosse & Aliyu (2018:1108).

3.3.3 Development of academic curricula

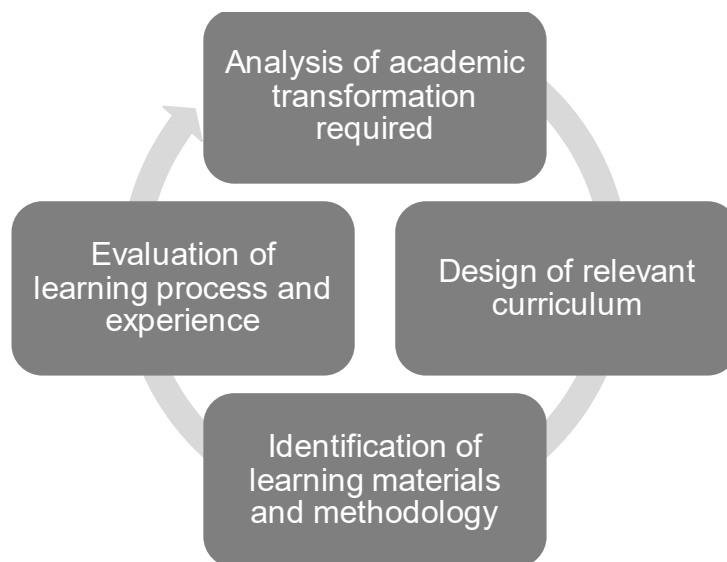
Framed within the context of the rapid changes in the compositional profile of South African HEI students, the transformation of academic curricula provides an opportunity to account for a diverse range of learning experiences and interactions that are inclusive of multiple and diverse perspectives and approaches (Lewis, 2021:65). Considering that academic curricula refer to the structured plans that guide the teaching, learning and research activities of lecturers, researchers and students of a HEI, the development of academic curricula requires a systematic process that considers both external and internal influences to the academic discipline with the aim of developing, measuring and implementing the learning plan (Kaviya *et al.*, 2022:230; Khoza & Mpungose, 2020:2).

In addition, curriculum development further includes analysing and improving the existing content's learning objectives, the teaching and learning methodology, the presentation mode, and the theoretical learning material used as part of the teaching and learning services and products (Moradi & Zarezadeh, 2022:1). Consequently, curriculum development aims to create suitable content and delivery methods that equip students with skills through quality of learning experiences in the form of teaching and learning products and services (Bens *et al.*, 2020:481).

The development of academic curricula through change should be combined with the educational requirements for a particular academic discipline and learning objectives, thereby enriching the transformation of academic curricula (Al-Jubran, 2022:684; Moradi & Zarezadeh, 2022:3). Thus, changes to academic curricula should contribute towards improved learning, better problem-solving abilities, and enhancement of research outputs (Al-Husseini *et al.*, 2021:671).

This agile focus on curriculum development is accompanied by the notable shift in the focus of curricula towards the outward facing learning experiences, that stimulate a heightened focus and contribution to community and society, rather than sole personal knowledge-gain (Lubicz-Nawrocka & Bovill, 2021:4). Overall, the intent of the curriculum development process should focus on the creation of a coherent and integrated learning experience for students, that addresses relevant themes, activities and content (Bens *et al.*, 2020:482). This process is summarised in Figure 3.5 below.

Figure 3.5: Academic curricula development process



Source: Author's own depiction from Al-Jubran (2020:689); Chen *et al.* (2019:680); Kaviya *et al.* (2022:231).

Informed by the academic development process illustrated in Figure 3.5 above, the following paragraphs serve to further describe each step as relevant to this study.

3.3.3.1 Analysis of academic transformation required

Identifying the relevant aspects of the curricula that require change is done by academic staff, informed by academic research and scholarly advancements, benchmarking exercises with other national and international universities, and the completion of peer review processes conducted by government regulatory bodies (Kaviya *et al.*, 2022:234). To enable an accurate assessment of the

transformation required, it is important that field specialists from more than one academic discipline are included in the team tasked with transformation and development of academic curricula, as the curricula and programmes are often interdisciplinary in nature (Moradi & Zarezadeh, 2022:4). Thus, the analysis phase is a fundamental departure point for curricular development and should be guided by a structured plan, that further accounts for the requirements and expectations of external stakeholders such as government entities and accreditation bodies (Al-Jubran, 2020:684).

3.3.3.2 Design of relevant curriculum

Based on the analysis of the curricula development needs, clear objectives and goals must be identified that will guide and inform the remainder of the development process, acting as an eventual measurement tool when evaluating the implemented curricula (Chen *et al.*, 2019:680). This development and design process of academic curricula is regarded as an innovation process forming a key element through which HEIs can increase their performance and attain a competitive advantage, in turn contributing towards profitability and increased throughput of student graduates (Al-Husseini *et al.*, 2021:674). However, this requires that the curriculum taught to student is relevant to ensure that it enables students to obtain the relevant skills and aptitudes required to qualify them for the particular discipline and employment opportunities (Al-Jubran, 2020:684).

3.3.3.3 Identification of learning materials and methodology

The methodological considerations should consider the medium used to convey the academic curricula, such as physical interactions, online interactions, continuous interaction and periodical interactions between academic staff and students (Cahapay, 2020: 3). When selecting the most appropriate learning materials and methods in support of the academic curricula, developers must reach a balance between the academic content and literature, combined with relevant industry requirements and practical application of the knowledge acquired (Posillico *et al.*, 2021:2).

In pursuit of the development of relevant learning experiences, the prior experiences, cultural and economic backgrounds, and demographic composition of the students must be considered, noting that this approach departs from traditional teaching and learning approaches where students are generalised to a homogenous group with similar needs, experiences and learning objectives (Lewis, 2021:66). Consequently, this array of factors require curriculum development to account for the changes in social structures, student demographic profiles and the evolving socio-economic conditions of students. Furthermore, these dynamic factors impacting on the curriculum development process must consider the accessibility that students have to the envisaged learning materials, platforms, and tools through which the curricula will be conveyed (Chen *et al.*, 2019:682).

3.3.3.4 Evaluation of learning process and experience

To determine whether knowledge and skills have been transferred to students, the academic curricula must provide for the evaluation processes measuring the learning experiences and achievements of the students (Al-Jubran, 2020:689). In the context of the rapidly developing national and international higher education environment, a dynamic approach is required in assessing students both informally and formally through quantitative and qualitative assessment methods (Cahapay, 2020:3). This should further be strengthened through the incorporation of technological advances that allow for a more holistic student assessment model harnessing traditional assessment methods, assessments through learner management systems, automated evaluation, and peer-evaluated assessments (Chen *et al.*, 2019:679).

3.3.4 Role-players in the transformation of academic curricula

The transformation of academic curricula through development comprises a complex process influenced by HEI role-players, organisational circumstances, resource limitations, and the prevailing political and economic climate (Bens *et al.*, 2020:484). The development of academic curricula is mobilised through concise leadership guiding the process, supported by focussed work groups and a mutual understanding of the development and change that is required to the academic curriculum (Bens *et al.*, 2020:482). Three role-player categories are identified in the paragraphs below, all contributing towards the transformation and development of academic curricula namely, academic staff, students and external stakeholders (Lubicz-Nawrocka & Bovill, 2021:3).

3.3.4.1 Academic staff as role-players in the development of academic curricula

Within HEIs, the process of developing academic curricula is predominantly planned and executed by academic staff within faculties, including researchers, lecturers and professional support staff who contribute to different stages of the development process (Lubicz-Nawrocka & Bovill, 2021:2). Academic staff therefore are the role-players involved in the transformation of the teaching and learning offering and how such is logically and effectively presented to students (Al-Jubran, 2020:684).

The role of organisational leaders remains central to the process of change, as these leaders must mobilise the support of employees, motivate them to participate, and achieve the shared change vision and objectives in developing and transforming the academic curricula (Al-Husseini *et al.*, 2021:673). Unfortunately, a disconnect between the role-players tasked with the development of academic curricula in HEIs often occurs, including both the both top-level and mid-level managers (who fail to interpret the overarching change plan, vision and objectives) and employees like lecturers and researchers, thereby contributing towards the reported failure rate for successful transformation of academic curricula (Aher & Luoma-Aho, 2017:31).

3.3.4.2 Students as role-players in the development of academic curricula

The transformation of academic curricula through co-creation where students and academic staff collaborate towards the development of academic content and learning experiences holds mutual benefit for long-term success for academic curricula but generates a layer of complexity that organisational managers must account for when overseeing and guiding the development of academic curricula (Kasnakoğlu & Mercan, 2020:74). Fortunately, this mutually beneficial process of co-creation between students and academic staff working towards the development and successful transformation of academic curricula can be enabled through the change management process (Lubicz-Nawrocka & Bovill, 2021:1). By harnessing a positive and healthy relationship between educators and students during the development of academic curricula, positive strides are made in the creation of an authentic and relevant teaching and learning experience for students (Lubicz-Nawrocka & Bovill, 2021:3).

3.3.4.3 External stakeholders as role-players in the development of academic curricula

Further layering the complex curricula development process and multiplicity of peripheral stakeholders is the reality that curriculum development is not isolated to the HEIs alone but is further influenced by industry where the knowledge and skills gained at such institutions are practiced and tested, providing critical reflective insights on the relevance and impact of the curriculum (Kaviya *et al.*, 2022:228; Posillico *et al.*, 2021:11). Therefore, the relevant industry in which the student will be expected to apply the skills and knowledge acquired at a HEIs cannot be disregarded during the curriculum development process (Al-Jubran, 2020:684). Furthermore, the role that local communities, parents of students and alumni play in influencing the teaching and learning products and services and thereby the curricula, further adds to the complexity of considerations required when transforming academic curricula (Kaviya *et al.*, 2022:234).

3.4 THE TRANSFORMATION OF ACADEMIC CURRICULA IN HIGHER EDUCATION INSTITUTIONS

3.4.1 Unsuccessful transformation of academic curricula in HEIs

As observed throughout this chapter, the transformation of academic curricula can fail due to a variety of factors that occur during the complex change management process (Bens *et al.*, 2020:483). Statistically it is reported that change management initiatives have a low success rate, with more than two-thirds reported as being unsuccessful (Odor, 2018:59). Managers of public sector organisations such as HEIs report that change management initiatives on average have a low success rate of roughly 30%, thus a 70% failure rate (Imran *et al.*, 2016:1098; Mitra *et al.*, 2019:2070; Pearse, 2017:81).

This low success rate is frequently linked to insufficient planning and poor communication during the change management process, which is further curtailed by the failure to address the bureaucratic and hierarchical culture of HEIs that diminishes the necessary flexibility demanded from the change management process (Aher & Luoma-Aho, 2017:27; Fraser-Arnott, 2018:170). Insufficient planning and coordination, poor resource allocations and ineffective communication and actioning by organisational managers further impair the change management process (Rohmah & Subriadi, 2022:53). Consequently, a negative reaction to change management is experienced by employees and organisational stakeholders. However, such an inadequate experience could be mitigated through effective change leadership that seeks to improve aspects related to motivation, trustworthiness, transparency and support provided to employees during the change management process (Holten *et al.*, 2020:403).

Unfortunately, public sector organisations like HEIs often fail to account for the involvement of their employees in the change management process by neglecting to effectively communicate with them, resulting in the creation of resistance to the change process (Aher & Luoma-Aho, 2017:28-29). Most worrisome of all is the inability of managers to appropriately address the challenges related to change management, that in turns fails to mitigate the identified risks that originate from the hierarchy and bureaucracy of HEIs, consequently impeding the successful change (Al-Alawi *et al.*, 2019:116).

3.4.2 The importance of transforming academic curricula

The nature of learning activities forming part of the teaching and learning experience of students has evolved to include a combination of teaching and learning engagements such as learning communities, communal experiences, internationally focussed learning, and community orientated learning (Lubicz-Nawrocka & Bovill, 2021:3). Understanding that the development of academic curricula requires the complex interchanging of information and activities as part of determining the teaching and learning needs of students, the development of a learning plan, the identification of suitable content and delivery methodology, the necessity to apply a methodical and well considered framework guiding the change becomes apparent (Al-Jubran, 2020:689). Placed within the international context, the observed strategic focus towards the internationalisation of higher education over the past two decades has further agitated the development of appropriate and relevant teaching and learning offerings presented to an increasingly diverse student population (De Wit & Altbach, 2020:28).

It remains important to change academic curricula within HEIs due to the necessity to deliver educational content to students that is relevant and up to date with current developments, taking into consideration the educational needs of students informed by the divergent backgrounds and experiences influencing their learning trajectory (Kaviya *et al.*, 2022:228; Moradi & Zarezadeh, 2022:4). Demand for the transformation of teaching and learning products and services has not

been limited to the managers and staff of HEIs, as students have also contributed towards the increased pressure for transformation of the academic curricula (Kasnakoğlu & Mercan, 2020:73).

Within the South African context the increased demand for access to HEIs consisting of relevant and current teaching and learning offerings has been further driven by the steady improvement of primary and secondary education and the growth in local economy and income classes (De Wit & Altbach, 2020:32). Internationally, the need to successfully execute change in HEIs has been driven by the increased demand in quality education and improved organisational functioning (Al-Husseini *et al.*, 2021:670). The global transformation agenda of HEIs is further encouraged by collective movements focussed on departing from the predominantly Westernised educational themes, aiming to include indigenous and culturally diverse concepts and learning modalities as part of the educational offering of HEIs (De Wit & Altbach, 2020:31), with this narrative manifesting in South Africa through the drive towards the decolonisation of HEIs.

Adding to the complexity of transforming undergraduate curricula is the growing demand for online course offerings that are flexible and meet the needs of a changing profile of students who cannot engage in solely contact-based higher education services and products (Lewis, 2020:62). It therefore becomes apparent why change failure is frequently observed in HEIs, often due to a lack of strategic focus when addressing complex issues, as well as the notable resistance to change observed in the academic structures and the bureaucratic nature of the institutions themselves (Jollands *et al.*, 2022:3).

Consequently, from what has been analysed of change management theories and models, the identified theories provide positive indications of their relevance in assisting HEIs to manage change within their complex and multi-dimensional environments. In thoroughly digesting the information gathered through the literature review contained in Chapter 2 and paragraphs 3.1-3.4, the following section works towards consolidating identified theories that support the transforming academic curricula through the application of change management.

3.5 CHANGE MANAGEMENT FRAMEWORK FOR HIGHER EDUCATION INSTITUTIONS

3.5.1 Change management framework

Change management can be applied to various processes, mechanisms and measures, aimed at managing and guiding the actions and reactions of individuals and organisations towards achieving the planned change vision and objectives (Rohmah & Subriadi, 2022:52). When studying the three change management models of Lewin, Kotter and Prosci, the core aspects of change management start to emerge as: the establishment of a shared vision, the involvement of organisational managers in driving the change process, the organisational readiness for change, measuring and evaluating the change achieved, and the dissemination of information throughout the organisation

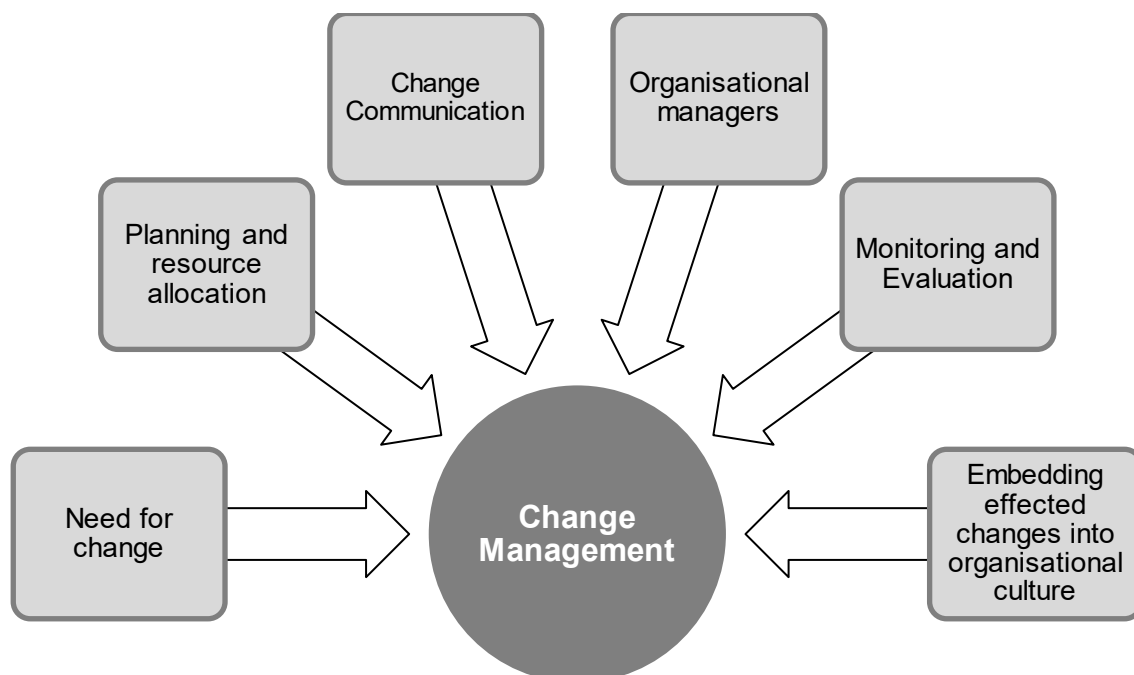
(Mitra *et al.*, 2019:2072; Rohmah & Subriadi, 2022:53). Understanding the inclusive approach required by change management, change must occur at both the individual level (for example employee), and at an organisational level that can include changes to policies, rules, and structures of the organisation (Jollands *et al.*, 2022:6).

When combining the theories developed by Lewin, Kotter and Prosci, six distinct core aspects of change management are extrapolated, illustrated in Figure 3.6 below and discussed thereunder (Kraft *et al.*, 2016:73-74). These core aspects have been identified as contextually relevant to this study, with change management being relevant and applicable when developing academic curricula (Kaviya *et al.*, 2021:228).

For the purposes of this study, the concept of a change management framework is regarded as a set of constructs that are related to one another in their joint objective of enabling the successful management of change (Jollands *et al.*, 2022:5). The discussion hereunder provides a detailed explanation of the six core aspects that form part of the guiding framework for successful change management when transforming academic curricula.

This framework will be used in guiding the quantitative research questionnaire measuring the experiences of change when transforming undergraduate academic curricula, fully discussed in Chapter 4 of this study.

Figure 3.6: Framework for change management when transforming undergraduate academic curricula



Source: Author's own depiction from Galli (2018:125); Rosenbaum *et al.* (2018:287); Shonhe & Grand (2020:50); Rohmah & Subriadi (2022:55).

3.5.2 Applying the change management framework when transforming undergraduate academic curricula

The following paragraphs continue to apply the change management framework extracted from the available literature and depicted in Figure 3.6 to the higher education environment when specifically transforming undergraduate academic curricula.

3.5.2.1 The need for change

The ability of organisational managers to execute change that transforms the organisation is dependent on the readiness of the organisation and its components to experience and endure envisaged change (Imran *et al.*, 2016:1099). In preparing the organisation for change, a need and understanding of the envisaged change is required with managers as the primary individuals tasked with creating the need to change amongst organisational employees and stakeholders (Subramoney & Matshabaphala, 2019:675).

By establishing this need, the change process commences, firmly grounded on a mutual understanding of the necessity to transform through change (Rohmah & Subriadi, 2022:52). In establishing the need for change, managers must determine what should be changed, and what is required to enable the change (Imran *et al.*, 2016:1099). This process must be managed strategically through the development of a strategic vision, and supported by specific objectives that inform the purpose and direction of the change management process (Fraser-Arnott, 2018:172).

Layered within the organisation, it is important that managers remain cognisant of the relationships that exist between the employees and organisational stakeholders, as these existing relationships have an impact on the acceptance and support of the change process (Rosenbaum *et al.*, 2018:288). Therefore, emphasis must be placed on ensuring that organisational stakeholders understand and accept the strategic vision and supporting objectives for these strategic imperatives to have a lasting impact as the change process gains momentum (Wan *et al.*, 2020:120). A lack of understanding and support amongst employees and stakeholders will result in resistance to change, often aggravated by emotional reactions in employee perception on loss of control, increased workload, insufficient understanding of the change, and lack of knowledge and skills in how to execute the required change (Pawl & Anderson, 2017:235; Chowti-Williams, 2018:243).

Transformational leaders play a central role in establishing the need for change by influencing employees through motivation that leads employees to contribute to a task orientated manner to the change management process (Al-Husseini *et al.*, 2021:676). To assist organisational managers in establishing the need for change and mitigating possible resistance, they can solicit and incorporate the views and perceptions of employees and stakeholders in relation to the envisaged change, as this will result in the establishment of the need for change in a manner that is inclusive

and well understood by employees, thereby reducing possible resistance to change (Rolland, 2018:5; Vandangeon-Derumez *et al.*, 2019:710).

Fundamentally, the importance of establishing this need for change by developing a strategic vision and specific objects, signals directly towards the underpinning role that strategic management plays in informing change management (Galli, 2019:121). This affirms the golden thread that is observed throughout the models of Lewin, Kotter and Prosci, where the importance of organisations establishing a clear need for change amongst organisational stakeholders is placed at the forefront when initiating the change management process (Brock *et al.*, 2019:17). This initial step consequently resonates with the transformation of HEIs' academic curricula, as it sets the scene that will initiate the change process executed by the academic staff and managers tasked with the development of academic curricula.

3.5.2.2 Planning and resource allocation

Managers facilitate the planning and coordination of change through the allocation of support and resources to the drive and sustain the change process (Holten *et al.*, 2020:404). As a result, their ability to pro-actively plan and determine the relevant resources that would be required to enable change forms a critical component in the entire change management process (Pearse, 2017:89). The sharing of knowledge amongst employees during the planning and resource allocation phase enables employees to understand what must change, develop a shared understanding of the anticipated benefits of change, and map the process forward, contributing positively towards the change management process (Wan *et al.*, 2020:122).

Consequently, to successfully mobilise the resources required for the planned change process, the proactive management of stakeholders' interactions, interpersonal relationships, and personal views and fears must be considered as part of the planning and resource allocation phase (Vandangeon-Derumez *et al.*, 2019:710). Notably, the involvement of employees during the planning stages of the change management process contributes positively towards identifying the relevant resources required to execute the change process (Hussain *et al.*, 2018:125). Furthermore, organisational managers increase the likelihood of achieving successful change, as the completion of accurate planning and allocation of sufficient resources contribute towards sustaining the change momentum during the change process until the necessary change vision has been achieved (Galli, 2018:126).

Contextual to HEIs, the planning and resource allocation phase will include those aspects comprising the teaching and learning programmes that can be methodological in nature, theory-based, or community-based. Primary considerations of staff, financial provision, management of time and the creation of a clear project plan further find relevance within this phase of transforming the undergraduate curricula.

3.5.2.3 Change communication

Effective communication of the change management process relies on a combination of formal and informal communication channels that can be used by organisational managers to communicate the change process to employees and organisational stakeholders (Angela-Eliza & Valentina, 2018:337). By developing a continuous and effective communication plan supporting the change process, employees and organisational stakeholders are empowered with relevant information and knowledge of the change that is planned and the progress made (Hussain *et al.*, 2018:124).

The communication practices enable organisational managers to communicate matters relevant to the change process to employees and stakeholders, thereby educating them on the requirements of change (Shonhe & Grand, 2020:46). Thus, the ability of organisational managers to effectively communicate the change management process to employees and stakeholders emerges as an important change management aspect, as the sharing of information on the change process positively contributes towards their understanding and support of the envisaged change (Fraser-Arnott, 2018:174; Holten *et al.*, 2020:397). Within the realm of transforming academic curricula, the communication plan further contributes towards building a shared vision within the faculty and those tasked with contributing to the academic development (Bens *et al.*, 2020:482).

The communication plan should therefore account for all members of the organisation, including those tasked with developing and steering the process at top-level management and those expected to effect and experience the change at an operational level (Rolland, 2018:10). In further unpacking the communication of the change process, effective communication adds towards improving employee motivation and support of the change management process (Hussain *et al.*, 2018:124). Central to this, the involvement of change agents is required who support the change process by disseminating information to employees that in turn stimulates the buy-in and support of employees, subsequently strengthening the communication plan (Imran *et al.*, 2016:1099; Rolland, 2018:10).

However, communication of the change management process that seeks to strategically transform organisations, remains a continuous undertaking throughout the change process, and benefits the organisation by maintaining momentum in relation to the initiatives and programmes that execute the change process (Pollack & Pollack, 2015:59). Effective communication consequently plays a foundational and continuous part towards achieving successful change management, whereby communication plans and practices function as tools and activities informing organisational employees and stakeholders of the ongoing change processes (Wan *et al.*, 2020:120). Understanding the complex matrix of stakeholders that form part of the development of academic curricula within a HEI, communication as part of the change management framework becomes a key towards executing successful change management.

3.5.2.4 Organisational managers

As observed within the management theories discussed in Chapter 2, organisational managers are responsible to initiate, complete and evaluate tasks related to the strategic change vision, strategic objections, coordination of human resources, communication and monitoring when executing change (Holten *et al.*, 2020:397). Hence, managers must possess leadership abilities to influence the thoughts and actions of employees, motivating and convincing them to understand and agree with the changes that need to be achieved and the task required in pursuit thereof (Subramoney & Matshabaphala, 2017:674).

This leadership role performed by organisational managers enables the development of the organisational systems, processes and cultures that contribute towards the likelihood of successful change management (Mitra *et al.*, 2019:2082). Understanding their strategic importance, managers directly influence the perceptions and experiences of employees during the change management process (Holten *et al.*, 2020:394).

In leveraging the strategic value of their position, managers are required to cultivate an internal organisational environment that is underpinned by the strategic vision and objectives, functioning in support of the change process thus enabling the process to gain momentum amongst employees (Hussain *et al.*, 2018:125). Organisational managers consequently perform the role of change agents within the organisation who drive the change process forward by example and personal involvement (Pearse, 2017:93). As change agents, managers perform the role of transformational leaders who are actively involved in the process by motivating and inspiring employees to support and participate in the change process, whilst being themselves actively involved (Al-Alawi *et al.*, 2019:117-118).

This change agent's role requires managers to explain facets of the change management process to employees, generating the necessary buy-in from employees who experience and participate the change process (Kraft *et al.*, 2016:73). In doing so, managers accelerate the change management process by responding to perceptions and concerns of employees with the objective of ensuring the support to the change management process (Pawl & Anderson, 2017:233).

The multi-faceted functions required from organisational managers resonates with the complex matrix of tasks involved in the development of academic curricula, as they must master specific skills and acquire an understanding related to the engaging with the employees who report to them that will enable them to motivate, coordinate and guide the subordinate employees during the change process (Vlasenko *et al.*, 2019:39). Failure of managers to resolve employee and stakeholder uncertainties regarding the change process, will further undermine the change management process (Shonhe & Grand, 2020:46). Therefore, managers are confirmed as core contributors to the change management process acting as primary drivers of change, who ensure active and

visible participation in the process by motivating employees to embrace and support change (Fraser-Arnott, 2018:173; Hussain *et al.*, 2018:124; Para-González *et al.*, 2017:413).

Within HEIs, transformational leaders are positioned to encourage academic staff and stakeholders to pursue improved teaching and learning products and services, thereby driving forward the change vision and objectives, motivating them to further contribute and work towards its achievement (Al-Husseini *et al.*, 2021:674).

3.5.2.5 Monitoring and evaluation

Monitoring and evaluation acts as a self-reflective activity during which organisational managers continuously monitor the progress related to the change process and evaluate whether the strategic vision and objectives are being achieved (Subramoney & Matshabaphala, 2019:766). Included in the monitoring phase, managers must identify and develop proactive strategies that mitigate repetition of previous errors and challenges encountered during prior change phases, and from this build successes in subsequent phases of the change management process (Al Khateeb, 2021:80). This dual directional monitoring and evaluation is of paramount importance in maintaining control and direction when executing the process of change within an organisation (Felicio *et al.*, 2021:595).

To allow this self-reflective function to occur continuously, managers identify immediate achievements related to the change process that are then celebrated within the organisation to further add to the momentum and appetite to complete the change management process (Brock *et al.*, 2019:21). When navigating this space, organisational managers gain positively from illustrating the benefits that have been and can still be obtained due to change, placed in comparison to the negative impact that could have occurred had the organisation refused to change (Pearse, 2017:86). Through the identification of such attainable short-term victories early on in the change process, managers build trust and confidence in the change management process, further contributing positively towards its success (Al Khateeb, 2021:79).

In celebrating the achievement of short- and long-term victories throughout the change management process, the drive towards successfully executing change is sustained and empowered, with such celebration and recognition being required both at an individual employee and group level within the organisation (Wan *et al.*, 2020:123). This can subsequently be observed in the celebration of individual's successes made by faculty staff, or whole schools and departments within the HEI. Ultimately, the successful monitoring and evaluation of the change process combined with the recognition and celebration of achieved milestones and objectives, stimulates and generates self-propelled change where employees take ownership of the relevant change activities and ensure successful change (Holten *et al.*, 2020:395).

3.5.2.6 Embedding effected changes into organisational culture

The important final phase of the change process is the embedding of the desired and achieved changes into the organisational culture and structures that inform the behaviours and activities of the employees and organisational stakeholders after the change has occurred (Brock *et al.*, 2019:22). As part of embedding change, it is important that the organisation aligns its processes and structures with the new change status and not retain previous processes that could possibly act in opposition to the achieved change (Rolland, 2018:9). The transformative nature of change management is further crystallised as managers consider and actively work towards developing and adjusting the organisational culture that acts in support of the effected change (Brock *et al.*, 2019:21).

The changes that were affected can be sustained within the organisation through the development and implementation of monitoring systems, confirming change management related messages, celebrating change successes and adapting the performance management of employees to act in support of the changed status quo (Rohmah & Subriadi, 2022:58). But, to successfully embed the organisational change as a permanent outcome, managers must establish new - and improve existing - activities and structures that support the effected change including training and orientation on process and systems changes, updating of organisational policies and guiding documentation, and designing organisational values and behaviours (Subramoney & Matshabaphala, 2019:677). By embedding change, organisations institutionalise the effected changes in the behaviour of the employees, ultimately contributing positively towards the competitive advantage of the organisation and paving the way for future instances of change (Al Khateeb, 2021:79).

Within the HEI content, the change management process must work towards embedding a culture of scholarship that is conducive to curriculum development amongst those tasked with its teaching and development (Moradi & Zarezadeh, 2022:5). Naturally, the embedding of effected changes when transforming academic curricula will manifest as changes towards the teaching and learning products and services, learner experiences, and delivery methodologies.

CHAPTER 4

RESEARCH METHODOLOGY: THE PROCESS OF RESEARCH

4.1 INTRODUCTION

The process of conducting research refers to the identification, description and analysis of a research problem and the meticulous process of solving such, through which the researcher contributes towards the understanding of the relevant academic discipline (Sabah *et al.*, 2022:1). Thus, the purpose of research is to answer the research question, also referred to as the research problem, as identified by the academic researcher (Roni *et al.*, 2020:7).

To enable the researcher to achieve this outcome, research must follow a structured and predetermined route to ensure that the researcher can ultimately address the research problem and achieve the identified research objectives (Rahman *et al.*, 2022:43). Consequently, insights gained through the completion of research can be applied to industry scenarios and organisations to answer important strategic questions related to organisational areas of development, increasing the competitive advantage and improving customer retention (Hair *et al.*, 2020:10).

The aim of this chapter is to provide an overview of the available research methods and the methods that are utilised in this study. Thus, this chapter proceeds to describe and analyse the relevant research methodologies and processes used as part of this study. Guided by the relevant literature on management, strategic management, and change management discussed in Chapters 2 and 3 of this study, the researcher will describe the empirical research design used for this quantitative study to investigate the research problem and objectives as set in Chapter 1. A detailed description is further provided on the quantitative research questionnaire employed during the data collection process, with the chapter concluding with a discussion on the data processing, analyses and reporting methods implemented.

4.1.1 Philosophical underpinnings

An integral component of the research process is the identification of an appropriate philosophical approach in conducting research. Identifying the approach is important as it determines the paradigmatic approach taken by the researcher, and it informs the directional thinking associated with the study and how the researcher executes it (Brown & Dueñas, 2020:546). The research paradigm can be described as the lens through which the researcher considers, investigates and reports on the research problem and academic discipline, further influenced by the researcher's own values and perceptions (Kamal, 2019:1388).

Three main components of research paradigms are identified from literature namely ontology, epistemology and methodology (Alharahsheh & Pius, 2020:40). Ontology is concerned with the nature of reality, whereas epistemology focuses on the nature of knowledge, and methodology refers to the research process and instruments used as part of the study (Cuthbertson *et al.*, 2020:95).

Research paradigms further delineate into qualitative and quantitative research approaches that in turn influence how researchers approach the research question and problem (Cuthbertson *et al.*, 2020:94). A qualitative research approach will let the researcher gain insight through how participants describe their experiences of an identified phenomenon, while a quantitative research approach is interested in establishing the relationship between variables through cause and effect (Kamal, 2019:1387). As part of this study, the researcher adopted a quantitative approach. Taking into account that a number of paradigmatic approaches exist, the following discussion will focus on understanding the research paradigms positivism and interpretivism regarded as most relevant to this study (Cuthbertson *et al.*, 2020:95).

4.1.1.1 Positivism

Generally, the positivist paradigm is focussed on the identification of a general law or rule that can be applied universally to address the research problem (Brown & Dueñas, 2020:547). Positivism departs from the perspective that a single reality exists which can be objectively quantified and scientifically analysed (Cuthbertson *et al.*, 2020:97). Thus, the positivist paradigm regards reality as an objective and quantifiable concept that can be measured through a quantitative research approach (Kamal, 2019:1390).

This paradigmatic approach consequently involves research methodological approaches such as surveys and action-based research (Rabetino *et al.*, 2020:155). Thus, knowledge and insights are obtained using valid and reliable research measurement instruments identified by the researcher (Brown & Dueñas, 2020:548). Due to the objective nature of the positivistic paradigm, an independence can be noted between the researcher and the participant who is further regarded as an object to the research process (Rabetino *et al.*, 2020:156).

Consequently, positivism is concerned with knowledge of reality that can be reproduced empirically based on an objective and independent reality (Cuthbertson *et al.*, 2020:96). In adopting a positivism stance to research, the researcher focuses on gathering data of the observed reality that would in turn allow the researcher to make generalised observations and findings (Alharahsheh & Pius, 2020:41).

4.1.1.2 Interpretivism

The paradigmatic approach of interpretivism aims to describe the human nature of the participants and concedes that multiple realities may exist that are further created through the social interactions of the participants (Brown & Dueñas, 2020:548). Therefore, interpretivism is focussed on obtaining perspectives from participants that require the researcher's further interpretation and personal interaction with the participant to obtain insights and data (Cuthbertson *et al.*, 2020:96). This approach therefore enables the researcher to observe and investigate the subjective interrelationships that exist amongst the constructs of the research problem that are influenced by the context of the participants and study (Alharahsheh & Pius, 2020:41).

Consequently, interpretivism takes the approach of reality being indirectly created through the observation and interpretation of the researcher at a subjective level (Cuthbertson *et al.*, 2020:97). Within this frame of research, the methodological approach can include interpretive tools, case studies, interviews and observational data measuring instruments (Rabetino *et al.*, 2020:155). Subsequently, the paradigm of interpretivism is closely associated with the adoption of a qualitative research approach (Cuthbertson *et al.*, 2020:95).

Overall, interpretivism views knowledge as subjective, postulating that it resorts within the individual realm between participants and the researcher (Brown & Dueñas, 2020:549). Ultimately, the involvement of the research with the participant is placed at an emphatic level, with the researcher reporting on the observations of the engaged participants to arrive at possible findings addressing the research problem (Rabetino *et al.*, 2020:156).

4.1.1.3 Philosophical paradigm underpinning this study

As part of this study, the researcher adopted a positivist paradigm through the use of quantitative research methodology (Baškarada & Koronios, 2018:3). The researcher included quantitative research instruments and measuring tools to gather data from participants to address the research problem. The decision to adopt the positivist paradigm is further supported by the observation that the interpretivist paradigm does not lend itself to the generalised application of findings to a larger context and group of participants (Alharahsheh & Pius, 2020:42; Rabetino *et al.*, 2020:153). Thus, the quantitative approach taken as part of this study will enable the researcher to obtain generalisable insights relating to the experiences of change management when transforming undergraduate curricula. Based on the philosophical underpinnings identified as relevant to this study, the researcher proceeds to further discuss the detailed methodological approach of the study.

4.2 METHODOLOGY AND BUSINESS RESEARCH

The following section discusses the methodological approach to business research. Consequently, the researcher proceeds to define research methodology and explores the importance of business research within the context of this study.

4.2.1 Defining research methodology

Research methodology refers to the systematic process undertaken by a researcher in gathering information and data, that includes existing data and findings, as well as data insights obtained through observation and study (Patel & Patel, 2019:48). Conducting academic research forms the foundation of an academic researcher's ability to expand their own knowledge and relate such to existing knowledge, overall contributing to their relevant academic discipline and industry knowledge (Snyder, 2019:333). Central to academic research is the importance of ensuring research that is ethical and transparent, subsequently allowing a researcher to deliver fair, accurate and responsible research outputs, upon which credible academic conclusions and decisions can be made (Eden *et al.*, 2020:6).

4.2.2 The importance of business research within the context of this study

Business research involves the structured activity of gathering relevant information and data to allow organisations to make informed decisions (Sorooshian *et al.*, 2023:1). The objective of business research is to improve the understanding of phenomena that are observed within the ever-changing environment of organisations and businesses (Hair *et al.*, 2020:6). Within the context of this study, conducting quality research will enable the researcher to define the research problem, identify research objectives, gain insight and information from existing literature, collect data on new insights, and proceed to resolve the identified research problem (Martelli & Greener, 2018:16). The business research process applicable to this study will be discussed next.

4.3 BUSINESS RESEARCH PROCESS

The following section proceeds to provide an in-depth discussion of the business research process applied as part of this study. The research process is identified and illustrated, and thereafter placed within the context of this study.

4.3.1 Identifying a suitable business research process

Conducting business research enables organisational managers to make important observations and correlations between aspects of a business or organisation, including employees, infrastructures, client engagement and services, production and organisational processes, organisational systems, remuneration, etc. (Hair *et al.*, 2020:7). Consequently, it is important to

ensure that a systematic and well-constructed plan is implemented to conduct research to ensure that credible and reliable information is obtained (Martelli & Greener, 2018:11).

Through conducting research, the data collected enables the researcher to answer the identified research questions and problems (Lakens, 2022:1). Business research itself is a complex and multi-dimensional concept that can be conducted at various levels, covering an array of categories and concepts related to business and organisational management (Martelli & Greener, 2018:12). By conducting business research, organisational managers are provided with the skills and insights to make informed strategic decisions regarding the functions, goals and objectives of the organisation (Hair *et al.*, 2020:9). The research process for this quantitative study was guided by the following steps, summarised in Figure 4.1 below:

Figure 4.1: Research Process

Step 1	<i>Refer to Chapter 1, and Paragraph 4.4</i>
•Identify and define a research problem and set research objectives	
Step 2	<i>Refer to Chapters 2 and 3, and Paragraph 4.5</i>
•Conduct a literature study	
Step 3	<i>Refer to Paragraph 4.6</i>
•Select the research design and strategy	
Step 4	<i>Refer to Paragraph 4.7</i>
•Select the target population and design the sampling plan	
Step 5	<i>Refer to Paragraph 4.8</i>
•Design the data collection method and instruments	
Step 6	<i>Refer to Chapter 5, and Paragraph 4.9</i>
•Analysis of the collected data	
Step 7	<i>Refer to Chapter 6, and Paragraph 4.10</i>
•Present the research findings and formulate a conclusion	

Source: Author's own depiction adapted from Business Research Methodology (2023); Martelli and Greener (2018:56); Mooi *et al.* (2018:12); Roni *et al.* (2020:8); Sabah *et al.* (2022); Stockemer (2019:19).

Guided by the business research process outlined in Figure 4.1, the subsequent sections will further describe the relevant steps and related processes.

4.4 IDENTIFY AND DEFINE THE RESEARCH PROBLEM AND SET RESEARCH OBJECTIVES

4.4.1 Identify the research problem

Higher Education Institutions (HEIs) are complex, multi-dimensional spaces that account for a variety of interactions between lecturers, researchers, support staff, students and community members, who in turn are comprised of a diverse demographic of races, religions and genders with even further divergent learning objectives, desires and backgrounds (Kasnakoğlu & Mercan, 2020:74). Due to this complexity, HEIs struggle to successfully manage change caused in part by their intrinsically bureaucratic nature, complex organisational structures, deep-rooted cultures and identities, and limited agility in responding to an ever-changing society (Rohmah & Subriadi, 2022:51).

When combining the complex multidimensional nature of HEIs and their bureaucratic natures with the continuously and often rapidly changing society and cultures, technological advancements and socio-economic conditions, it becomes evident why HEIs often struggle to successfully execute the changes demanded by the students and communities they serve (Kaviya *et al.*, 2022:228). Departing from the observed challenges experienced by HEIs in managing change, also previously described in chapter 3 of **this study**, the following research objectives were developed.

4.4.2 Identifying the research objective

Research objectives assist the researcher in guiding **this study** by understanding the interrelation that exists between the identified variables of the study namely, creating the need for change, planning and resource allocation, communication, change leadership, evaluation and monitoring, and embedding of effected changes (Sabah *et al.*, 2022:1). The primary objective of this research study as identified in paragraph 1.6.1 of Chapter 1 is:

To investigate the experience of change management when transforming selected undergraduate curricula of a higher education institution.

To support the primary objective, secondary objectives (refer to paragraph 1.6.2) were also identified in Chapter 1. These secondary objectives are discussed further in paragraph 4.4.3 below.

4.4.3 Setting the secondary research objectives

This study was further guided by the following secondary research objectives (see paragraph 1.6.2 of Chapter 1) that support the investigation of the primary research objective:

- i. Compile a sample profile of the respondents within the HEI who participate in the change management process when transforming undergraduate curricula.
- ii. Conceptualise change management from existing literature as an element in the strategic management discipline.
- iii. Determine the need for change management when transforming academic curricula.
- iv. Identify the role-players who participate in the transformation (therefore change) of academic curricula.
- v. Measure the experience of the participants who participated in the change management process.

The accomplishment of secondary objectives i. and iv. are described in Chapter 3, Paragraph 3.3, and is elaborated on in paragraphs 4.7 and 4.8 below. Secondary objectives ii. and iii. were realised in chapters 2 and 3 of this study, describing the theoretical foundation clearly indicating how change management evolved from strategic management that in turn developed from management theory. Secondary objective v. was achieved through the quantitative questionnaire circulated to the target population measuring their experiences of change management when transforming undergraduate academic curricula, with this data to be reported as part of Chapter 5 of the study.

The following section continues to discuss the research approach undertaken in conducting the literature review on management, strategic management and change management. Thereafter, the subsequent steps identified for the research process and outlined in Figure 4.1 above will be discussed.

4.5 CONDUCTING A LITERATURE STUDY

A literature review can be described as the process through which the researcher gathers and processes previous research data and insights in a systematic manner (Snyder, 2019:333). Table 4.1 provides an overview of the categories of literature review identified:

Table 4.1: Categories of literature review

Literature review approach	Description
Systematic Literature Review	Refers to structured processing of specific data in a focussed manner that falls within the scope of the research question and objectives. Often includes the comparison of research data and findings from the existing knowledge basis.
Semi-Systematic Literature Review	A wider and less specific approach is applied in terms of data analysis, with mixed-method approaches often included in analysing data in a quantitative and qualitative manner. Often used by researchers to determine theoretical frameworks. Data review conducted in a cross-disciplinary manner with researchers comparing information from a variety of research areas that may be relatable.
Integrative Literature Review	Can also be referred to as the critical-review approach. Similarities exist with semi-systematic literature review approaches, however this approach focuses on reflecting critically on existing data and analysing the findings and content.

Source: Snyder (2019:334-335).

A systematic literature review was **conducted for this study** as it assisted the researcher to build a comprehensive understanding of the existing knowledge of the academic discipline (Sabah *et al.*, 2022:3). Consequently, this study focussed on research conducted by researchers and authors in the field of management, strategic management and change management, placed within the context of higher education. Information was drawn from the work of various national and international authors published in textbooks, journals and manuals.

In creating the theoretical framework for this study, two comprehensive chapters were devoted to the literature study namely Chapters 2 and 3. The information reflected in these two chapters was gathered from textbooks, journals and manuals with the topic of management, strategic management, change management, management in higher education institutions, management of transformation, and undergraduate curriculum development (Schindler, 2019:58).

The following databases were consulted to access the textbooks, journals and manuals (Sorooshian *et al.*, 2023:2):

- Web of Science.
- Emerald Insight journals: international journals.
- Sabinet African Journals.
- Science Direct: a collection of books, academic journals and articles.
- African journals: the collection of African scholarly journals.
- Internet sources: Google Scholar and internet sources.
- NWU Boloka (the database of NWU published theses and dissertations).
- NWU Library.
- Textbooks: from publishers such as Cengage, Pearson, Southwestern and Wiley.

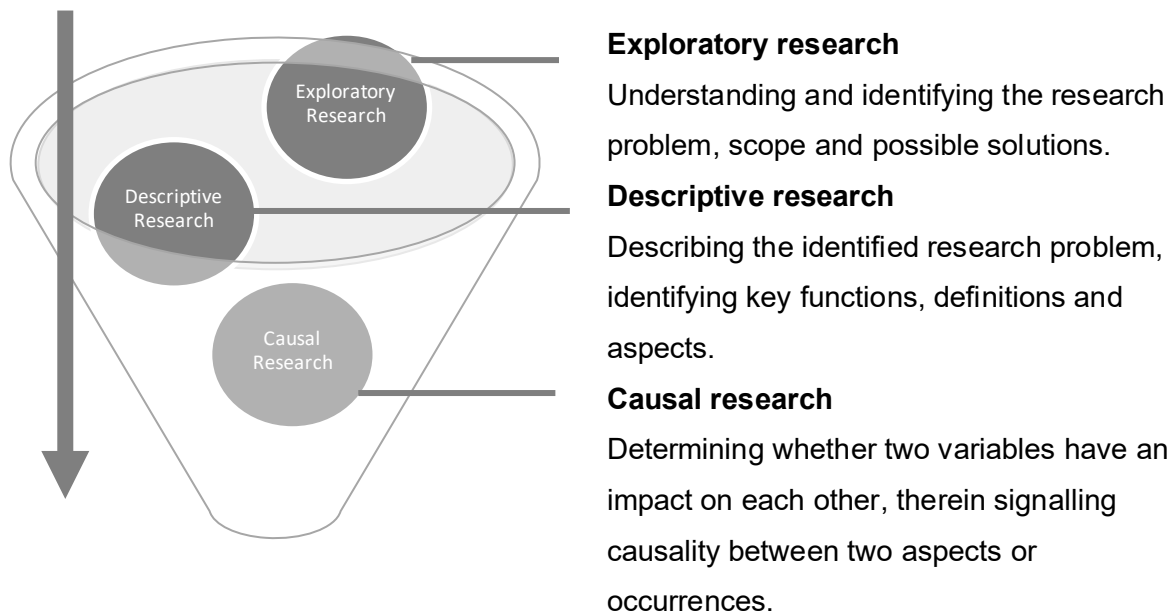
Both hard-copy textbooks and e-books focussed on management, strategic management and change management were consulted as part of this study. Manuals and websites of existing specialist organisations working with change management were further consulted to establish the theoretical foundation of the study.

4.6 SELECTING THE RESEARCH DESIGN AND STRATEGY

4.6.1 Selecting a research design

Research design can be illustrated as a process of narrowing down information and thought aimed at defining, exploring, investigating, and finally answering a research question (Mooi *et al.*, 2018:14). This process is illustrated in Figure 4.2 below.

Figure 4.2: Research design process



Source: Author's own depiction adapted from Mooi *et al.*, (2018:15-17).

4.6.1.1 Exploratory research

Exploratory research involves the process whereby the research works towards understanding and identifying the research problem, gathering information from various sources to arrive at a precise research problem statement (Mooi *et al.*, 2019:15).

4.6.1.2 Descriptive research

Descriptive research includes the analyses and explanation of the research problem through the use of statistics, often focussing on the "who, what, when and where" of the research problem (Martelli & Greener, 2018:53). Descriptive research can further be categorised as longitudinal studies focussed on gathering data over an extended period of time using multiple measurements, and cross-sectional studies that focus on measuring data at a specific moment in time (Burns *et al.*, 2017:99).

4.6.1.3 Causal research

Causal research aims to determine the relationship that may exist between two or more variables, with one variable or event impacting the subsequent variable or event (Mooi *et al.*, 2019:21). By conducting causal research and applying inferential statistics in the analysis of the observed phenomena, the researcher can make generalised assumptions and projections on the population that was studied (Martelli & Greener, 2018:53).

For the purposes of this study the researcher adopted the above-mentioned research approaches to answer the research question and achieve the research objectives. Thus, an exploratory research approach was adopted in identifying the research problem, primary objectives and secondary objectives (refer to Chapter 1). Hereafter a descriptive research approach was undertaken to investigate existing data on change management, strategic management and management, and building an understanding of change management within the higher education context (refer to Chapters 2 and 3). Lastly, a causal research approach was pursued through the collection of data and the statistical analysis thereof to determine the impact of the identified constructs and variables forming part of this study (refer to Chapter 5).

4.7 SELECTING THE TARGET POPULATION AND DESIGN THE SAMPLING PLAN

4.7.1 Identifying the target population

The population of a research study consists of units who fall within the parameters of the research focus area the researcher intends to study (Sarstedt & Mooi, 2019:39). The population thus refers to the entire group of individuals that form part of the group relevant to the research topic (Scharrer & Ramasubramanian, 2021:74). Within the target population, the constituent individuals can be referred to as objects, who in turn poses the information that is relevant to the research topic being studied (Hair *et al.*, 2020: 181).

As part of this quantitative study, the researcher will aim to generalise the findings of the data from a smaller group of the target population to the population as a whole, as it is often difficult to take a full measurement of the entire population group (Rahman *et al.*, 2022:46). Thus, the target population of **this study** was identified as both the academic and academic support staff employed by the North-West University, reflected in the Table 4.2 below.

Table 4.2: Target population of the study

Target population sub-groups	Number of staff
Instruction/research professional	1 569
Executive/management professional	82
Support professional	473
Total	2 124

Source: NWU (2021).

4.7.2 Sampling

Sampling refers to the selection units from the target population who will form part of the study as participants and provide insights towards perceptions held by a largely heterogeneous group (Sabah *et al.*, 2022:2; Scharrer & Ramasubramanian, 2021:73). As part of the process of sampling, the sampling unit refers to the individual components that comprise the target population and can therefore be indicative of an individual, an organisation, a sub-group, etc. (Hair *et al.*, 2020:182). In turn, the sample framework is defined as a list containing all the sampling units who form part of the sample and thus represent the target population (Stockemer, 2019:57).

Subsequently, through sampling, general insights will be obtained with respect to the perceptions and experiences of the units of the target population who are participants in the study (Rahman *et al.*, 2022:43). It is, however, noted that a sampling frame may be problematic in terms of accuracy, therefore necessitating the researcher to verify the completeness and correctness of the sample frame (Hair *et al.*, 2020:183). Consequently, sampling errors can affect the accuracy of the data collected as they relate to a variation between the population and the sample framework (Sarstedt & Mooi, 2019:40). However, within the context of the study, the researcher had limited access to the sample frame due to restrictions related to the access to personal information of academic staff and academic support staff.

Understanding that the sample is drawn from the overall population identified for the study, two types of sampling methods are identified to assist the researcher in obtaining the sample (Scharrer & Ramasubramanian, 2021:75). These two sampling methods are identified as **probability** and **non-probability sampling** (Rahman *et al.*, 2022:46; Schindler, 2019:96), and are further discussed below.

4.7.2.1 Probability sampling

Probability sampling refers to the sampling method where potential respondents of the population have a similar chance of being selected to form part of the sample (Sabah *et al.*, 2022:2; Scharrer & Ramasubramanian, 2021:79). Theoretically, a random selection approach is taken towards the sampling method that would exclude possible bias that the researcher might have towards the target population or the study when selecting the sample (Bager-Charleson & McBeath, 2020:182). Table 4.3 below summarises the types of probability sampling extracted from literature and regarded as relevant to quantitative data collection.

Table 4.3: Probability sampling methods

Probability Sampling Method	Description
Random selection	Also referred to as simple random sampling, forms part of probability sampling whereby the units forming part of the sample are selected at random by the researcher, and can increase the representativity of the sample in relation to the target population.
Stratified random sampling	Refers to the population being divided into largely homogenous subgroups with these groups being distinguishable from one another thereby allowing the researcher to obtain insights from the respective groups, also referred to as " <i>strata</i> ".
Systematic sampling	Refers to the approach whereby the population is grouped per the identifiable strata, and the researcher selecting a fixed interval at which to select the next participant to form part of the sample. Thus, the researcher commences to select a sampling unit at a specific point, whereafter the subsequent units are selected in accordance with a predetermined interval. This in turn leads to the sampling interval that refers to the sequential positions that are selected, for example every tenth position or sampling unit.
Cluster sampling	Refers to the grouping – or clustering – of members of the sample grouped in smaller groups within the already selected sample group. This creates heterogenous sub-groups of the sampling units, in turn contributing positively towards the representativity of the data in relation to the overall target population.

Source: Ghauri *et al.* (2020:163-165); Hair *et al.* (2020:184-191); Rahman *et al.* (2022:47-48); Scharrer and Ramasubramanian (2021:79-83); Sarstedt and Mooi (2019:41).

For this study, the researcher did not adopt probability sampling methods, but focussed largely on **non-probability sampling** methods. This was necessitated by the lack of access the researcher had to the sample frame, and consequently to the biographical data of the population group. Consequently, the researcher was not able to differentiate units within the population to specific strata, groups or intervals. Therefore, the research adopted non-probability sampling methods which do not require in-depth segmentation and group of population units to perform data collection.

4.7.2.2 Non-probability sampling

Non-probability sampling refers to data sampling where the participants forming part of the target population do not have an equal chance of forming part of the study as the discretion of the researcher influences the selection of sampling units (Hair *et al.*, 2020: 184; Scharrer & Ramasubramanian, 2021:83). Therefore, the selection of the participants and eventual respondents to the sample is informed by a judgement of the researcher and can be based on specific insights or knowledge that the researcher might have on the target population (Bager-Charleson & McBeath, 2020:182).

Table 4.4 below summarises the types of non-probability sampling methods that are relevant to quantitative data collection.

Table 4.4: Non-probability sampling methods

Non-probability Sampling Method	Description
Convenience sampling	Forms part of non-probability sampling whereby the researcher selects the participants who are easily accessible to them. This can therefore refer to an educator who collects data from their students, or retail stores collecting data directly from customers during the check-out process. A negative outcome of convenience sampling is that the generalisability of the findings remain limited as the approach of identifying the respondents can be biased.
Purposive sampling	Also referred to as judgement sampling, in turn refers to the researcher having identified groups that would contain the relevant traits what the researcher wants to measure through the study in a logical and methodical manner. Thus, it is the belief or perception of the researcher regarding the sampling units possessing the relevant information required that will inform the selection of the sampling units.
Quota sampling	Refers to the selection of respondents by the researcher to form part of the sample, with the selected respondents reflecting the general characteristics of the broader population proportionately. Thus, a quota is set by the researcher that informs the characteristics of the required sampling units, relative to the target population.
Snowballing sampling	Also called referral sampling, refers to an approach whereby the researcher requests the members identified through the purposive sampling method to in turn identify additional members who share similar characteristics, to also participate in the study. Snowball sampling is often used where the sampling units are difficult to reach or form part of scarce groups of persons, thus being dependent on the referral between individuals with similar characteristics.

Source: Ghauri *et al.* (2020:166-167); Hair *et al.* (2020:193); Martelli and Greener (2018:69-70); Sarstedt and Mooi (2019:42); Scharrer and Ramasubramanian (2021:84-86).

For the purpose of this study, the researcher made use of a non-probability sampling technique with specific reference to **convenience** sampling, **purposive** sampling and **snowballing** sampling.

Convenience sampling was selected due to the researcher's employment relationship with the university where the study was conducted, consequently, the researcher was familiar with the relevant sources and stakeholders who could grant access to the population units. Purposive sampling was further pursued due to the researcher's knowledge of the university and stakeholders responsible for the development of academic curricula. Snowballing sampling is regarded as particularly useful, as the units of the target population are seen to be known to one another through their academic functions at the university and would be well-placed to make referrals to relevant staff who form part of the sample frame. Overall, the researcher's general access to the database of units that form part of the target population by means of a mediator, as well as the researcher's personal knowledge of the target population and interaction with them guided the usage of convenience -, purposive - and snowballing sampling.

4.7.3 Determining the sample size

When considering the most appropriate sample size for a quantitative research project, the researcher should consider matters related to the overall population size, the permissible margin of error, the distribution of data within the sample, limitations related to cost and time, and the level of anticipated participation by respondents (Martelli & Greener, 2018:73-74). Sample size influences the precision of the research and its representativity in relation to the overall population (Sarstedt & Mooi, 2019:43).

Two types of bias concerns further exist that can influence the data namely, selection bias where the researcher might not have access to specific groups of the sample frame, and non-response bias where groups within the sample frame opt not to respond to the questionnaire (Bager-Charleson & McBeath, 2020:184). The representativeness of the sample refers to how the components of the sample group represent the larger population group that is studied (Scharrer & Ramasubramanian, 2021:78). Determining the appropriate sample size can further be informed by justification such as limited access to resources on the part of the researcher, matters related to accuracy, and measurements of an entire population (Lakens, 2022:2). Consequently, the appropriate sample size for this study is placed at between 200 and 300 respondents, measured against the 2 126 units that comprise the identified target population, with this informed by the justification of limited resources and access of the researcher to the population.

Based on the aforementioned discussion, Table 4.5 below provides a summary of the sample design used for **this study**.

Table 4.5: Summary of sample design

Target population	Academic staff and academic support staff employed at a South African higher education institution.
Sample unit	Academic and academic support staff employed at the North-West University.
Sampling method/s	Convenience sampling, purposive sampling and snowballing sampling.
Sample size	200 respondents.

Source: Researcher's own compilation.

4.8 DESIGNING THE DATA COLLECTION METHOD AND INSTRUMENT

Two types of research methodology are identified from literature namely **quantitative**, and **qualitative** research methodology (Sarstedt & Mooi, 2019: 30). Quantitative and qualitative methodology involves the process of describing categories of data, the methods used to collect such data, and ultimately the methods used to analyse the gathered data (Blaikie, 2018:637). A combination of quantitative and qualitative research methods can also be used whereby the advantages of both methods could be gained, referred to as mixed-methods research (Burns *et al.*, 2017:144).

Quantitative research methodology entails the use of objective research instruments based on statistical theories aimed at establishing a generalised view of perceptions, experiences, and insights of the target population (Kurten *et al.*, 2021:2009). Thus, the inputs gathered from a large and definable group are translated into numerical variables that are further statistically analysed to arrive at reliable conclusions (Edwards, 2019:31). Quantitative research strategies therefore seek to conceptualise phenomena as distinct variables, that are further measured and evaluated to enable the researcher to study the relationships that exist between the variables, ultimately allowing them to answer the research question and solve the research problem (Lambert, 2019:56).

In contrast, qualitative research methodologies do not focus primarily on the translation of phenomena observed to distance distinct variables and values (Blaikie, 2018:637). Rather, qualitative research methodology derives its conclusions from words, phrases, observations and choices of participants that are in turn translated to specific codes by the researcher to reach a conclusion on its target population (Sarstedt & Mooi, 2019: 31). Therefore, qualitative research aims to address the research problem by drawing from a small group of respondents analysing their experiences, perceptions and realities (Bager-Charleson & McBeath, 2020:7).

Within the context of this study and considering the scope of the target population, the access of the researcher to the target population, and the existing questionnaires on change management within the research field, a quantitative research methodology was adopted for this study.

4.8.1 Primary and secondary data

Two categories of data are applicable in the context of this study, namely primary data collected by the researcher through the use of surveys, questionnaires, etc. that are focussed on the specific research problem identified, and secondary data that is gathered from information and data already collected and made available by other researchers, organisations, institutions, etc. (Ghauri *et al.*, 2020:153; Sabah *et al.*, 2022:3). Primary data gathered through specific design collection methods such as questionnaires and surveys can collect information from individuals, employees and staff of organisations as resources of data (Schindler, 2019:54). Secondary data on the other hand can further be subdivided into internal and external secondary data, with internal data referring to the information collected by an organisation for its own processing, and external data referring to data collected across various organisations by government or market research organisations, and further includes information sourced from databases of academic journals, books, news, etc. (Sarstedt & Mooi, 2019:52).

The related process in gathering primary and secondary data are further described in paragraphs 4.5 and 4.8.2. **For the purpose of this study** the researcher depended on both primary and secondary data to complete the study, with the researcher having relied predominantly on external secondary data published through textbooks, journals, manuals and articles by organisations and researchers.

4.8.2 Data types

Data refers to the information gathered through the use of quantitative and qualitative research methodologies, with the data being focussed on the research topic and research problem (Rosenstein, 2019:78). The four data types described next are identified as relevant for the purposes of this study (Mooi *et al.*, 2018:35).

4.8.2.1 Ratio data

Ratio data possesses a true zero point, with equal distances and order observed between the values (Schindler, 2019:33). Consequently, the same difference exists between the values forming part of the data set, which can be illustrated as weight, length and height measurements (Lambert, 2019:61).

4.8.2.2 Interval data

Interval data refers to data that is logically arranged, with equal intervals existing between the values that form part of a continuum, however with no true zero point in the data set (Lambert, 2019:61). Therefore, although the research is able to determine the exact distance and change between the variable intervals, the true impact or meaning of the change and distance between variables may not be immediately evident (Mooi *et al.*, 2018: 37).

4.8.2.3 Ordinal data

Ordinal data, also referred to as rank(ed) data, refers to data responses where the respondents were requested to assign a specific rating or scale to a specific question, often reflected as a Likert or other rating scale (Saunders *et al.*, 2019:569). This consequently creates a continuum of options with the values indicating a rank and not a definitive difference or numerical distance between provided options (Rosenstein, 2019:79). An example of ordinal data in a questionnaire can subsequently also include Likert scale rankings measured through an indication of strongly agree, somewhat agree, and agree (Roni *et al.*, 2020:40).

4.8.2.4 Nominal data

Nominal data, also referred to as descriptive data, places the data collected through quantitative research instruments into specific and clearly defined groups that reflect the number of times the variables were selected by respondents (Saunders *et al.*, 2019:569). Thus, nominal data assigns specific values to data collected signalling the existence of the data in the data set based on fixed options selected by the respondents (Roni *et al.*, 2020:40). Nominal data is frequently reported as frequencies, means, and percentages based on the categories assigned to each data set (Rosenstein, 2019:79).

4.8.3 Data collection method for primary data

Primary data relates to the information and insights that are collected by a researcher through the quantitative and qualitative research processes (see par. 4.8.1 and 4.8.2) (Mooi *et al.*, 2018:32). The following section proceeds to describe the research instruments and levels of measurement that are relevant when gathering primary data.

4.8.3.1 Levels of measurement

Four measurement scales or levels exist that are relevant to quantitative research in describing the variables and data collected, noting that the scales share some similarities but have distinct purposes within the categorisation and grouping of data namely, nominal -, ordinal -, interval - and ratio scales (Bager-Charleson & McBeath, 2020:167). Table 4.6 summarises the aforementioned measurement scales identified from existing literature regarded as relevant for the collection of quantitative data in this study:

Table 4.6: Measurement scales for quantitative research

Measurement Scale	Description
Nominal Scale	Respondents are provided with specific categories that are distinguishable, with no ranking or order between the categories. This can include categories related to gender, race, qualification, etc.
Ordinal Scale	Specific points on a linear scale are assigned fixed values with respondents selecting the value most appropriate to them, thereby enabling the respondent to assign a specific rating to their chosen option, for example a scale with values from 01 to 06, with the lower value indicating a lesser rating than the higher value.
Interval Scale	Interval scales have no true 0 value, however, a scale of continuous variables is provided with equal differences between the scale values. Upon interpretation, the difference between the values might not per se result in a meaningful difference in interpretation, for example temperature readings.
Ratio Scale	In contrast to interval scales, a ratio scale has a true zero (0) value, with meaningful interpretation made based on the differences between the values of the scale. Thus, this scale clearly indicates the difference between value intervals as well as the order of the data.

Source: Bager-Charleson and McBeath (2020:166-167); Ghauri *et al.* (2020:81-83); Lambert (2019:60); Sarstedt and Mooi (2019: 33-34); Williams and Quave (2019:5).

Within the confines of this study, and informed by existing literature on change management, the researcher will use a combination of **nominal** and **interval** scales, as described in Table 4.6 above, to develop the research instrument. Nominal scales are regarded as relevant in determining the demographic profile of the respondents as it relates to their position category, position within the university, their highest qualification, period of employment, etc. In turn, interval scales - using Likert scales specifically - were deemed relevant for this study as it allows the respondents to express their experiences on change management and the identified constructs and variables using fixed scale values linked to a level of agreement or disagreement.

Within the questionnaire itself, section A comprises of nominal scale measurements, with sections B-G consisting of interval scales such as Likert scales testing participants' level of agreement to each statement.

4.8.3.2 Identifying the data collection instrument

The data collection instrument refers to the tool used by the researcher to collect the data that is relevant to the study (Schindler, 2019:80). Questionnaires enable researchers to use standardised formats, and to extract information from a large pool of respondents that can be generalised and applied to a larger population (Lambert, 2019:2). To enable the researcher to capture and describe behaviours and perceptions of the respondents during a particular point in time as it relates to change management (Ghauri *et al.* 2020:171), a quantitative questionnaire was used for **this study**.

The six main constructs of this study namely need for change, planning and resource allocation, communication, change leadership, evaluation and monitoring and embedding of effected changes, were measured using the rating questions that measure the attributes identified for each construct, with the combined score of each scale item indicating the outcome of the construct (Saunders *et al.*, 2019:528). In developing a suitable questionnaire design, the researcher studied existing quantitative questionnaires on change management, using closed-ended questions posed to the respondents with fixed responses, categories, and scales, as opposed to open ended questions where respondents would have been able to provide their own inputs (Ghauri *et al.*, 2020:173; Saunders *et al.*, 2019:519). Closed-ended questions were further regarded as favourable in the context of this quantitative study as the data gathered is easy to quantify and analyse statistically by assigning values to them when processing the data (Bager-Charleson & McBeath, 2020:180).

Likert scales were developed to measure the respondents' level of agreement or disagreement to specific statements related to their experience of the change management process (Saunders *et al.*, 2019:524; Sarstedt & Mooi, 2019:69). Likert scales remain a commonly used measurement tool used to collect quantitative data as it measures the respondent's level of agreement to a particular

statement (Bager-Charleson & McBeath, 2020:179). Thus, the scale of choice, a forced scale approach was used opting for a six-point Likert scale that removed the possibility of respondents selecting a neutral answer (Sarstedt & Mooi, 2019:71).

A combination of question formats was consequently integrated in this questionnaire consisting of multiple choice, interval scales and category questions, extracted and refined from existing questionnaires available on change management. In terms of timing and period of observation, the point in time that was studied focussed on respondents' experiences of change management when undergraduate curricula were transformed.

4.8.4 Questionnaire layout

In designing the questions, statements and questionnaire layout, the researcher took care to ensure that the wording of the phrases remained similarly aligned and worded positively, thereby avoiding possible requirements for reverse coding later in the data analysis phases as well as possible interpretation inconsistencies amongst the respondents (Saunders *et al.*, 2019:528). The developed questionnaire consisted of six sections each focussed on an identified construct measuring the experiences of respondents to the management of change, with an introductory set of questions focussed on establishing the demographic profile of the respondents.

4.8.4.1 Introductory Questions

This section of the questionnaire consisted of a series of screening questions whereby participants were guided in whether they would be eligible to participate in the study or not (Sarstedt & Mooi, 2019:74). Participants were screened based on their employment status and relationship with the university, with participants who did not answer positively to all four screening questions being excluded from the study. These screening questions included determining whether or not the respondent is a permanent staff member, whether they form part of the academic staff cohort, and whether and how they previously might have been part of a change management process. Hereafter, the questionnaire proceeded to sections B through G as described below, focussing on the six constructs identified for **this study**.

4.8.4.2 Questionnaire Sections

Section A of the questionnaire focussed on establishing the demographic profile of the respondents who participated in this study. Thereafter, sections B-G proceeded to focus on the measurement of change management experiences related to the identified six constructs of change management. Section A-G are summarized in Table 4.7 below.

Table 4.7: Layout of the sections of the questionnaire

Section	Construct	Description
A	Participant background information	• Close-ended questions posed to respondents to establish whether the respondents qualify to participate in the study, as well as build the demographical profile of the respondents.
B	Creating the need for change	• Clearly defining the purpose and extent of the change management process. • Obtaining the buy-in from staff on the envisaged change management process. • Determining the clear benefits of the change, and the risks associated with not effecting the envisaged change.
C	Planning and resources	• The mobilisation of resources to effect change. • Identification of change agents to facilitate the change process. • Defining objectives, strategies and outcomes to be achieved.
D	Communication to role-players involved	• Relevance of the communication circulated to staff. • Frequency of the communication circulated to staff. • Establishment and nurturing of trust in the recipients on the change management process.
E	Change leadership	• Leadership provided by managers to staff. • Ability of institutional leaders to motivate, inspire and mentor staff. • Ability of managers (leaders) to guide staff through the change management process. • Managers' ability to positively influence the change management process and ensure retained buy-in of staff.
F	Evaluation and monitoring	• Continuous monitoring of progress and achievements. • Evaluation of implemented changes. • Determining if the initial outcomes of the change management process were achieved.
G	Embedding effected changes	• Supporting desired changes through institutional changes to values, policies, rules and processes. • Skills development and awareness related to changes in organisational culture, policies and processes. • Integration of systems and policies to ensure a smooth transition during the change process.

Source: Adapted from Amuguni *et al.* (2019:4); Chowthi-Williams (2017:244-246); Kaphe (2017:30-34); Mahboob and Evans (2015:85-86).

4.8.5 Pilot testing of questionnaire

Conducting a pilot test of the planned questionnaire assists the research in identifying possible shortcomings in the questionnaire that can include matters such as question formulation, understandability, response rate, ambiguity, etc. (Lambert, 2019:3). Overall, this enables the researcher to make the necessary adjustments prior to the circulation of the questionnaire that will increase the response rate of respondents. **For the purpose of this study** a pilot study was conducted to test the developed questionnaire with the purposes of improving on the understandability and coherence of the questions, and to improve any other material shortcomings identified by the pilot group respondents (Sarstedt & Mooi, 2019:76).

By conducting this pilot study with a small group of respondents knowledgeable in the field of research on management, who were in turn similar to the identified sample frame (Saunders *et al.*, 2019:540), the researcher was able to establish a prediction of the questionnaire's validity and reliability. Ten (10) members formed part of the pilot group and provided inputs on the questionnaire layout, understandability and coherence, whereafter the researcher made the necessary and relevant changes to the questionnaire prior to commencing with the data collection process.

4.8.6 Administering the survey

Following the development and testing of the questionnaire, the researcher transferred the questionnaire to Google Forms which formed the primary hosting platform for administering the research instrument. A link to the digital questionnaire was prepared accompanied by a short invitational email request, whereafter both were circulated via email to members forming part of the target population (Ghuri *et al.*, 2020:171).

A mediator situated in the office of Corporate Communications within the University who had direct access to the contact information of the target population, assisted in circulating the questionnaire link and message via email, with additional requests circulated to staff members who were regarded as fitting the characteristics of the target population. The process of gathering data unfolded over a period of 14 months between November 2021 and December 2022.

The researcher chose to make use of the online survey platform, Google Forms, due to the flexibility it offered in design options types, and formats. This flexibility and preprogrammed question formats were regarded by the researcher as suitable for the layout of the planned questionnaire. Furthermore, the platform allows for data to be exported in a constructed manner in Excel format, thereby reducing possible data processing errors observed for hard-copy questionnaires (Bager-Charleson & McBeath, 2020:177). Finally, the access the researcher has to this platform through institutional licencing contributed towards the final decision in selecting this platform.

4.9 ANALYSIS OF THE COLLECTED DATA

This section of the chapter provides further insights into the processes completed as part of processing, analysing and reporting on the data collected through the quantitative research instrument. The researcher further explores the statistical analysis conducted, including descriptive and inferential statistical analysis.

4.9.1 Data preparation

The following steps guided the data preparation performed by the researcher following the collection of data:

- i. Step 1: Data validation
- ii. Step 2: Data editing and coding
- iii. Step 3: Data entry
- iv. Step 4: Data tabulation

For the purpose of this study the researcher manually checked and performed the validation of the data, data editing and coding, and was assisted by the statistical services of the North-West University (NWU) regarding the entry and tabulation of data. After the data had been prepared, the reliability and validity of the measures needed to be determined. Therefore, the following section will focus on the criteria used to determine the quality of measurement.

4.9.2 Criteria for good measurement

4.9.2.1 Reliability

Considering that the sample is drawn from the overall population identified for the study, it remains vital that the data collected is reliable and valid (Scharrer & Ramasubramanian, 2021:75). **Data reliability** is concerned with the consistency of the questionnaire and whether the questionnaire will be able to deliver consistent, or similar, interpretations and outcomes amongst the target population when applied to different samples, research environments and periods (Saunders *et al.*, 2019:518). In other words: will the questionnaire be interpreted similarly each time or will variation occur amongst respondents? The reliability of the data is consequently concerned with the data being devoid of repetitive and random errors within the data set (Olejnik, 2021:129). In aiming to understand reliability more distinctly, three types of reliability are described below in Table 4.8.

Table 4.8: Types of data reliability

Data reliability type	Description
Test-retest reliability	Reliability is measured by gathering data at different time intervals from the same population group and comparing the data outcomes, thus more than one data sample is used in the comparison. A high correlation in the data of the different data sets will signal strong reliability.
Internal consistency reliability	This form of reliability involves the researcher identifying similar descriptions that measure the same construct, thus allowing for the same construct to be measured repeatedly. The internal consistency can be measured through calculating Cronbach's Alpha.
Inter-rater reliability	Inter-rater reliability focuses on measuring the reliability of secondary data and data collected through qualitative measurements.

Source: Sarstedt and Mooi (2019: 38); Martelli and Greener (2018:49-50).

4.9.2.1.1 Cronbach's Alpha

Cronbach's Alpha coefficient value is a statistical value used to determine the consistency of the responses gathered through scale questions focussed on a specific construct (Saunders *et al.*, 2019:518). Consequently, Cronbach's Alpha acts as a method in establishing the reliability of the data collected (Olejnik, 2021:129). Thus, to determine whether a level of consistency is present within the data collected and questionnaire questions of this study, Cronbach's Alpha was calculated for each of the identified six constructs (Saunders *et al.*, 2019:518). The calculation consists of an alpha coefficient ranging between 0-1, with values between 0.7-1.0 regarded as being internally consistent (Saunders *et al.*, 2019:518).

For the purpose of this study, the reliability of the data collected was measured through determining the internal consistency reliability method whereby the **Cronbach's Alpha coefficient** values (refer to paragraph 4.9.2.1.1 below) were calculated for the scales to determine whether the scales were reliable. However, it should be noted that the reliability of the data will not per se result in the data being valid (Olejnik, 2021:129).

4.9.2.2 Replicability

Data replicability refers to the data findings being intersubjectively certifiable by more than one research project (Babin & Zikmund, 2016:135). Thus, replicability is concerned with the possibility of reproducing a similar outcome and data findings by multiple researchers if the researcher follows a similar research approach and data collection method (Beatty *et al.*, 2020:616). To enable research to increase the replicability of their data findings, sufficient consideration and description should be given towards the determination of an appropriate sample size, the variables applicable to the study, and the data collection processes applied (Eden *et al.*, 2020:57).

4.9.2.3 Validity

The **data validity** in turn refers to the applicability of the data to the target population based on the findings of the sample data (Scharrer & Ramasubramanian, 2021:75). Validity thus relates to the extent to which the data collected actually measured what was intended (Sarstedt & Mooi, 2019: 36). Positive data validity is therefore indicative that data with a high data validity score will most likely result in the reflection of similar observations and the ability to generalise assumptions amongst the target population group from which the sample was drawn (Rosenstein, 2019:37). The following types of validity are identified from literature and are reported in Table 4.9 below.

Table 4.9: Types of data validity

Validity type	Description
Internal validity	Also referred to as measurement validity, refers to whether the questionnaire that has been developed by the researcher measures that which the researcher had intended to investigate.
Content validity	This refers to the measurement instrument used and focuses on establishing the comprehensiveness of the questionnaire in including the relevant aspects as identified in literature that should be measured as part of the study.
Construct validity	Determines whether the construct the researcher had intended to measure was indeed present within the questions, and whether the assumptions derived from the data can be generalised.

Source: Saunders *et al.* (2019:517); Eden *et al.* (2020:184, 406).

For the purpose of this study, an exploratory factor analysis was conducted to determine the validity measurement instrument. The construct validity is tested by calculating the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy through which the researcher can further explain correlations that exist between variables, as well as Bartlett's test of sphericity p-value which contributes towards determining data correlation (Sarstedt & Mooi, 2019:265).

4.9.3 Descriptive and inferential statistical techniques

When dealing with quantitative data and questionnaires, a variety of statistical techniques can be used. This section will further elaborate on the different statistical techniques used **for the purpose of this study**.

4.9.3.1 Descriptive statistics

As part of the analysis of quantitative data, descriptive statistics assist the researcher in summarising the data, describing the information gathered as a whole (Lambert, 2019:61). Several descriptive statistics aspects can be extracted from quantitative research data namely frequencies, central tendencies such as means, medians and modes, dispersion (including standard deviations), and associations such as the data correlation (Bager-Charleson & McBeath, 2020:163).

To extract the descriptive statistics from the data collected, an exploratory data analysis is conducted whereby the researcher condenses the collected data to descriptive statistics of frequencies, percentages, means and standard deviations (Schindler, 2019:332). These types of descriptive statistics can also be referred to as the central tendency of the data set, that allows the researcher to identify commonalities within the data collected (Lambert, 2019:62).

The information derived from this exploratory data analysis is then reported through digestible forms of graphs, diagrams, and tables that in turn allow the researcher to make preliminary deductions on the data collected in relation to the research question such as trends, data distributions, etc. (Saunders *et al.*, 2019:582). The following paragraphs motivate the statistical techniques used in **this study**.

4.9.3.1.1 Frequencies distribution

Frequencies are derived from the collected data indicating the number of instances reported for each answer per question, with this data reflected in tables, diagrams or charts (Schindler, 2019:335). As part of this study, the researcher will report the data frequencies for nominal data collected as part of Section A of the questionnaire.

4.9.3.1.2 Percentages

To assist in the overall data interpretation at a preliminary stage of data analysis, the data percentages are calculated, with the raw data reduced to a similar numerical base of 0-100 (Schindler, 2019:342). Drawing from the reported frequencies, the researcher will calculate the percentages of the analysed data as part of the data reporting and analysis.

4.9.3.1.3 Means

The mean value of the data collected is calculated to determine the central tendency of the responses received, thereby determining the average of the responses per scale question contained in the questionnaire (Saunders *et al.*, 2019:599). Thus, the total sum of the responses, or the assigned response values, are divided by the number of responses received to arrive at the mean (Bager-Charleson & McBeath, 2020:164).

The mean can be calculated using the following formula depicted in Figure 4.3:

Figure 4.3: Formula used to calculate the mean

$\bar{X} = \frac{\sum X_i}{n}$	$\bar{X}$ = the mean
	X_i = individual score
	n = number of values (i.e. sample size)
	$\sum$ = summation of all X_i values

Source: Burns *et al.*, (2017:320); Zikmund *et al.*, (2013:417).

4.9.3.1.4 Standard deviations

Considering that some deviation may occur within the data collected, the researcher is required to determine whether the differences observed in the collected data is statistically significant (Schindler, 2019:360). This is done through determining how the data values are spread around the mean value of a particular set of question responses or data, therein indicating whether the data values are closely grouped or dispersed to specific ends of the value parameters (Saunders *et al.*, 2019:601).

The standard deviation therefore indicates to the researcher how many of the responses vary from the overall responses that might be similar to the normal tendency, thus identifying response deviations and outliers within the data set (Bager-Charleson & McBeath, 2020:166). Consequently, a large variation from the mean can be indicative of poor representation of the data gathered, thereby negatively impacting on the ability of the researcher to make credible conclusions based on the data set (Lambert, 2019: 63).

Burns *et al.* (2017:322), Mooi *et al.* (2018:115) and Zikmund *et al.* (2013:420) describe the standard deviation as an index referring to the variability of the distribution of the data, which can be measured with the formula depicted in Figure 4.4.

Figure 4.4: Formula used to calculate the standard deviation

$S = \sqrt{S^2} = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$	S = standard deviation
	X_i = each score
	$\bar{X}$ = the mean
	n = number of values (i.e. sample size)
	$\sum$ = summation of values

Source: Burns *et al.* (2017:322); Mooi *et al.* (2018:115); Zikmund *et al.* (2013:420).

The standard deviation of the data collected in this study will be calculated and reported in the next chapter.

4.9.4 Factor analysis

It is important to determine the statistical significance of the data collected as the research must ensure that a material relationship exists between the constructs reflected in the data and that the data observations are not due to pure chance (Bager-Charleson & McBeath, 2020:169). To establish whether the data variables are independent and statistically significant, a factor analysis is conducted (Schindler, 2019:332).

Calculation of the factor analysis subsequently allows the researcher to better understand the data collected by processing large sets of data variables into understandable sets of smaller data factors that allow for research observations to be made (Olejnik, 2021:84). As part of this study, the factor analysis of the six questionnaire constructs will be calculated.

4.9.5 Inferential statistics

According to Burns *et al.* (2017:318), the purpose of inferential statistics is to attain conclusions pertaining to the sample, meaning that inferential statistics are dependent on the sample and its characteristics.

4.9.5.1 Independent samples t-test analysis

Independent sample t-test analysis the differences between two distinguishable groups that form part of the data set of respondents, such as gender (Sarstedt & Mooi, 2019:163). A lower t-value is indicative of the observed difference between the variables not being by chance, but having a significant meaning in the context of the study (Martelli & Greener, 2018:94).

4.9.5.2 Paired sample t-test analysis

Paired sample t-test are conducted when the researcher aims to compare the differences between the means of two variables that form part of similar samples or groups, and are therefore not part of independent or clearly distinguishable groups (Babin & Zikmund, 2019:425). Consequently, a paired sample t-test can measure the difference that occurs between variables forming part of the same group (Martelli & Greener, 2018:95).

4.9.5.3 One-way ANOVA analysis

When analysing the differences of multiple means observed in the data set, an analysis of variance – referred to as ANOVA – is conducted (Sarstedt & Mooi, 2019:163). Thus, a determination can be made on whether a statistically significant difference exists between multiple means forming part of the data set (Babin & Zikmund, 2016:427). Consequently, if the ANOVA calculation reveals a p-

value below 0.05, the results can be regarded as statistically significant (Martelli & Greener, 2018:95).

4.9.5.4 Regression analysis

Measuring the correlation between data sets indicates to the researcher the relationship that exists between variables and sets of variables that comprise the data set (Rosenstein, 2019:120). However, the presence of data correlation between two or more variables does not per se mean that a causal relationship exists between the variables (Martelli & Greener, 2018:89). To allow for the completion of a correlation analysis between two or more variables, the relationship between the variable sets should be linear (Stockemer, 2019:142).

Regression is indicative of how a variable or set of variables can predict an outcome of each other (Rosenstein, 2019:121). Thus, regression precludes to measure the relationship and interaction between dependent and independent variables with the objective of enabling the researcher to make a prediction based on the data set (Martelli & Greener, 2018:145). The following two types of regression analysis are identified:

4.9.5.4.1 Simple regression analysis

Simple regression analysis involves the analysis of the linear relationship that exists between an independent and dependent variable (Babin & Zikmund, 2016:433). This type of regression analysis can also be referred to as Bivariate regression and can be used as a predictive tool whereby the linear relationship that exists between two variables is used to determine the impact of one on the other (Burns *et al.*, 2017:407).

4.9.5.4.2 Multiple regression analysis

To analyse the effect of two or more independent variables on a dependent variable, a multiple regression analysis is conducted (Babin & Zikmund, 2016:434). Consequently, a multiple regression analysis considers more than one independent variable based on the formula of the Bivariate regression analysis, with the expansion from a simple straight-line graph to a regression plane (Burns *et al.*, 2017:412). Thus, a multiple regression analysis can be used to predict the outcome of a dependent variable based on the changes to the independent variables (Martelli & Greener, 2018:145).

For the purposes of this study, a multiple regression analysis was performed, analysing the impact of various independent variables on the identified dependent variables. This will assist the research in predicting specific outcomes based on data collected related to the identified constructs of change management relevant to this study.

4.10 PRESENTING THE RESEARCH FINDINGS AND FORMULATE A CONCLUSION

Before proceeding with the data processing, the researcher must review the data set and ensure that the observed data omissions are corrected either through replacement or exclusion (Olejnik, 2021:85). Considering that the researcher opted to use Google Forms as the data collection tool and constructed the questionnaire in such a manner that participants are guided in answering each question, the risk of data omissions is regarded as minimal.

A variety of data processing software exist which enabled the researcher to make the relevant calculations described above, including SPSS (Statistical Package for the Social Sciences), PSPP and JASP (Jeffreys's Amazing Statistics Program) (Bager-Charleson & McBeath, 2020:171). The researcher, assisted by a qualified statistician, used SPSS to complete the described calculations.

For this study, the results and findings are presented in Chapter 5, whereas the conclusions and recommendations (based on the results and findings) are presented in Chapter 6.

4.11 ETHICAL CONSIDERATIONS

The research obtained ethical clearance and approval from the Faculty of Economic and Management Sciences Research and Ethics Committee, with the following ethical clearance number assigned: NWU-00063-21-A4. In addition to the ethical clearance and approval obtained from the faculty, the researcher further obtained permission from the NWU Research Data Gatekeeper Committee, to enable the researcher to conduct the quantitative research study on members of university staff. The Research Data Gatekeeper Committee issued the following permission number to the study: NWU-GK-21-022.

4.12 CONCLUSION

In this chapter the researcher explored the research processes and methodology applied to achieve the primary and secondary research objectives of the study. The chapter was guided by the research process illustrated in Figure 4.1, indicating the various steps undertaken by the researcher as part of this study.

The chapter explored the research design approach used to investigate the experiences of change management, further defining the target population and sample. A comprehensive description of the research instrument was further provided, consisting of seven sections, sections A-G, collecting demographical data on the respondents and insights towards their experience of change management related to the transformation of undergraduate curricula of a higher education institution.

A non-probability sampling approach was adopted for this study, due to the researcher's proximity to and knowledge of the university, staff and structure where the study was conducted. Ultimately, data was collected for analysis during the period November 2021 to December 2022, with a minimum target of 200 respondents. The data collected was hereafter analysed using SPSS, and the outcome of the statistical analysis enabled the researcher to provide further insights and recommendations on the research problem and objectives.

The study proceeds to Chapter 5, in which the researcher will report on the empirical results and findings of the study, based on the statistical analysis of the data collected through the quantitative research instrument.

CHAPTER 5

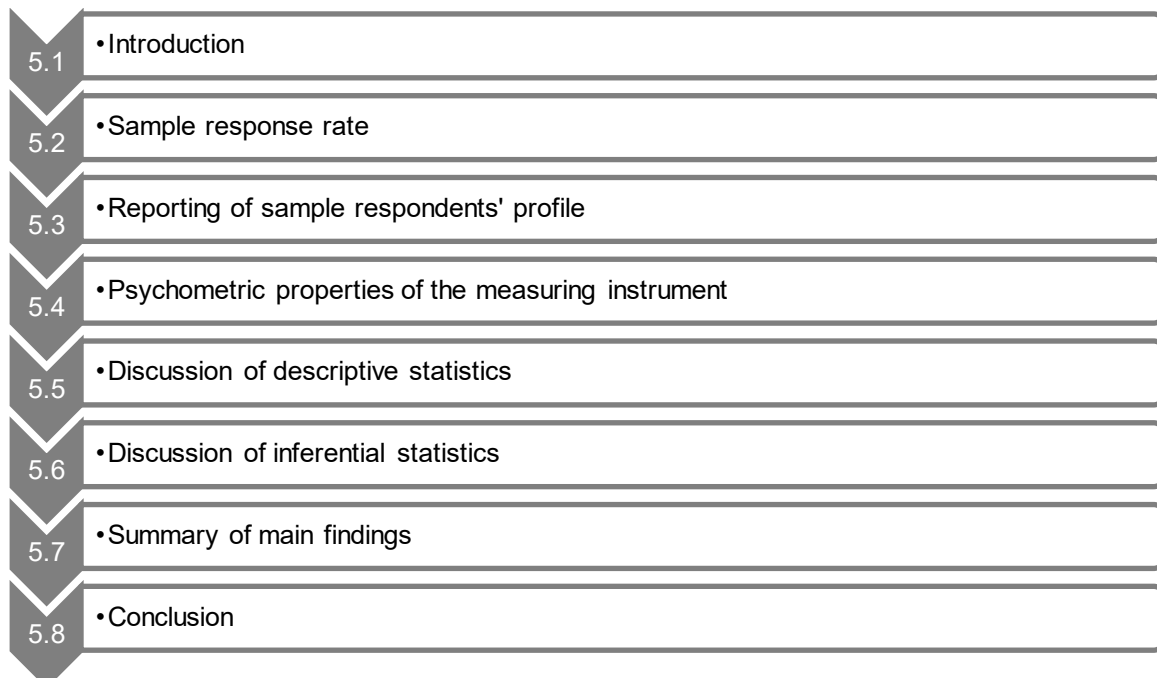
EMPIRICAL RESEARCH RESULTS AND FINDINGS

5.1 INTRODUCTION

In Chapter 4 of this study, an overview of the research methodology used to complete the quantitative research was discussed, following the guidance provided by the research design plan (see Par. 4.3). One of the stages mentioned in Chapter 4 (see Par. 4.9 and 4.10) was the presentation of research findings obtained from the empirical data analysis. This chapter now reports the data gathered from the structured self-administered questionnaire that was circulated to the identified sample target.

Chapter 5 is guided by the chapter layout illustrated in Figure 5.1 below. An overview of the response rate and related insights obtained from respondents will be reported (see Par. 5.2 & 5.3), followed by a discussion on the psychometric properties of the questionnaire related to validity and reliability (see Par. 5.4). Then the descriptive statistics will be reported (see Par. 5.5), as well as the inferential statistics (see Par. 5.6). A report will finally be provided on the data findings and conclusion (see Par. 5.8).

Figure 5.1: Outline of chapter



Source: Author's own depiction.

5.2 SAMPLE RESPONSE RATE

This study was conducted amongst the population group of staff of a notable university in South Africa who experienced a process of change management when transforming higher education curricula (see Par. 4.7). According to the data published by the university, the population size was determined to be 2 126 (see Table 4.2). The purpose of this study was to investigate the experience of change management when transforming higher education academic curricula in undergraduate studies, and a minimum sample size of 200 respondents was considered acceptable for investigating respondents' experience of change management (Malhotra *et al.*, 2017:418; Scharrer & Ramasubramanian, 2021:78). Furthermore, the sample size should be sufficiently large enough to represent the overall population from which the survey is drawn. This is particularly important when data samples share common characteristics (Bordens & Abbott, 2011:289).

To assist the researcher in obtaining a viable response rate and minimizing possible non-response errors from respondents, the digital online survey platform Google Forms, was used. This form was set-up in such a manner that it required each respondent to respond to all questions forming part of the survey, before electronically submitting the questionnaire. Positively, the ability to configure the Google Form survey tool in such a manner, enabled the researcher to minimize possible sample frame errors. The measurement instrument was repeatedly circulated via the internal university mediator to staff who formed part of the identified population. The response rate results for the quantitative study are reported in Table 5.1 below:

Table 5.1: Response rate realisation

Description	Quantity
Proposed sample size	200 (minimum)
Completed questionnaires	201
Discarded questionnaires	0
Usable questionnaires	201
Realisation rate	100,5%

Source: Researcher's own depiction.

As indicated in Table 5.1 above, the minimum target sample size was realised, with 201 responses received from the population. All questionnaire responses were regarded as useful, due to the manner in which the questionnaire was programmed to eliminate members who did not form part of the identified population. The response realisation rate is consequently calculated at 100,5%.

5.3 REPORTING OF SAMPLE RESPONDENTS' PROFILE

The following section proceeds to report the profile of respondents who participated in the study. Information gathered through the demographical measurements included under Section A of the questionnaire will be reported and discussed.

5.3.1 Analysis of the respondents' profile

Section A of the questionnaire gathered data on the respondents' demographical profile composition, and included measurements on their highest qualification, position category, employment position held in the university, and duration of employment (Addendum A).

Table 5.2: Respondent's demographic profile

	Frequency (n)	Percentage (%)
Highest Qualification		
Degree	21	10,40%
Diploma	11	5,50%
Doctoral Degree	86	42,80%
Honours Degree	27	13,40%
Master's Degree	52	25,90%
National Senior Certificate (or equivalent)	4	2,00%
Position Category		
Instruction/research professional	32	15,90%
Executive/management professional	92	45,80%
Support professional	77	38,30%
Position Currently Held		
Administrative support staff	67	33,30%
Deputy Dean of a Faculty	1	0,50%
Deputy Director of a Faculty School	3	1,50%
Director of a Faculty School	11	5,50%
Executive Dean of a Faculty	2	1,00%
Junior Lecturer	17	8,50%
Lecturer	28	13,90%
Programme Leader	24	11,90%
Researcher	9	4,50%
Senior Lecturer	38	18,90%
University Management	1	0,50%

Table 5.2: Respondent's demographic profile (cont.)

Duration of Employment		
0 – 1 years	11	5,50%
1 – 3 years	29	14,40%
3 – 5 years	53	26,40%
5 – 10 years	62	30,80%
More than 10 years	46	22,90%

Source: Researcher's own compilation.

As reported in Table 5.2 above, the majority of the respondents indicated that they hold a doctoral degree as their highest qualification (42,80%; n = 86). In contrast, only four respondents indicated that they only hold a national senior certificate as their highest qualification (2,00%; n = 4). Cumulatively, 98,00% (n = 197) of the respondents have a qualification higher than a national senior certificate.

In terms of position category, the majority of respondents identified as executive/management professionals (45,80%; n = 92), with only 15,90% (n = 32) identifying as instruction/research professionals and 38,30% (n = 77) indicated that they are support professionals. In terms of the position currently held the majority of 33,30% (n = 67) respondents indicated that they hold a position as administrative support staff, with 18,90% (n = 38) and 13,90% (n = 28) respectively holding positions as senior lecturers and lecturers. At the time of the data collection, 30,80% (n = 62) of respondents had been employed in the position they indicated for 5-10 years, with 26,40% (n = 53) employed for a period of 3-5 years.

Main finding 1:	A sample profile was compiled of stakeholders who participated in the change management process when undergraduate curricula were transformed.
Main finding 2:	With regards to highest qualification, the majority of respondents indicated that they hold a doctoral degree.
Main finding 3:	With regards to the position currently held by the respondent, the majority of respondents indicated that they form part of the academic support staff.
Main finding 4:	With regards to the position category, the majority of respondents formed part of the category <i>executive/management professional</i> .
Main finding 5:	With regards to the employment duration, the majority of respondents indicated that they had been employed in their current position for 5 to 10 years.

5.4 PSYCHOMETRIC PROPERTIES OF THE MEASURING INSTRUMENT

The accuracy of the measuring instrument, referred to as the questionnaire, can be determined through its psychometric properties (Bell *et al.*, 2019:48), in this instance reliability (see Par. 5.4.1) and validity (see Par. 5.4.2). Therefore, the following section proceeds to report the reliability and validity analysis conducted on the data gathered.

5.4.1 Reliability

Reliability is the determination of a measurement instrument's ability to obtain consistent outcomes in gathering data when applied at different intervals and to different sample targets (Saunders *et al.*, 2019:518; Sarstedt & Mooi, 2019:279). A questionnaire that is reliable can be regarded as consistent, thus signalling that different instances of data collection would measure similar, albeit not identical outcomes (Babin & Zikmund, 2016:280).

In determining the reliability of the measurement instrument for this study and whether it consistently measures the same underlying construct (Shrestha, 2021:5), Cronbach's Alpha values (α) were calculated using the statistical programme SPSS version 28. The determination as to whether the measurement scale contained in the questionnaire could be regarded as reliable, was informed by the parameters indicated in Figure 5.2 below.

Figure 5.2: Parameters for determining reliability of a measurement instrument

$\alpha \leq 0,60$	• Measurement instrument and scale possesses poor reliability.
$0,60 < \alpha \leq 0,70$	• Measurement instrument and scale possesses moderate reliability.
$0,70 < \alpha \leq 0,80$	• Measurement instrument and scale possesses good reliability.
$0,80 < \alpha < 0,96$	• Measurement instrument and scale possesses very good reliability.

Source: Babin and Zikmund (2016:281); Sarstedt and Mooi (2019:280).

Table 5.3: Reliability of the measurement instrument

Construct	Number of Items	Cronbach's Alpha (α)	Reliability indication
The need for change management to transform the undergraduate academic curricula.	6	0,904	Very good reliability
Planning and resources allocation during the change management process when transforming undergraduate curricula.	5	0,863	Very good reliability
Communication related to the change management process.	7	0,895	Very good reliability

Table 5.3: Reliability of the measurement instrument (cont.)

Construct	Number of Items	Cronbach's Alpha (α)	Reliability indication
The role of leadership during the change process.	8	0,926	Very good reliability
Measuring the experiences related to evaluation and monitoring of the change management process when transforming undergraduate curricula.	5	0,892	Very good reliability
Embedding the effected changes into the organisation.	8	0,862	Very good reliability

Source: Researcher's own compilation.

As reported in Table 5.3 above, the Cronbach's Alpha values for the six identified constructs for change management ranged between 0,862 and 0,926. It is evident that all the constructs showed very good reliability (see Figure 5.2). Consequently, it can be concluded that the measurement instrument utilised to measure respondents' experience related to change management when transforming the undergraduate curricula of a higher education institution has a very high level of internal consistency and is can therefore be regarded as reliable. This subsequently signals that, should the study be conducted again with data gathered from a similar population and sample group, a similar outcome would be achieved in terms of the data.

Main finding 6:	The measurement scales forming part of this study to measure the constructs have good internal consistency reliability, with the Cronbach's Alpha values all reported above 0,8.
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5.4.2 Validity

The validity of the measurement instrument relates to the level of accuracy at which the concept contained in the instrument is measured (Bell *et al.*, 2019:46; Roni *et al.*, 2020:11). Thus, a measurement instrument with good validity can be regarded as having measured that which was intended to be measured by the researcher (Sarstedt & Mooi, 2019:380). To assist the researcher in determining the validity of the measurement tool used and further identifying possible relationships that may exists between the constructs measured, the researcher conducted a principle component analysis of the six identified constructs for change management identified as part of this study.

The probability value (p-value), measuring the significance level between an observed value and an expectation and whether this would be acceptable, was calculated for the data collected (Saunders *et al.*, 2019:607). The Kaiser-Meyer-Olkin (KMO) value measures the adequacy of the sample (also referred to as measure of sampling adequacy (MSA) obtained and further provides an indication as to whether a factor analysis can be conducted on the data (Shrestha, 2021:6). The parameters in determining sampling adequacy for meaningful factor analysis ability is indicated in Figure 5.3 below.

Figure 5.3: Parameters on sampling adequacy for meaningful factor analysis using KMO

KMO $\leq$ 0,50	• Extremely poor sampling adequacy, data not suitable, unacceptable.
0,50 < KMO < 0,59	• Poor sampling adequacy.
0,60 $\leq$ KMO < 0,69	• Moderate sampling adequacy.
0,70 $\leq$ KMO < 0,79	• Good sampling adequacy.
0,80 $\leq$ KMO < 1,0	• Extremely good sampling adequacy.

Source: Ermatita *et al.* (2019:232); Sarstedt and Mooi (2019:265); Shkeer and Awang (2019:88); Shrestha (2021:6).

Bartlett's Test of Sphericity was further conducted to determine the suitability for completing a factor analysis in the data conducted, with a p-value of < 0,05 regarded as suitable for a factor analysis (Shkeer & Awang, 2019:88; Shrestha, 2021:6). The principal component analysis was further conducted to reduce the data and group data findings in accordance with observed similarities (Ermaita *et al.*, 2019:232). The eigenvalues of each variable identified under each construct were then calculated to assist the researcher in understanding each variable's contribution towards the factor variance (Sarstedt & Mooi, 2019:271).

The principle component analysis results for the data gathered though the questionnaire will be discussed below, informed by the data validity values and measurements identified in the paragraph above. As part of paragraph 5.4.2.1-5.4.2.6 below, the factor analysis of each construct is reported as the KMO value, the test of sphericity (p-value), and the correlation matrix coefficient. Hereafter the principal component analysis will be reported, based on Kaiser's criterion where only eigenvalues larger than 1 are used when determining the number of factors being extracted.

5.4.2.1 Factor analysis of change management related to the need for change

Section B of the measurement instrument measured the respondents' experiences related to change management and the establishment of the need for change. The factorability of the data gathered was assessed and is reported in Table 5.4 below, with a correlation matrix value of 0,003 reported. The KMO value measured at 0,892, with the test of sphericity reported at $p < 0,001$. The reported values consequently signalled that the data could further be subjected to factor analysis as part of determining the validity.

Table 5.4: Factorability of data gathered related to the "need for change"

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,892
Bartlett's Test of Sphericity	Approx. Chi-Square	925,300
	df	15
	Sig.	0,000
Correlation Matrix		0,003

Source: Author's own compilation.

Table 5.5 below further reports the principal component analysis that was conducted. Based on the results of the calculated data, a total variance explained of 70,942% was reported, which prompted the researcher to retain only one factor that accounted for the aspects measured as part of the "need for change" construct. The factor that was retained was labelled, with the measuring questions indication in Table 5.6 below. Based on the reported data, the researcher can indicate that acceptable elements of validity are present in this section of the questionnaire related to the "need for change".

Table 5.5: Total variance explained for the retained factor on "need for change"

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,257	70,942	70,942	4,257	70,942	70,942
2	0,799	13,320	84,262			
3	0,320	5,335	89,598			
4	0,258	4,293	93,891			
5	0,214	3,565	97,456			
6	0,153	2,544	100,000			

Source: Author's own compilation.

Table 5.6: Factor loading and communalities derived from the Principle Component Analysis for the factors labelled "need for change"

Need for Change	Factor Loading
B1. There was a clear need to transform the undergraduate programmes of the university.	0,787
B2. I believed that the university would have an increased competitive advantage from the envisaged change in relation to other universities.	0,731
B3. I could see that there was a clear benefit(s) in transforming the undergraduate curricula.	0,812
B4. I supported the need to transform the undergraduate curricula.	0,862
B5. I understood the need to transform the undergraduate curricula throughout the process.	0,767
B6. I was able to participate in the processes whereby the undergraduate programmes were changed.	0,300

Source: Author's own compilation.

5.4.2.2 Factor analysis of change management related to planning and resource allocation

Section C of the measurement instrument measured the respondents' experiences related to change management and the planning and resource allocation forming part of the change management process. The factorability of the data collected was evaluated and is stated in Table 5.7 below, with the correlation matrix value of 0,70, the KMO value measured at 0,800, and the test of sphericity reported at $p < 0.001$. These stated values subsequently signalled that the data could further be exposed to factor analysis as part of determining the validity.

Table 5.7: Factorability of data gathered related to the "planning and resource allocation"

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,800
Bartlett's Test of Sphericity	Approx. Chi-Square	526,534
	df	10
	Sig.	0,000
Correlation matrix		0,70

Source: Author's own compilation.

The principal component analysis that was conducted is indicated in Table 5.8. Based on the results, a total variance explained of 65,764% was stated, therefore only one was factor retained that accounted for the items measured as part of the "planning and resource allocation" construct. The factor that was retained was labelled, with the measuring questions indication in Table 5.9 below. Based on the reported data, the researcher can indicate that acceptable elements of validity are present in this section of the questionnaire related to the "planning and resource allocation".

Table 5.8: Total variance explained for the retained construct on planning and resource allocation

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,288	65,764	65,764	3,288	65,764	65,764
2	0,804	16,083	81,847			
3	0,379	7,585	89,432			
4	0,286	5,715	95,147			
5	0,243	4,853	100,000			

Source: Author's own compilation.

Table 5.9: Factor loading and communalities derived from the Principle Component Analysis for the factors labelled "planning and resource allocation"

Planning and resource allocation	Factor loading
C1. Specific staff members advocated and motivated staff to successfully complete the process of changing the undergraduate programme.	0,629
C2. I experienced the change process as being guided by specific objectives and outcomes.	0,757
C3. The process of changing the undergraduate curricula was guided by a clearly defined plan of action.	0,686
C4. I was able to participate in the aspects of the planning towards changing the curricula of undergraduate programmes.	0,555
C5. I was provided with sufficient resources to partake in the process of changing the undergraduate curricula.	0,662

Source: Author's own compilation.

5.4.2.3 Factor analysis of change management related to communication

Section D of the measurement instrument (questionnaire) measured respondents' experiences related to change management and the communication on the change management process. The factorability of the of the data gathered was assessed and is reported in Table 5.10 below, with a correlation matrix value of 0,15 reported. The KMO value measured 0,864, with the test of sphericity reported at $p < 0.001$. These reported values consequently signalled that the data could further be subjected to factor analysis as part of determining the validity.

Table 5.10: Factorability of data gathered related to "communication"

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,864
Bartlett's Test of Sphericity	Approx. Chi-Square	830,280
	df	21
	Sig.	0,000
Correlation matrix		0,15

Source: Author's own compilation.

The principal component analysis that was conducted is reported in Table 5.11. A total variance explained of 61,696% was reported, that resulted in the researcher retaining only one factor that accounted for the aspects measured as part of the "communication" construct. The measuring questions are reported in Table 5.12 below, with the retained factor labelled accordingly. Informed by the reported data, the researcher can indicate that acceptable elements of validity are present in this section of the questionnaire related to "communication".

Table 5.11: Total variance explained for the retained construct on communication

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,319	61,696	61,696	4,319	61,696	61,696
2	0,881	12,579	74,275			
3	0,566	8,079	82,353			
4	0,455	6,501	88,854			
5	0,350	4,994	93,848			
6	0,273	3,899	97,747			
7	0,158	2,253	100,000			

Source: Author's own compilation.

Table 5.12: Factor loading and communalities derived from the Principle Component Analysis for the factors labelled "communication"

Communication	Factor loading
D1. The need and purpose of changing the curricula of the undergraduate programme was clearly communicated to me.	0,666
D2. I feel that all staff members who were affected by the change in undergraduate curricula were informed about it.	0,713
D3. The university (either through managers or official communications) remained consistent and honest regarding the purpose of the change in the curricula of undergraduate programmes.	0,634
D4. I regarded frequent communication with staff on the process of change as important.	0,300
D5. I noted that specific individuals were tasked with sharing information with staff on behalf of the university during the process of transforming the undergraduate curricula.	0,578
D6. My manager(s) provided frequent communication and information on the unfolding process of changing the undergraduate programmes.	0,722
D7. I received useful information from my manager(s) which assisted me in executing my role in the change process.	0,730

Source: Author's own compilation.

5.4.2.4 Factor analysis of change management related to change leadership

Section E of the measurement instrument (questionnaire) measured respondents' experiences related to change management and change leadership forming part of the change management process. The factorability of the data gathered was assessed and is reported in Table 5.13 below, with a correlation matrix value of 0,002 reported. The KMO value measured 0,907, with the test of sphericity reported at $p < 0.001$. These reported values consequently signalled that the data could further be subjected to factor analysis as part of determining the validity.

Table 5.13: Factorability of data gathered related to "change leadership"

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,907
Bartlett's Test of Sphericity	Approx. Chi-Square	1238,311
	df	28
	Sig.	0,000
Correlation matrix		0,002

Source: Author's own compilation.

The principal component analysis that was conducted is reported in Table 5.14. The results of the calculated data indicate a total variance explained of 66,588%, that lead the researcher to retain only one factor that pertained to the aspects measured as part of the construct of "change leadership". The retained factor was labelled, with the measuring questions provided in Table 5.15 below. Informed by the data reported, the researcher can state that this section of the questionnaire focussing on "change leadership" has acceptable elements of validity.

Table 5.14: Total variance explained for the retained construct on change leadership

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,327	66,588	66,588	5,327	66,588	66,588
2	0,791	9,889	76,477			
3	0,609	7,617	84,094			
4	0,418	5,220	89,314			
5	0,309	3,862	93,176			
6	0,239	2,988	96,164			
7	0,173	2,168	98,332			
8	0,133	1,668	100,000			

Source: Author's own compilation.

Table 5.15: Factor loading and communalities derived from the Principle Component Analysis for the factors labelled "change leadership"

Change Leadership	Factor loading
E1. University managers remained core drivers during the process whereby the undergraduate curricula was changed.	0,543
E2. Managers within the university provided direction which guided the process whereby the undergraduate programmes were changed.	0,739
E3. During the change process, possible resistance to the change process was identified by managers.	0,342
E4. Any resistance to the changing of the undergraduate curricula, was effectively and reasonably managed.	0,643
E5. My manager interpreted and understood the university's strategic direction and acted accordingly.	0,696
E6. My manager frequently motivated the staff members reporting to them throughout the process of changing the undergraduate curricula.	0,785
E7. My manager provided me with support during the process whereby the undergraduate curricula was changed.	0,834
E8. My manager recognised the change impact on me and managed it appropriately.	0,746

Source: Author's own compilation.

5.4.2.5 Factor analysis of change management related to evaluation and monitoring

Section F of the measurement instrument (questionnaire) measured respondents' experiences related to change management and the establishment of the evaluation and monitoring of the change management process. The factorability of the data gathered was assessed and is reported in Table 5.16 below, with a correlation matrix value of 0,49 reported. The KMO value measured 0,843, with the test of sphericity reported at $p < 0.001$. These reported values consequently signalled that the data could further be subjected to factor analysis as part of determining the validity.

Table 5.16: Factorability of data gathered related to the "evaluation and monitoring"

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,843
Bartlett's Test of Sphericity	Approx. Chi-Square	593,679
	df	10
	Sig.	0,000
Correlation matrix		0,49

Source: Author's own compilation.

Table 5.17 below further reports the principal component analysis that was conducted. Informed by the calculated data results, a total variance explained of 70,473% was reported, with the researcher retaining only one factor that related to the "evaluation and monitoring" construct measured. The factor that was retained was labelled, and the measuring questions are provided Table 5.18 below. Based on the reported data, the researcher can indicate that acceptable elements of validity are present in this section of the questionnaire related to "evaluation and monitoring".

Table 5.17: Total variance explained for the retained construct on evaluation and monitoring

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,524	70,473	70,473	3,524	70,473	70,473
2	0,618	12,363	82,835			
3	0,341	6,830	89,665			
4	0,273	5,461	95,126			
5	0,244	4,874	100,000			

Source: Author's own compilation.

Table 5.18: Factor loading and communalities derived from the Principle Component Analysis for the factors labelled "evaluation and monitoring"

Evaluation and monitoring	Extraction
F1. Progress throughout the process of changing the undergraduate curricula was continuously monitored.	0,671
F2. The progress during the process of changing the undergraduate curricula was evaluated against the plan of action communicated at the start of the process.	0,735
F3. The plan of action which guided the process of changing the curricula allowed for flexibility if necessary changes had to be made during the transformation process.	0,742
F4. My manager(s) celebrated achievements and successes during the change process.	0,643
F5. My manager(s) provided frequent feedback on the change process.	0,733

Source: Author's own compilation

5.4.2.6 Factor analysis of change management related to embedding of effected changes

Section G of the measurement instrument (questionnaire) measured respondents' experiences related to change management and the embedding of the effected changes. The factorability of the data gathered was assessed and is reported in Table 5.19 below, with a correlation matrix value of 0,15 reported. The KMO value measured 0,822, with the test of sphericity reported at $p < 0.001$. These reported values consequently signalled that the data could further be subjected to factor analysis as part of determining the validity.

Table 5.19: Factorability of data gathered related to the "embedding of effected changes"

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,822
Bartlett's Test of Sphericity	Approx. Chi-Square	819,627
	Df	28
	Sig.	0,000
Correlation Matrix		0,15

Source: Author's own compilation.

The principal component analysis conducted is reported as part of Table 5.20. Based on the results, a total variance explained of 51,704% was reported, that assisted the researcher to only retain one factor that reflected the aspects measured as part of the construct "embedding of effected changes". After labelling the retained factor, the measuring questions are provided in Table 5.21. Informed by the reported data, it can be indicated that the section of the questionnaire related to the "embedding of effected changes" has acceptable elements of validity.

Table 5.20: Total variance explained for the retained construct on embedding of effected changes

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,136	51,704	51,704	4,136	51,704	51,704
2	1,339	16,738	68,442			
3	0,857	10,708	79,150			
4	0,501	6,260	85,410			
5	0,369	4,617	90,027			
6	0,326	4,075	94,102			
7	0,277	3,465	97,568			
8	0,195	2,432	100,000			

Source: Author's own compilation.

Table 5.21: Factor loading and communalities derived from the Principle Component Analysis for the factors labelled "embedding effected changes"

Embedding of effected change	Extraction
G1. I experienced a change in the organisational identity and values which supported the changes made.	0,490
G2. Existing structures and policies were amended to support the effected changes.	0,607
G3. The effected changes have been embedded into the processes and systems I engage with on a daily basis.	0,575
G4. A culture orientated towards supporting the changed curricula was implemented.	0,677
G5. The effected changes positively impacted on my tasks and responsibilities.	0,646
G6. My behaviour and reactions to my work changed following the change process.	0,300
G7. I experience the effected changes as beneficial to the university.	0,406
G8. I still enjoy working within my current environment after the change process was completed.	0,462

Source: Author's own compilation.

5.4.2.7 Summary of data reported on the measurement instrument and construct validity

In summarising the data gathered and calculations made in determining the construct validity of the measurement instrument, Table 5.22 below provides a consolidated indication of the KMO, p-values, total variance based on eigenvalues, as well as the factor loadings. Based on the values reported as part of the factor analysis completed, it can be indicated that the validity of the measurement instrument can be regarded as acceptable.

Table 5.22: Construct validity of the measurement instrument and scales

Constructs	Factors extracted	KMO	p-value (Bartlett)	% Variance explained	Loadings
Need for change	1	0,892	0,000	70,942	0,55-0,93
Planning and resource allocation	1	0,800	0,000	65,764	0,74-0,87
Communication	1	0,864	0,000	61,696	0,53-0,85
Change leadership	1	0,907	0,000	66,588	0,58-0,86
Evaluation and monitoring	1	0,843	0,000	70,473	0,80-0,86
Embedding of effected changes	1	0,822	0,000	51,704	0,52-0,82

Source: Author's own compilation

Main finding 7:	One factor was extracted for each of the constructs, with this extraction indicating the unidimensional structure of the constructs. Based on the KMO values that range from 0,800 to 0,907, the data used as part of the factor analysis can be regarded as having sampling adequacy. Similarly, values measuring nearer to 1 are indicative of suitability for factor analysis.
Main finding 8:	The correlations between the variables can be regarded as statistically significant with the p-values all measuring 0,000.
Main finding 9:	The percentage of variance explained by each factor ranges from 51,704% to 70,942%. The higher percentages reported are indicative of the factors capturing the total variation in the constructs.
Main finding 10:	The factor loadings for each of the constructs are reported between 0,52-0,93, consequently indicating an existence of a strong relationship between the items and their respective factors. Factor loadings higher than 0,5 are generally considered as acceptable, with the reported range provided (0,55-0,93) indicating a good level of item-factor association.
Main finding 11:	Considering the impact of main findings 7-10 reported above, the scales used as part of the measurement of construct in this study namely, Need for change, Planning and resource allocation, Communication, Change leadership, Evaluation and monitoring, Embedding of effected changes, can be regarded as valid.

5.5 DISCUSSION OF DESCRIPTIVE STATISTICS

The following section analyses the mean scores ($\bar{x}$) and standard deviations (σ) observed within the data set of respondents' feedback on the questionnaire. As reported in Chapter 4 of this study, mean scores and standard deviations are regarded as relevant to this study (Bager-Charleson & McBeath, 2020:163; Lambert, 2019:61). Informed by the statements related to the six main constructs of change management identified as part of this study, respondents were requested to indicate their level of agreement to a specific statement using a six-point Likert scale (refer to Addendum A). As part of the six-point scale, a score of 1 indicated "strongly disagree", with a score of 6 indicative of "strongly agree". To assist the researcher in reporting on the data findings using the indicated Likert scale, the following rating guidelines are provided related to the interpretation of the mean scores (see Table 5.23).

Table 5.23: Rating guidelines on mean scores derived from Likert Scale data

Likert Scale Rating	Mean Score	Interpretation
Strongly disagree	1 < and $\leq 1,4$	Negative experience related to change management
Disagree	1,5 < and $\leq 2,4$	
Slightly disagree	2,5 < and $\leq 3,4$	
Slightly agree	3,5 < and $\leq 4,4$	Positive experience related to change management
Agree	4,5 < and $\leq 4,9$	
Strongly agree	5 < and ≤ 6	

Source: Author's own interpretation

5.5.1 Respondents' experiences of change management related to the need for change

This section of the measuring instrument determined the respondents' experiences of change management related to the establishment of a need for change. The data gathered is reported in Table 5.24 below on the six statements that measured the respondents' level of agreement with the overarching construct: *The need for change management to transform the undergraduate curricula*.

Table 5.24: Respondents' experiences of the need for change management to transform the undergraduate curricula.

Statements	$\bar{x}$	σ
There was a clear need to transform the undergraduate programmes of the university.	4,64	1,24
I believed that the university would have an increased competitive advantage from the envisaged change in relation to other universities.	4,60	1,23
I could see that there was a clear benefit(s) in transforming the undergraduate curricula.	4,48	1,24
I supported the need to transform the undergraduate curricula.	4,65	1,23
I understood the need to transform the undergraduate curricula throughout the process.	4,60	1,24
I was able to participate in the processes whereby the undergraduate programmes were changed.	4,13	1,56
Overall score	4,52	1,06

Source: Researcher's own compilation

As depicted in Table 5.24 above, the overall score was ($\bar{x} = 4,52$; $\sigma = 1,06$), indicating that respondents mostly agreed and understood the need for change management as important to the transformation of the undergraduate curricula, thereby indicating a positive experience related to change. The item *"I supported the need to transform the undergraduate curricula"*, scored the highest ($\bar{x} = 4,65$; $\sigma = 1,23$), while the item *"I was able to participate in the processes whereby the undergraduate programmes were changed"*, scored the lowest ($\bar{x} = 4,13$; $\sigma = 1,56$).

Main finding 12:	Respondents' overall experiences relating to their need for change were mostly positive.
Main finding 13:	Pertaining to the need for change, the respondents are mostly in agreement that they supported the need to transform the undergraduate curricula.
Main finding 14:	Looking at the need for change, respondents reported as being least in agreement about their participation in the process to change undergraduate programmes.

5.5.2 Respondents' experiences of change management related to planning and resource allocation

The respondents' experiences of change management related to planning and resource allocation were measured as part of this section of the measuring instrument. The data is reported in Table 5.25, indicated as the five items that measured the respondents' level of agreement with the indicated construct: *Planning and resources allocation during the change management process when transforming undergraduate curricula*.

Table 5.25: Respondents' experiences of planning and resources allocation during the change management process when transforming undergraduate curricula.

Statements	$\bar{x}$	σ
Specific staff members advocated and motivated staff to successfully complete the process of changing the undergraduate programme.	4,22	1,19
I experienced the change process as being guided by specific objectives and outcomes.	4,21	1,22
The process of changing the undergraduate curricula was guided by a clearly defined plan of action.	4,02	1,23
I was able to participate in the aspects of the planning towards changing the curricula of undergraduate programmes.	3,62	1,56
I was provided with sufficient resources to partake in the process of changing the undergraduate curricula.	3,60	1,45
Overall score	3,94	1,08

Source: Researcher's own compilation.

It is reported in Table 5.25 that the overall score for the respondents' experience on planning and resource allocation during the change management process was moderate ($\bar{x} = 3,94$; $\sigma = 1,08$) indicating that the respondents slightly agree that the planning and resource allocation during change management process was done moderately, but still rendering a positive experience related to change. The item that scored the highest was *"Specific staff members advocated and motivated staff to successfully complete the process of changing the undergraduate programme"* ($\bar{x} = 4,22$; $\sigma = 1,19$). The lowest score was registered for the statement *"I was provided with sufficient resources to partake in the process of changing the undergraduate curricula"* ($\bar{x} = 3,60$; $\sigma = 1,45$).

Main finding 15:	In relation to planning and resource allocation, respondents had a moderately positive experience during the change management process.
Main finding 16:	Respondents felt that specific staff did advocate and motivate the change management process but felt that sufficient resources had not been provided.
Main finding 17:	With regards to the construct of planning and resource allocation, it was confirmed that the constructs of need for change, communication, change leadership, and monitoring and evaluation was statistically significant and had a definite impact and effect.

5.5.3 Respondents' experiences of change management related to communication

The respondents' experiences of change management related communication on the change management process were determined in this section of the questionnaire. Table 5.26 reports the data gathered as the mean scores ($\bar{x}$) and standard deviations (σ) for the seven statements relating to respondents' level of agreement with the construct: *Communication related to the change management process*.

Table 5.26: Respondents' experiences of communication related to the change management process.

Statements	$\bar{x}$	σ
The need and purpose of changing the curricula of the undergraduate programme was clearly communicated to me.	4,09	1,33
I feel that all staff members who were affected by the change in undergraduate curricula were informed about it.	3,95	1,38
The university (either through managers or official communications) remained consistent and honest regarding the purpose of the change in the curricula of undergraduate programmes.	3,82	1,26
I regarded frequent communication with staff on the process of change as important.	4,84	1,14
I noted that specific individuals were tasked with sharing information with staff on behalf of the university during the process of transforming the undergraduate curricula.	4,26	1,18
My manager(s) provided frequent communication and information on the unfolding process of changing the undergraduate programmes.	3,93	1,39
I received useful information from my manager(s) which assisted me in executing my role in the change process.	3,83	1,37
Overall score	4,10	1,01

Source: Researcher's own compilation

The overall experience of respondents relating to the communication of the change management process was measured as positive ($\bar{x} = 4,10$; $\sigma = 1,01$) as indicated in Table 5.26. This consequently indicates that respondents regarded communication as an important aspect of the change management process, and that they received frequent and useful information contributing towards their overall positive experience of change management. The item that scored the highest was "*I regarded frequent communication with staff on the process of change as important*", ($\bar{x} = 4,84$; $\sigma = 1,14$). The lowest score was registered for the statement "*The university (either through managers or official communications) remained consistent and honest regarding the purpose of the change in the curricula of undergraduate programmes*" ($\bar{x} = 3,82$; $\sigma = 1,26$).

Main finding 18:	Respondents who participated in the change management process regarded frequent communication between stakeholders as an important aspect to the process.
Main finding 19:	Participants in the change management process perceived communication as less consistent.
Main finding 20:	In relation to the construct of communication, the majority of staff experienced that the need and purpose for change management of the undergraduate curricula was clearly communicated.

5.5.4 Respondents' experiences of change management related to change leadership

This section of the questionnaire measured respondents' experiences of change management related to change leadership on the change management process. The data gathered is reported in Table 5.27 below as the mean scores ($\bar{x}$) and standard deviations (σ) on the eight statements that measured the respondents' level of agreement with the overarching construct: *The role of leadership during the change management process*.

Table 5.27: Respondents' experiences of the role of leadership during the change management process.

Statements	$\bar{x}$	σ
University managers remained core drivers during the process whereby the undergraduate curricula were changed.	4,18	1,23
Managers within the university provided direction which guided the process whereby the undergraduate programmes were changed.	3,98	1,20
During the change process, possible resistance to the change process was identified by managers.	3,67	1,29
Any resistance to the changing of the undergraduate curricula, was effectively and reasonably managed.	3,56	1,30
My manager interpreted and understood the university's strategic direction and acted accordingly.	4,02	1,25
My manager frequently motivated the staff members reporting to them throughout the process of changing the undergraduate curricula.	3,83	1,33
My manager provided me with support during the process whereby the undergraduate curricula was changed.	3,86	1,32
My manager recognised the change impact on me and managed it appropriately.	3,58	1,40
Overall score	3,83	1,04

Source: Researchers' own compilation

The overall experience of the respondents relating to their experience of the role of change leadership is reported in Table 5.27, indicated as being moderately positive ($\bar{x} = 3,83$; $\sigma = 1,04$). This signals that the role of change leadership was present in the execution of change, but that leadership could have played a more active role. The item that registered the highest score was *"University managers remained core drivers during the process whereby the undergraduate curricula were changed"* ($\bar{x} = 4,18$; $\sigma = 1,23$). The lowest score was registered for the statement *"Any resistance to the changing of the undergraduate curricula, was effectively and reasonably managed"* ($\bar{x} = 3,56$; $\sigma = 1,30$).

Main finding 21:	Managers were reported by respondents as core drivers in the change management process
Main finding 22:	Respondents reported that managers were able to interpret and understand the university's strategic direction, and act accordingly to assist staff.
Main finding 23:	Respondents felt that resistance to change could have been managed more effectively and reasonably by managers.

5.5.5 Respondents' experiences of change management related to evaluation and monitoring

Within this section of the questionnaire, experiences of change management related to the evaluation and monitoring as experienced by respondents were determined. Table 5.28 below indicates the data on the five statements that measured the respondents' level of agreement with the overarching construct: *Measuring the experiences related to evaluation and monitoring of the change management process when transforming undergraduate curricula*.

Table 5.28: Respondents' experiences of change management related to evaluation and monitoring of the change management process

Statements	$\bar{x}$	σ
Progress throughout the process of changing the undergraduate curricula was continuously monitored.	3,97	1,10
The progress during the process of changing the undergraduate curricula was evaluated against the plan of action communicated at the start of the process.	3,86	1,22
The plan of action which guided the process of changing the curricula allowed for flexibility if necessary changes had to be made during the transformation process.	3,75	1,18
My manager(s) celebrated achievements and successes during the change process.	3,45	1,43
My manager(s) provided frequent feedback on the change process.	3,72	1,32
Overall score	3,75	1,05

Source: Researcher's own compilation.

Overall, the respondents experienced the monitoring and evaluation of the change management process as positive ($\bar{x} = 3,75$; $\sigma = 1,05$) (see Table 5.28). However, this can be regarded as indicative that respondents experienced the processes related to monitoring and evaluation as less effective and planned than expected. The item that received the highest score was *"Progress throughout the process of changing the undergraduate curricula was continuously monitored"*, ($\bar{x} = 3,97$; $\sigma = 1,10$). The lowest score was registered for the statement; *"My manager(s) celebrated achievements and successes during the change process"* ($\bar{x} = 3,45$; $\sigma = 1,43$).

Main finding 24:	Respondents experienced a continuous monitoring of the change management process and progress made.
Main finding 25:	Participants in the change management process indicated that the accomplishments pertaining to the change management process could have been celebrated more often.
Main finding 26:	Respondents reported that the progress made in the change management process was measured against the predetermined plan of action.

5.5.6 Respondents' experiences of change management related to the embedding of effected changes

The respondents' experiences of change management related to the embedding of the effected changes of the change management process was measured under this section. The data gathered is reported in Table 5.29, with the mean scores ($\bar{x}$) and standard deviations (σ) on the eight statements that measured the respondents' level of agreement with the overarching construct provided: *Embedding the effected changes during the change management process when transforming undergraduate curricula*.

Table 5.29: Respondents' experiences of change management related to embedding of effected changes

Statements	$\bar{x}$	σ
I experienced a change in the organisational identity and values which supported the changes made.	3,97	1,19
Existing structures and policies were amended to support the effected changes.	3,94	1,22
The effected changes have been embedded into the processes and systems I engage with on a daily basis.	3,96	1,19
A culture orientated towards supporting the changed curricula was implemented.	3,68	1,26
The effected changes positively impacted on my tasks and responsibilities.	3,68	1,39

Table 5.29: Respondents' experiences of change management related to embedding of effected changes (cont.)

Statements	$\bar{x}$	σ
My behaviour and reactions to my work changed following the change process.	3,86	1,28
I experience the effected changes as beneficial to the university.	4,18	1,27
I still enjoy working within my current environment after the change process was completed.	4,37	1,28
Overall score	3,95	0,90

Source: Researcher's own compilation.

Table 5.29 indicated that the experience of respondents relating to the embedding of the effected changes related to the change management process was positive ($\bar{x} = 3,95$; $\sigma = 0,90$). It was further observed that respondents did not in all instances experience the effected changes as well implemented and incorporated into organisational processes and culture. The item that scored the highest was *"I still enjoy working within my current environment after the change process was completed"* ($\bar{x} = 4,37$; $\sigma = 1,28$). The lowest score was registered for the statements *"A culture orientated towards supporting the changed curricula was implemented"* ($\bar{x} = 3,68$; $\sigma = 1,260$), and *"The effected changes positively impacted on my tasks and responsibilities"* ($\bar{x} = 3,68$; $\sigma = 1,39$).

Main finding 27:	Respondents reported that they still enjoyed working within their environment following the conclusion of the change management process.
Main finding 28:	Respondents largely positively indicated that changes were made to the organisational identity and values that were further regarded as beneficial to the university.
Main finding 29:	Although respondents indicated that they still enjoy working in the environment, the effected changes were not experienced in all instances as positively impacting on their tasks and responsibilities.

5.6 DISCUSSION OF INFERENTIAL STATISTICS

As part of achieving the research objectives indicated in Chapter 1 of this study, the researcher harnessed the Pearson's Product Moment Correlation Coefficient (PMCC) to determine the relationship and strength thereof between independent variables forming part of the change management process (Saunders *et al.*, 2019:616). The researcher further relied on a standard multiple regression and stepwise multiple regression analysis, with the aim to determine and predict the value of an individual variable placed in the context of multiple variables (Van Zyl & Pellissier, 2017b:174). The analysis is informed by the notion that the accuracy of the prediction on the regression analysis will increase when independent variables are individually correlated with other dependent variables (Martelli & Greener, 2018:145).

Consequently, this section proceeds to discuss the correlations noted between dependent and independent variables of the study. The multicollinearity that exists between the dependent and independent variables will thereafter be discussed, followed by the multiple regression analysis. Finally, the section will conclude with an indication of the main findings relating to the identified variables.

5.6.1 Reporting of Pearson's Correlation data

In determining whether two variables measured through the research instrument are related to one another and thus regarded as having an impact on each other, the Pearson's correlation coefficients (Sarstedt & Mooi, 2019:115) were calculated. Table 5.30 provides an indication of the correlation analysis conducted on the constructs relating to the experiences of respondents when transforming the undergraduate curricula. Guided by the parameters on the Pearson's correlation coefficient values (indicated as r) showed in Figure 5.4 below, the researcher was further able to determine which constructs had a meaningful impact on each other.

Figure 5.4: Pearson's Correlation Coefficient Variables

$r < 0,30$	• A weak correlation and relationship between constructs.
$0,30 < r < 0,49$	• A moderate correlation and relationship between constructs.
$0,50 < r$	• A strong correlation and relationship between constructs.

Source: Sarstedt and Mooi (2019:116).

It is further reported that the effect values of the majority of the constructs are large, measuring $r > 0,50$, with a few constructs measuring between $0,30 - 0,50$. In addition, it can be indicated that statistically significant and positive relationships exist between the six constructs identified as part of this study, scoring p-values of smaller than $0,005$ ($p < 0,005$). It can therefore be reported that overall, the constructs have a large effect on each other, with all values indicated as positive, thus

signalling that the constructs affect each other in the same direction. This positive relationship related to effect sizes consequently signals that changes in one construct will result in a change of experience with the other constructs, in the same direction and with a similar effect.

For the purposes of this study, the discussion on the correlation and regression analysis between identified constructs will be reported under paragraph 5.6.2 below.

Table 5.30: Pearson's correlation between the six identified constructs of change management

		Need for change	Planning and resource allocation	Communication	Change leadership	Evaluation and monitoring	Embedding of effected changes
Need for change	Correlation	1,000					
	Sig. (2-tailed)	0,000					
	N	201					
Planning and Resource Allocation	Correlation	.613**	1,000				
	Sig. (2-tailed)	0,000	0,000				
	N	201	201				
Communication	Correlation	.503**	.730**	1,000			
	Sig. (2-tailed)	0,000	0,000	0,000			
	N	201	201	201			
Change Leadership	Correlation	.283**	.568**	.741**	1,000		
	Sig. (2-tailed)	0,000	0,000	0,000	0,000		
	N	201	201	201	201		
Evaluation and Monitoring	Correlation	.314**	.565**	.710**	.772**	1,000	
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000	
	N	201	201	201	201	201	
Embedding of effected changes	Correlation	.348**	.473**	.598**	.615**	.661**	1,000
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000	0,000
	N	201	201	201	201	201	201
**Correlation is significant on a 0,01 level (2-tailed) *Correlation is significant on a 0,05 level (2-tailed) When $r = 0,10$ (small effect), $r = 0,30$ (medium effect) and $r = 0,50$ (large effect)							

Source: Researcher's own compilation.

5.6.2 Analysis of Regression

The following section will discuss the regression analysis of dependent and independent variables that measured statistically significant.

5.6.2.1 Regression analysis of "Planning and resource allocation during the change management process when transforming undergraduate curricula"

When analysing "*Planning and resource allocation during the change management process*" as a dependent variable, the significance of the model is indicated in Table 5.31 below with the independent variables forming part of the calculated ANOVA as the *Need for change*, *Communication*, *Change leadership*, and *Monitoring and evaluation*. In reading Table 5.31, the p-value ($p < 0,01$) is smaller than 0,05, therefore the model can be regarded as statistically significant.

Table 5.31: ANOVA for "*Planning and resource allocation during the change management process when transforming undergraduate curricula*"

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152,686	4	38,171	94,729	<,001 ^b
	Residual	78,979	196	0,403		
	Total	231,665	200			
a. Dependent variable: Planning and resource allocation during the change management process when transforming undergraduate curricula						
b. Predictors: (Constant), Need for change, Communication, Change leadership, Monitoring and evaluation						

Source: Researcher's own compilation.

In analysing Table 5.32 below, the R^2 value is indicated as 0,659, thus signalling that the dependent variables of *Need for change*, *Communication*, *Change leadership*, and *Monitoring and evaluation* have a large and important effect on the variance of 65,90% noted for the construct of "*Planning and resource allocation during the change management process*".

Table 5.32: Model Summary for "Planning and resource allocation during the change management process when transforming undergraduate curricula"

Model	R	R ²	Adjusted R ²
1	.812 ^a	0,659	0,652
a. Predictors: (Constant), Need for change, Communication, Change leadership, Monitoring and evaluation b. Dependent Variable: Planning and resource allocation during the change management process when transforming undergraduate curricula			

Source: Researcher's own compilation.

In analysing the data indicated in Table 5.33, it is observed that the β -weights and related p-values of the constructs "Need for change" ($p = 0,000$, $\beta = 0,286$), "Communication" ($p = 0,000$, $\beta = 0,462$), and "Monitoring and evaluation" ($p = 0,058$, $\beta = 0,148$), significantly contributed towards the noted variance of the dependent variable. It is further observed that the construct of "Communication" was regarded as the most relevant aspect in explaining the observed variance for the construct "Planning and resource allocation during the change management process".

Table 5.33: Coefficients for "Planning and resource allocation during the change management process when transforming undergraduate curricula"

Model		Standardized Coefficients Beta-value (β)	t	Sig.
1	(Constant)		-0,951	0,343
	Need for change	0,286	5,913	0,000
	Communication	0,462	6,147	0,000
	Change leadership	0,067	0,854	0,394
	Monitoring and evaluation	0,148	1,909	0,058
b. Dependent Variable: Planning and resource allocation during the change management process when transforming undergraduate curricula				

Source: Researcher's own compilation.

The correlations observed aligns with the literature relating to planning and resource allocation (see Par. 3.5.2.2). Consequently, the impact of information sharing through communication during planning and resource allocation as observed by Wan *et al.* (2020:122) can be confirmed through the data reported above. The mobilisation of participants to change in supporting a need for change during planning and resource allocation as postulated by Vandangeon-Derumez *et al.* (2019:710) is also observed as part of this study. Furthermore, the pivotal role played by organisational managers as argued by Galli (2018:126) is supported through the findings of this study.

Main finding 30:	It is noted that planning and resource allocation remains an important aspect of the change management process that substantially impacts on the need for change, the communication relating to change, the involvement of change leaders, and ultimately the monitoring and evaluation process.
Main finding 31:	Communication remains a key aspect of the change management process, reported as being the most significant contributor to the dependent variable of planning and resource allocation.

5.6.2.2 Regression analysis of "Communication related to the change management process"

When analysing "*Communication related to the change management process*" as a dependent variable, the significance of the model is indicated in Table 5.34 below with the independent variables forming part of the calculated ANOVA as the *Need for change*, *Planning and resource allocation*, *Change leadership*, and *Monitoring and evaluation*. When interpreting Table 5.34, the p-value ($p < 0,01$) is smaller than 0,05, therefore the model can be regarded as statistically significant.

Table 5.34: ANOVA for "*Communication related to the change management process*"

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152,836	4	38,209	140,904	<,001 ^b
	Residual	53,149	196	0,271		
	Total	205,985	200			
a. Dependent variable: Communication related to the change management process. b. Predictors: (Constant), Need for change, Planning and Resource allocation, Change leadership, Monitoring and evaluation.						

Source: Researcher's own compilation.

In analysing Table 5.35 below, the R^2 value is indicated as 0,742, thus signalling that the dependent variables of *Need for change*, *Planning and resource allocation*, *Change leadership*, and *Monitoring and evaluation* have a large and important effect on the variance of 74,20% noted for the construct of "*Communication related to the change management process*".

Table 5.35: Model Summary for "Communication related to the change management process"

Model	R	R ²	Adjusted R ²
1	0,861 ^a	0,742	0,737
a. Predictors: (Constant), Need for change, Planning and resource allocation, Change leadership, and Evaluation and monitoring. b. Dependent Variable: Communication related to the change management process.			

Source: Researcher's own compilation.

In analysing the data indicated in Table 5.36, it is observed that the β -weights and related p-values of the constructs "Need for change" ($p = 0,009$, $\beta = 0,118$), "Change leadership" ($p = 0,000$, $\beta = 0,312$), "Monitoring and evaluation" ($p = 0,000$, $\beta = 0,235$), and "Planning and resource allocation" ($p = 0,000$, $\beta = 0,350$), significantly contributed towards the noted variance of the dependent variable. It is further observed that the construct of "Planning and resource allocation" could be identified as the aspect that assisted most in explaining the observed variance for the construct "Communication related to the change management process".

Table 5.36: Coefficients for "Communication related to the change management process"

Model		Standardized Coefficients Beta-value (β)	t	Sig.
1	(Constant)		1,513	0,132
	Need for change	0,118	2,627	0,009
	Change Leadership	0,312	4,795	0,000
	Evaluation and monitoring	0,235	3,571	0,000
	Planning and resource allocation	0,350	6,147	0,000
b. Dependent Variable: Communication related to the change management process				

Source: Researcher's own compilation.

The literature on communication as an important aspect of the change management process is underscored by the data reported above (see Par. 3.5.2.3). The importance of continuous and effective communication proposed by Hussain *et al.* (2019:124) as well as Shonhe and Grand (2020:46) is confirmed by the data correlations reported above, thus signalling that communication during the change management process empowers stakeholders to optimally participate. A positive impact of communication in ensuring a shared vision for the envisaged change thus articulating the need for change is further supported by the findings of this study (refer to Bens *et al.*, 2020:482; Fraser-Arnott, 2018:174; Holten *et al.*, 2020:397). Ultimately, the ability of communication in enabling top-level management to guide, evaluate and adjust the change management process (Rolland, 2018:10) is strongly linked in the data emanating from this study.

Main finding 32:	The most significant relationship was observed between the variable of communication, and the independent variable of planning and resource allocation, thus signalling that good communication would positively impact on the planning and resource allocation process.
Main finding 33:	The positive relationship between communication and change leadership was observed, signalling the importance of effective communication by organisational leadership leading the change management.

5.6.2.3 Regression analysis of "Change leadership during the change management process"

When analysing "*Change leadership during the change management process*" as a dependent variable, the significance of the model is indicated in Table 5.37 below with the independent variables forming part of the calculated ANOVA as the *Embedding of effected changes, Planning and resource allocation, Communication, and Monitoring and evaluation*. In reading Table 5.37, the p-value is smaller than 0,05, therefore the model can be regarded as statistically significant.

Table 5.37: ANOVA for "Change Leadership during the change management process"

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	158,142	4	39,535	128,749	<,001 ^b
	Residual	60,187	196	0,307		
	Total	218,328	200			
a. Dependent Variable: Change leadership during the change management process. b. Predictors: (Constant), Embedding of effected changes, Planning and resource allocation, Communication, Monitoring and evaluation.						

Source: Researcher's own compilation.

Table 5.38 is further analysed below, with the R² value indicated as 0,724, therefore signalling that the dependent variables of *Planning and resource allocation, Communication, Evaluation and monitoring, and Embedding of effected changes* have a large and important effect on the variance of 72,40% noted for the construct of "*Change leadership during the change management process*".

Table 5.38: Model Summary for "Change leadership during the change management process"

Model	R	R ²	Adjusted R ²
1	.851 ^a	0,724	0,719
a. Predictors: (Constant) Planning and resource allocation, Communication, Evaluation and monitoring, Embedding of effected changes. b. Dependent Variable: The role of change leadership during the change management process			

Source: Researcher's own compilation.

It is observed from Table 5.39 that the β -weights and related p-values of the constructs "*Planning and resource allocation*" ($p = 0,000$, $\beta = 0,513$), and "*Evaluation and monitoring*" ($p = 0,000$, $\beta = 0,296$), significantly contributed towards the noted variance of the dependent variable. Furthermore, the construct of "*Planning and resource allocation*" was observed as having the greatest influence on explaining the observed variance for the construct "*Change leadership during the change management process*".

Table 5.39: Coefficients for "*Change leadership during the change management process*"

Model		Standardized Coefficients Beta-value (β)	t	Sig.
1	(Constant)		0,708	0,479
	Planning and resource allocation	0,513	8,149	0,000
	Communication	0,022	0,364	0,716
	Evaluation and monitoring	0,296	4,209	0,000
	Embedding of effected changes	0,098	1,820	0,070
b. Dependent Variable: the role of Change Leadership during the change management process				

Source: Researcher's own compilation.

The role of change leadership performed by organisational managers during the change management process is supported in the reported research findings (see Par. 3.5.2.4). The noted correlation between change leadership and communication supports the reported findings made by Holten *et al.* (2020:397). The findings further confirm the impact of change leadership in the development of systems and processes that support the embedding of effected changes into the organisational structure and culture (Mitra *et al.*, 2019:2082). The organisational managers' role in driving the monitoring and evaluation process, making necessary adjustments as the process unfolds, is proven (Al Khateeb, 2021:80).

Main finding 34:	A strong interdependence is observed between the dependent variable of change leadership and the independent variable of planning and resource allocation. This consequently signals the importance of the role fulfilled by organisational leaders in planning and preparing for the change management process.
Main finding 35:	The role of organisational managers in the monitoring and evaluation process is confirmed with the noted interdependence between the two variables of change leadership, and planning and resource allocation.
Main finding 36:	The construct of planning and resource allocation scored the highest beta-value, $\beta = 0,513$, thus indicating that it was the construct that had the most significant impact on the change management process.

5.7 SUMMARY

The purpose of Chapter 5 was to report and interpret the empirical research results and findings for this study. Consequently, the chapter layout was illustrated to guide the structure of the chapter.

Paragraph 5.2 reported the sample response rate of the questionnaire was given, reporting on the sample size and realisation rate of respondents who participated. Paragraph 5.3 thereafter reported the demographic profile of the respondents, alluding to the highest qualification, position category and current position held by respondents, were presented. This consequently enabled the researcher to compile the sample profile of respondents who participated in the change management process research.

The psychometric properties of the measuring instrument were reported, followed by in paragraph 5.4. Paragraph 5.4.1 reported the statistical analysis of the measuring instrument confirming that the instrument is reliable, whereafter paragraph 5.4.2 reported the validity of the instrument. The descriptive statistics were discussed as part of paragraph 5.5 where the mean scores and standard deviations of the measuring instrument and constructs were reported. Under paragraph 5.6 the inferential statistics were reported, which further provided insights in terms of the interdependencies between change management constructs.

In concluding this chapter, the empirical results and findings have been reported. The following chapter will proceed to provide an overview of the study, the primary and secondary objectives received, the implications thereof, with a discussion on the recommendations from the study, identified limitations and suggestions for possible future research opportunities.

CHAPTER 6:

EMPIRICAL RESEARCH RESULTS AND FINDINGS

6.1 INTRODUCTION

This chapter aims to provide an overview of the study, its contributions to academic knowledge, put forward possible recommendations, and identify limitations as well as future research suggestions. Consequently, the primary aim of this chapter is to address the secondary objectives that were formulated in Chapter 1 (see Par. 1.6.2). In doing so, this chapter commences with an illustration of the chapter structure (refer to Figure 6.1 below), whereafter an overview of each chapter is provided (refer to Par. 6.2). This section highlights the contribution of each chapter to this study on the investigation of experiences related to change management when transforming select undergraduate curricula of a higher education institution. The chapter further discusses the study's contributions, the recommendations, limitations thereof, suggestions for future research opportunities, and ends with a conclusion.

Paragraph 6.2 provides a comprehensive overview of Chapters 1 to 5 of this study, with paragraph 6.3 discussing the contributions of this study to academic knowledge on change management. Hereafter, paragraph 6.4 indicates the recommendations that have been identified from this study relevant to the management of change when transforming undergraduate curricula. A summary of the main findings from this study is provided in paragraph 6.5, whereafter, the list of limitations relevant of this study is reported in paragraph 6.6 of this chapter. Paragraph 6.7 proceeds to discuss possible future research opportunities pertinent to the research topic. A conclusion on the research project is provided in paragraph 6.8, with paragraph 6.9 concluding the study with a summary.

Figure 6.1: Structure of Chapter 6

Par. 6.1	Introduction
•Paragraph 6.1 of this study provides an overview of the structure of the chapter.	
Par. 6.2	Overview of Chapters
•As part of paragraph 6.2, an overview of Chapters 1-5 of this study is provided, discussing the highlights of each chapter.	
Par. 6.3	Research Objectives
•Under this paragraph, the researcher will summarize the primary and secondary objectives of the study.	
Par. 6.4	Findings, Contributions and Managerial Implications pertaining to Secondary Research Objectives
•In this paragraph, the researcher will describe the findings, contributions and managerial implications that were made by the study, focusing on change management when transforming higher education undergraduate curricula.	
Par. 6.5	Contributions
•A summary of the contributions made in relation to theory and practice will be provided as part of this paragraph.	
Par. 6.6	Limitations
•Paragraph 6.6 discusses the theoretical and empirical limitations that were identified during the course of this study.	
Par. 6.7	Future Research Suggestions
•Future research opportunities and possibilities are identified and discussed as part of paragraph 6.7 of this chapter.	
Par. 6.8	Conclusion
•Conclusions on the academic research and findings of this study are reported under paragraph 6.8.	
Par. 6.9	Summary
•A concluding summary of this chapter and the study is provided under paragraph 6.9.	

Source: Researcher's compilation.

6.2 OVERVIEW OF CHAPTERS

Chapter 1 of the study served as the research proposal, identifying the primary and secondary research objectives that would be pursued. **Chapter 2** of the study meticulously explored the theoretical underpinnings of management. It began by tracing the origins of management through the foundational works of Henri Fayol, Frederick Taylor, and Max Weber (par. 2.2). The discussion then transitioned into an exploration of contemporary management theories, chosen for their relevance to the study (par. 2.3). A substantial portion of Chapter 2 was dedicated to the discussion of strategic management, a critical aspect for organisations aiming to navigate continuously changing landscapes and meet evolving consumer demands (par. 2.5). This discussion underscored the pivotal role of strategic management in maintaining a competitive edge. The chapter culminated in a purposeful discussion about the intricate interconnections between management, strategic management and change management (par. 2.6). Here, the linear relationship between these academic disciplines was highlighted. The overlapping functions of planning, coordination, monitoring and control, integral to all three areas, were traced back to their roots in management theory, forming a cohesive framework (Figure 2.6). This cohesive framework illustrates the symbiotic relationship between these domains, enhancing the study's comprehensive understanding of organisational dynamics.

In **Chapter 3** of the study, the attention turned to change management and its relevance in higher education. This section not only discussed the theoretical aspects but also presented a clear definition of change management (par. 3.2). The chapter examined three significant change management models: those proposed by Kurt Lewin, John Kotter and the Prosci ADKAR® model. An interesting finding emerged as the overlap between Lewin's and Kotter's models was visually represented in Figure 3.2. In addressing the study's secondary research objectives (objectives 3 and 4), the applicability of change management models in Higher Education Institutions (HEIs) was explored (par. 3.3 and 3.4). This exploration led to the identification of four principles of change management specifically relevant to HEIs, illustrated in Figure 3.4. Additionally, the chapter thoroughly examined the process of developing academic curricula (par. 3.3.3.1 to 3.3.3.4).

Chapter 3 further outlined the key participants involved in academic curriculum development, summarising them as academic staff, students and external stakeholders (par. 3.3.4). The chapter concluded by proposing a tailored change management framework to guide the transformation of undergraduate curricula (par. 3.4). This framework, depicted in Figure 3.6, outlined six essential steps crucial for managing change when transforming undergraduate academic curricula. These steps later informed the six constructs measured with the quantitative research instrument detailed in Chapters 4 and 5. Chapter 3 also provided a detailed exploration of the change management framework (par. 3.5), enhancing its intricacies and practical applications.

Chapter 4 offers an in-depth exploration of the research process employed in this study, as illustrated in Figure 4.1. The quantitative research methodology approach, which was adopted in this study, is comprehensively discussed in terms of the processes involved in exploratory, descriptive and causal research methods (par. 4.3). The chapter furthermore provides an overview of both primary and secondary data, along with relevant data collection methods, scales and instruments (par. 4.4). An appropriate target population was identified (Table 4.2), and a sample framework was established, along with the determination of the required sample size (Par. 4.7). The layout and structure of the questionnaire were discussed, with Table 4.7 offering a summary of questionnaire sections derived from the six change management constructs identified in Chapter 3. The chapter engaged in a theoretical dialogue concerning data validity, reliability, various data types, statistical analysis and ethical concerns (par. 4.9-4.11). This chapter laid the foundation for the research methodology, guaranteeing the study's rigour and credibility.

The empirical research results and findings were reported in **Chapter 5** of this study. The sample response rate and respondents' demographic profile were reported in paragraphs 5.2-5.3, thus addressing secondary research objective 1. The reliability and validity of the measurement instrument was analysed using exploratory factor analysis through Cronbach's Alpha, the Kaiser-Meyer-Olkin values, Bartlett's Test of Sphericity, and the principal component analysis, with the measurement instrument concluded to be reliable and valid (see Par. 5.4). The relevant data analysis is reported for each of the change management constructs, indicated in Tables 5.3-5.22. Paragraph 5.5 discussed the descriptive statistics of the data collected as means and standard deviations.

Hereafter, the identified six constructs of change management were measured using a six-point Likert scale, with the rating guidelines provided in Table 5.23, and the analysed data reported as part of Tables 5.24–5.29. The main findings of each construct's empirical analysis are reported as part of paragraph 5.5. In paragraph 5.6, the inferential statistics were reported using Pearson's Correlation Coefficient as the relevant value to determine the degree and direction of the effect of constructs and variables on one another (refer to Table 5.30). Thereafter, a regression analysis was completed on three of the change management constructs regarded as dependent variables, measured against the remaining independent variables (refer to Par. 5.6.2). The calculated ANOVA, R-square and Beta values for the three dependent variables are reported in Tables 5.31-5.39.

6.3 RESEARCH OBJECTIVES

The **primary research objective** of this study was defined as (refer to Par. 1.6.1):

To investigate the experience of change management when transforming selected undergraduate curricula of a higher education institution.

To enable the researcher to ultimately address the primary research objective and research problem, the **secondary research objectives** of this study were identified as (refer to Par. 1.6.2):

Secondary research objective 1:

Compile a sample profile of the respondents within the HEIs who participate in the change management process when transforming undergraduate curricula.

Secondary research objective 2:

Conceptualise change management from existing literature as an element in the strategic management discipline.

Secondary research objective 3:

Determine the need for change management when transforming academic curricula.

Secondary research objective 4:

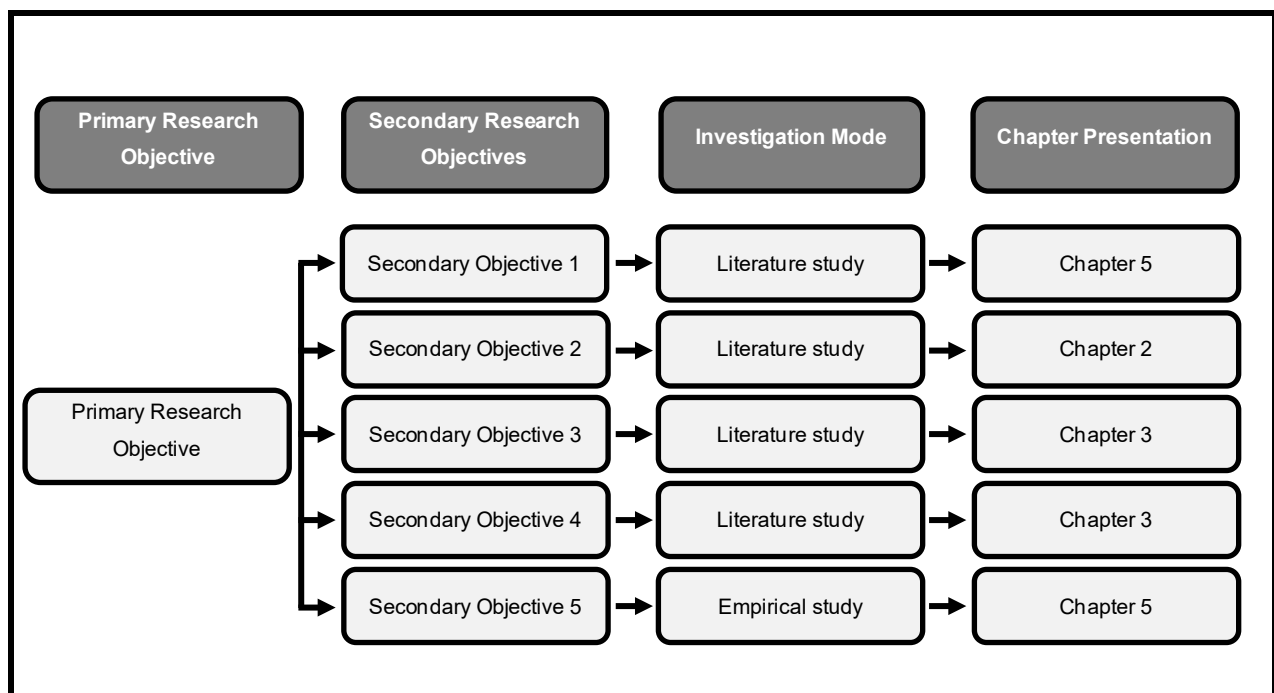
Identify the role-players who participate in the transformation (change) of academic curricula.

Secondary research objective 5:

Measure the experience of the participants who participated in the change management process.

The identified secondary research objectives were subsequently investigated as part of the research project, with a summary provided in Figure 6.2 below, highlighting the relationship that exists between the primary and secondary objectives, the related investigation, and its final presentation in this study.

Figure 6.2: Summary highlighting the relationship between primary and secondary objective, investigation method, and chapter presentation.



Source: Researcher's compilation.

By investigating and fulfilling the identified secondary research objectives of this study, ultimately the researcher also fulfilled the primary research objective by presenting the findings of the investigation of the experience of change management when transforming higher education academic curricula in undergraduate studies.

6.4 FINDINGS, CONCLUSIONS AND MANAGERIAL IMPLICATIONS PERTAINING TO THE SECONDARY RESEARCH OBJECTIVES

Investigating the experience of change management when transforming the curricula of selected undergraduate programmes was the primary research objective of this study, focussed on the change management experiences of staff at a South African HEI. Based on the insights gained through this study, both at a theoretical and empirical level, the following findings, conclusions and managerial implications can be made towards the change management process in HEIs and the transformation of undergraduate curricula, based on the identified secondary research objectives.

6.4.1 Secondary research objective 1

Compile a sample profile of the respondents within the HEIs who participate in the change management process when transforming undergraduate curricula.

6.4.1.1 Findings and conclusions pertaining to secondary research objective 1

Through completing a literature study on the development of undergraduate curricula, a group of stakeholders were identified who participate in the change management process (refer to Par. 3.3.4). These role-players were identified as academic staff, students and external stakeholders. The quantitative research instrument used in this study focussed on obtaining insights from the academic staff as the target population in further defining the demographic profile of the staff involved in the transformation of undergraduate curricula (refer to Par. 4.7). Consequently, this study contributed towards the understanding of the demographic profile of respondents – i.e., role players – who participate in the change management process when transforming undergraduate curricula. This profile is summarised in paragraph 5.3.1 of this study, and further indicated in table 5.2.

Overall, the main findings in relation to secondary research objective 1 can be summarised as:

Main finding 1:	A sample profile was compiled of stakeholders who participated in the change management process when undergraduate curricula was transformed.
Main finding 2:	With regards to the highest qualification, the majority of respondents indicated that they hold a doctoral degree.
Main finding 3:	With regards to the position currently held by the respondent, the majority of respondents indicated that they form part of the academic support staff.
Main finding 4:	With regards to the position category, most of respondents formed part of the category <i>executive/management professional</i> .
Main finding 5:	With regards to the employment duration, the majority of respondents indicated that they had been employed in their current position for 5-10 years.

6.4.1.2 Managerial implications pertaining to secondary research objective 1

The following managerial implications are identified for secondary research objective 1:

- i. Consideration can be given towards refining the population group when pursuing future research opportunities and further focussing the data collection process from specific respondents who share similar demographic traits.
- ii. Differences that may exist between members of the sample profile can be investigated, to determine whether different experiences related to change management occur.

6.4.2 Secondary research objective 2

Conceptualise change management from existing literature as an element in the strategic management discipline.

6.4.2.1 Findings and conclusions pertaining to secondary research objective 2

After investigating and reporting the theoretical origins of management, which in turn led to the development of strategic management, the researcher further pursued their analysis into the development of change management. This conceptualisation was achieved through the identification of the golden thread referred to in paragraph 2.5 of the study whereby the correlation between management, strategic management and change management was highlighted. The linkage was primarily noted in the applicability of management and strategic management principles in proactively and efficiently analysing, planning, and monitoring the execution of organisational change in ensuring appropriate responses to changing organisational needs and environments (refer to Par. 2.5.1 & 2.5.2).

The change management discipline was further explored and applied to the higher education context (refer to Par. 3.2). A change management framework guiding the transformation of undergraduate academic curricula was proposed based on existing literature and models on change management, as illustrated in Figure 3.6.

6.4.2.2 Managerial implications pertaining to secondary research objective 2

Based on the above, the following managerial implications are provided in support of secondary research objective 2:

- i. The proposed framework, illustrated in Figure 3.6, is provided as a managerial implication for future studies related to change management, applicable specifically to HEI functions.
- ii. Informed by the perceived universal application of change management principles, it is recommended that the proposed model is not limited to change management processes related to transforming undergraduate curricula.
- iii. The universal application of management, strategic management and change management theories further inform the recommendation towards expanding the research focus of the study to focus on possible core functions of the university, not solely related to teaching and learning, but also related to social change, student support services, financial systems, etc.

6.4.3 Secondary research objective 3

Determine the need for change management when transforming academic curricula.

6.4.3.1 Findings and conclusions pertaining to secondary research objective 3

Based on the insights gained through the literature study the researcher confirmed the need for organisational managers of HEIs to manage change when transforming academic curricula successfully. This is substantiated through the reports of unsuccessful change management attempts reported for HEIs (refer to Par. 3.1), as well as the continuously changing higher education environment that requires HEIs to remain agile in their observation and reaction to the sector and often unstable organisational environment (refer to Par. 3.3.2). Consequently, the importance of ensuring that organisational managers establish a need for change amongst those required to plan, execute and participate in change is supported, as without achieving this guiding coalition, change management initiatives struggle to gain momentum.

Overall, the main findings in relation to secondary research objective 3 can be summarised as:

Main finding 11:	Considering the impact of main findings 7-10 reported in this study, the scales used as part of the measurement of construct in this study namely, Need for change, Planning and resource allocation, Communication, Change leadership, Evaluation and monitoring, Embedding of effected changes, can be regarded as valid.
Main finding 12:	Respondents' overall experiences relating to their need for change were mostly positive.
Main finding 13:	Pertaining to the need for change, the respondents are mostly in agreement that they support the need to transform the undergraduate curricula.
Main finding 14:	Looking at the need for change, respondents reported being least in agreement about their participation in the process to change undergraduate programmes.
Main finding 15:	In relation to planning and resource allocation, respondents had a moderately positive experience during the change management process.
Main finding 18:	Respondents who participated in the change management process regarded frequent communication between stakeholders as an important aspect of the process.
Main finding 23:	Respondents felt that resistance to change could have been managed more effectively and reasonably by managers.

6.4.3.2 Managerial implications pertaining to secondary research objective 3

Based on the findings summarised above, the following managerial implications are identified for secondary objective 3:

- i. The change management frameworks identified as part of this study can be used as a departure point from where the management of change in HEIs can be successfully navigated and managed through change management principles and concepts identified in this study.
- ii. Consideration should be given towards the investigation of the factors that impact the products and services provided by HEIs, not limited to undergraduate curricula.
- iii. Based on the identification of these factors, products and services, managers can investigate how to establish a related need to change that would enable the organisation to successfully effect the identified transformation.

6.4.4 Secondary research objective 4

Identify the role-players who participate in the transformation (change) of academic curricula.

6.4.4.1 Findings and conclusions pertaining to secondary research objective 4

The literature study conducted in Chapter 3 of this study revealed multiple role-players who participate and contribute towards the development of academic curricula of a HEI. This included role-players in the categories of academic staff, students and community or industry stakeholders. In further defining the role-players, academic staff could be delineated as academic researchers, lecturers, academic management staff, etc.

Within the student category, the contribution made by this group was explored discovering that students can contribute as content developers, reveal insights through programme testing and review, and provide valuable insights in terms of the relevance of programmes. Looking at community and industry stakeholders, this group was reported as providing valuable indicators towards industry and community-related needs in realising the impact of teaching and learning programmes in practice, thereby ensuring its relevance for the creation of desirable student graduate attributes for future employment.

For secondary research objective 4, the following main findings are regarded as relevant:

Main finding 16:	Respondents felt that specific staff did advocate and motivate the change management process but felt that sufficient resources had not been provided.
Main finding 18:	Respondents who participated in the change management process regarded frequent communication between stakeholders as an important aspect of the process.
Main finding 21:	Managers were reported by respondents as core drivers in the change management process.
Main finding 22:	Respondents reported that managers were able to interpret and understand the university's strategic direction, and act accordingly to assist staff.
Main finding 23:	Respondents felt that resistance to change could have been managed more effectively and reasonably by managers.
Main finding 33:	The positive relationship between communication and change leadership was observed, signalling the importance of effective communication by organisational leadership leading the change management.
Main finding 34:	A strong interdependence is observed between the dependent variable of change leadership and the independent variable of planning and resource allocation. This consequently signals the importance of the role fulfilled by organisational leaders in planning and preparing for the change management process.
Main finding 35:	The role of organisational managers in the monitoring and evaluation process is confirmed by the noted interdependence between the two variables of change leadership, planning, and resource allocation.

6.4.4.2 Managerial implications pertaining to secondary research objective 4

The managerial implications that consequently stem from secondary objective 4 are underpinned by a multi-stakeholder approach whereby:

- i. HEIs are advised to adopt a multi role-players approach when developing and transforming their undergraduate curricula.
- ii. An approach whereby solely academic research or teaching staff is involved is discouraged, with the contributions of student participants in the transforming of academic curricula identified as a key component to success.
- iii. The increased involvement of community and industry stakeholders is further recommended as this contributes towards ensuring the relevance of the academic curricula, as it then becomes informed by the needs and desires of practice, as opposed to a solely theoretical consideration viewed in isolation.

6.4.5 Secondary research objective 5

Measure the experience of the participants who participated in the change management process.

6.4.5.1 Findings and conclusions pertaining to secondary research objective 5

Departing from the complex structure of HEIs, the measurement instrument included measurement scales and questions that measured the experiences of participants relating to change management for both those who participated in the change management process as well as those who were tasked with leading it. This was justified due to the multiple layers of organisational managers noted in the structures of HEIs, whereby they inherently experienced the roles of participants and leaders and could reflect on both experiences.

The participants who manage change were observed from academic literature to be the organisational managers of HEIs. These organisational managers can be observed throughout such institutions and are not solely limited to top-level management. Depending on the structure of the HEI, the organisational managers can be located at an institutional, faculty, school and module-group level, with involved staff tasked with teaching and learning functions, management functions, and service delivery functions.

From the quantitative data gathered through this study, the experience of change management remained largely positive. In further exploring the data, the importance of planning and resource allocation was identified, as respondents reported that insufficient consideration was provided towards allocating resources to enable them to execute the required changes. Furthermore, the importance of communication that is consistent, frequent and useful was highlighted as an aspect with which the respondents had a moderately positive experience. In addition, the role played by the multiple groups of organisational managers of HEI and their ability to manage and motivate their staff appropriately was identified as a cornerstone element in managing change.

The following main findings support the achievement of secondary research objective 5:

Main finding 11:	Considering the impact of main findings 7-10 reported in this study, the scales used as part of the measurement of construct in this study namely, need for change, Planning and resource allocation, Communication, Change leadership, Evaluation and monitoring, Embedding of effected changes, can be regarded as valid.
Main finding 15:	In relation to planning and resource allocation, respondents had a moderately positive experience during the change management process.
Main finding 16:	Respondents felt that specific staff did advocate and motivate the change management process but felt that sufficient resources had not been provided.
Main finding 18:	Respondents who participated in the change management process regarded frequent communication between stakeholders as an important aspect of the process.

Main finding 19:	Participants in the change management process perceived communication as less consistent.
Main finding 20:	In relation to the construct of communication, the majority of staff experienced that the need and purpose for change management of the undergraduate curricula was clearly communicated.
Main finding 21:	Managers were reported by respondents as core drivers in the change management process.
Main finding 24:	Respondents experienced a continuous monitoring of the change management process and progress made.
Main finding 25:	Participants in the change management process indicated that the accomplishments pertaining to the change management process could have been celebrated more often.
Main finding 26:	Respondents reported that the progress made in the change management process was measured against the predetermined plan of action.
Main finding 27:	Respondents reported that they still enjoyed working within their environment following the conclusion of the change management process.
Main finding 28:	Respondents largely positively indicated that changes were made to the organisational identity and values that were further regarded as beneficial to the university.
Main finding 29:	Although respondents indicated that they still enjoy working in the environment, the affected changes were not experienced in all instances as positively impacting on their tasks and responsibilities.
Main finding 30:	It is noted that planning and resource allocation remains an important aspect of the change management process that substantially impacts on the need for change, the communication relating to change, the involvement of change leaders, and ultimately the monitoring and evaluation process.
Main finding 31:	Communication remains a key aspect of the change management process, reported as being the most significant contributor to the dependent variable of planning and resource allocation.
Main finding 32:	The most significant relationship was observed between the variable of communication, and the independent variable of planning and resource allocation, thus signalling that good communication would positively impact on the planning and resource allocation process.
Main finding 33:	The positive relationship between communication and change leadership was observed, signalling the importance of effective communication by organisational leadership leading the change management.
Main finding 34:	A strong interdependence is observed between the dependent variable of change leadership and the independent variable of planning and resource allocation. This consequently signals the importance of the role fulfilled by organisational leaders in planning and preparing for the change management process.

6.4.5.2 Managerial implications pertaining to secondary research objective 5

In consolidating the above-mentioned aspects, the following managerial implications can be identified for secondary research objective 5:

- i. The planning that underpins the change management project must be clearly understood and supported by those participating in the process.
- ii. Sufficient resources should be allocated towards participants who support and execute organisational managers' change vision, strategies, and plans.
- iii. Participants in the change management process require frequent communication that is truthful, accurate and consistent, further explaining the change process, next steps and phases, possible implications, and anticipated benefits.
- iv. Those managing change must ensure the development of a communication plan that has an appropriate frequency in terms of circulation, with the communication content being clear, truthful and easy to understand.
- v. Organisational managers must provide proper consideration towards the allocation of resources that would enable those tasked with executing change to complete their required tasks. Should other expectations or limitations exist relating to resource allocation, this must be clearly communicated with alternative support measures provided to enable staff.
- vi. The interpersonal interactions between organisational managers and the staff that report to them should form an ongoing consideration for organisational managers, and staff require continuous support, motivation and enablement to perform their tasks and roles.
- vii. The monitoring and evaluation of the change management process must be continuous, as this assists participants in measuring their progress, providing assurance with regard to their contribution and role in the process.
- viii. Organisational managers should perform a key role in completing the monitoring and evaluation and distilling practical advice and feedback to participants that would enable them to make the necessary corrections and refinements, ultimately ensuring the successful completion of the change.
- ix. It is important that the effected changes be inculcated to the organisational structure, policies and culture in a manner that sustains the changes made and positively impacts participants' perceptions and experience of the working environment, creating a conducive organisational environment.

6.5 CONTRIBUTIONS

This study made the following contributions in terms of theory and practice.

6.5.1 Theoretical contributions

This study contributed towards the theoretical understanding of the origin of change management as a component of strategic management, originating from management theory. The study underlined the observed lack of studies focussed on change management theories applied within the higher education context in South Africa. Furthermore, the study formulated and proposed a possible framework for executing successful change management when transforming higher education undergraduate curricula, drawing from several established theories and models on management, strategic management, change management, as well as curriculum development and transformation within HEIs.

Consequently, the insights obtained through this study can contribute to future researchers' understanding of change management within the higher education context, noting the continuously evolving internal and external influences impacting HEIs' ability to ensure survival. Furthermore, the knowledge consolidated as part of this study can be used by organisational managers within HEIs to assist in the formulation of change management plans and strategies that could assist them in managing change within their organisations.

6.5.2 Contributions to practice

A contribution to practice is made by the study through the data collected and analysed using the measurement instrument. The results from the analysed data will further contribute towards the identification of suitable managerial implications that could be made to managers of HEIs relating to change management and aspects of transforming undergraduate curricula (refer to Par. 6.4). Consequently, the data reported in Chapter 5 of this study also provides insights towards limitations of this study (refer to Par. 6.6), that can influence future studies on related topics. The insights obtained through the data analysis can further assist future researchers in developing relevant and accurate research studies related to change management of HEIs and other public sector organisations. The data can further be used to expand possible research opportunities related to research problems on change management in the higher education environment, other than the transformation of undergraduate curricula.

In addition to the insights gained through the measurement instrument, a cohesive framework for effecting change management specific to HEIs has been identified, based on existing literature (refer to Figure 3.6). Furthermore, a clearer understanding of the theoretical relationship and origin of change management from management and strategic management theory was delivered, contributing towards future researchers' ability to continue developing change management

models. Four principles contributing towards change management in the context of higher education institutions were identified, which contribute positively towards the completion of successful change management. Lastly, the role players who contribute and participate in the change management process when transforming academic curricula were identified (refer to Par. 3.3.4) and studied, thereby contributing towards organisational managers' ability to manage and coordinate the change management process.

6.6 LIMITATIONS

The following limitations were identified for this study:

6.6.1 Theoretical limitations

As previously observed, a lack of literature was noted in relation to the study of specifically the change management process within HEIs of South Africa. This was further limited by an observed lack of international studies that apply change management models and theories to HEIs. In addition, it was discovered from the literature that specific change management models had not been fully developed that could find relevance in HEIs, thus requiring the application of change management models tested and applied in private and corporate sector organisational environments.

In further acknowledging the complex set of socio-economic, societal and political landscapes of South Africa, limited literature was available that addressed these identified factors and their impact on HEIs through specific change management models derived from Lewin, Kotter and Prosci. Adding to this, no specific longitudinal data was available to the researcher that analysed the application of change management models over a period of time in South African HEIs that would provide insights as to the perceived success or failure thereof, specifically focussed on the institution that formed part of the study.

6.6.2 Empirical limitations

The following empirical limitations were identified as part of this study:

- i. The study focussed on only one HEI – a traditional university – in South Africa and did not gather data from the other traditional universities or HEIs in South Africa.
- ii. The study focussed solely on the experiences of change management when transforming academic undergraduate curricula, and did not account for other functions, products and services of HEIs.
- iii. The research scope was limited to one country, South Africa, and can therefore limit the application of the findings to institutions in other countries that do not pose a similar HEI profile or environment.

- iv. The study only included a quantitative research methodology, therefore, the research instrument could not further investigate sub-constructs through qualitative investigatory questions and was therefore limited to the predetermined questionnaire.
- v. Subsequently, participants were not afforded the opportunity to provide written inputs as part of the quantitative measurement tool. Therefore, further analysis as to possibly key experiences of respondents related to change management could not be recorded or reported. The experience of change management only measured the experiences of staff members and did not include the experiences of students who are the recipients of the (changes in) undergraduate academic curricula of HEIs.
- vi. The study further had a general approach to curriculum transformation and did not account for possible differences that may exist between various academic disciplines, faculties and schools.
- vii. The study also limited its determination of change management experiences on the six constructs of change management identified in the proposed model (refer to Chapter 3).
- viii. The study further focussed on change management in general and did not measure the experience of change management after specific instances. Therefore, respondents could reflect on different change management instances that could have been executed differently, thus influencing specificity of the data.
- ix. Support staff of university who perform functions that support the academic curricula such as student finance, student support, facilities and infrastructure, etc., were not included in the study; thus their perceptions on the changes to academic curricula and how these impact on their work was not obtained.

6.7 FUTURE RESEARCH SUGGESTIONS

Informed by the above-mentioned limitations, the following future research suggestions are identified:

- i. A longitudinal study can be conducted focussed on one HEI and the changing experiences of staff related to change management over an extended period of time.
- ii. The study scope can be further refined to focus on the change management experiences specific to a single or a group of faculties, schools or modules/subjects.
- iii. The insights gained through this study can be further explored to investigate the experiences of change management in relation to other functions of the HEI.
- iv. A comparative study can be completed, based on the insights obtained through this study, comparing the change management experience between different HEIs in South Africa, not solely limited to traditional universities.

- v. Future research can adopt multiple methodological approaches by combining quantitative and qualitative research instruments, that can further be differentiated between the stakeholders who participate in the change management process in HEIs.
- vi. Students and their experiences of change management when transforming undergraduate curricula can also be included as part of future research considerations.
- vii. Attention can be given towards studying the experience of change management related to postgraduate programmes, as the academic scope, requirements and duration of programmes are observed to differ substantially from the undergraduate level.
- viii. A reflexive study can be completed based on the insights obtained in this study whereby the implementation of effected changes and the impact thereof on university business can be measured to determine further insights that may contribute towards the successful management of change in future.
- ix. Focussed studies can in future investigate the role of specifically organisational managers of HEIs, and the challenges, uncertainties, and successes they experience related to change management, with the intent of developing possible tools that will assist such managers to successfully manage change in future.

6.8 CONCLUSION

Chapter 6 of this study provided an overview of the completed study, summarising the key components investigated, analysed and discussed in Chapters 1-5. This was followed by a detailed discussion of the contributions made by this study, informed by the secondary research objectives that underpinned the study. Hereafter, the researcher identified and reported the recommendations that stem from the study and provided a summary of the study's main findings reported in Chapter 5. The observed limitations of the study were provided, with suggestions towards future research opportunities also reported, providing a preliminary proposal towards expanding and refining the research focus related to change management.

The researcher can therefore positively indicate that the primary research objective identified for this study was achieved, with various insights gained in relation to change management when transforming undergraduate curricula. In addition, the five identified secondary objectives were thoroughly investigated and described, thereby achieving such. Consequently, insights were obtained in relation to the experience of change management when transforming undergraduate curricula of HEIs, with specific models identified regarded as relevant to guiding this process. The contributing role-players to this process were identified, with six important constructs underpinning successful change management described.

Subsequently, knowledge obtained through this study can assist organisational managers of HEIs to improve their approach to change management as it relates to change need identification, building a guiding coalition, ensuring effective and continuous communication, monitoring and evaluating of the process, and embedding the effected changes into the culture and structure of the organisation.

6.9 SUMMARY

In summarising this study, the research investigated literature related to management, strategic management and change management to identify suitable models that would facilitate change related to the transformation of undergraduate curricula. This was followed by further investigation related to the HEIs and the development of academic curricula, identifying the role-players involved in the process. Hereafter, the methodological approach in obtaining insights from respondents involved in the development of academic curricula was investigated and identified.

Data was collected through the identified quantitative research instruments. The findings of the quantitative research approach were reported as part of Chapter 5. Based on these findings, the researcher formulated findings, conclusions and managerial implications on change management that could be pursued by HEIs when transforming undergraduate curricula. Specific limitations and future research opportunities were also identified. Finally, the researcher concluded the chapter and study with a concluding paragraph, followed by this summary.

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ADDENDUM A: QUESTIONNAIRE



This survey forms part of a Master's study in Business Management on the experience of change management when transforming higher education academic curricula in undergraduate programmes.

Dear Research Participant

As an NWU staff member forming part of the academic cohort of the University, you are hereby invited to participate in a research study focussed on determining the experiences relating to change management when transforming higher education academic curricula in undergraduate studies.

Completing the questionnaire should take approximately 15 minutes of your time. When evaluating a question, please answer from your own perspective, by marking or completing where required.

There are no foreseeable risks associated to you as a participant by participation in this study.

Confidentiality and anonymity:

All information gathered through the completed questionnaires will be treated with the utmost standard of privacy and confidentiality during the analyses and publication thereof as part of a Master's degree dissertation. Should any of the findings from this study be published in academic journals or presented at academic conferences, no association will be made between you and your completed questionnaire, as no personal identifiable information will be requested.

It should be noted that all data collected by means of the questionnaire will be anonymised and no personal information will be collected which can directly identify you as a participant to the study.

Consent

Participation to the study is completely voluntary and you may withdraw at any time. The data you provide by means of participating in this study will be used for the sole purpose of completing the aforementioned study and will not be used for additional purposes not already disclosed to you.

By choosing to proceed with the questionnaire, you hereby provide your voluntary consent to participate in the study.

Results:

The research results will only be used empirically for the written dissertation of the study. All respondents are welcome to request results upon completion of this study.

Conclusion

Please accept my thanks, in anticipation of your willingness to participate in this research. Should you have any questions, please contact Prof. Louis van Staden at louis.vanstaden@nwu.ac.za or Prof Alfred Henrico alfred.henrico@nwu.ac.za.

Yours sincerely

LeRoux Malan

Screening questions:

1. Are you a permanent staff member of the university?

Yes	1
No	2

2. Do you form part of the Academic Staff Cohort (including academic support staff)?

Yes	1
No	2

3. Have you previously experienced a process whereby the curricula of undergraduate programmes of a university were changed (transformed).

Yes	1
No	2

4. If yes, in which capacity did you experience the process whereby the undergraduate curricula were changed?

I experienced the process through being directly involved with the planning and development thereof.	1
I experienced the process primarily as an observer who remained largely unaffected by the process.	2
I experienced the process through only providing the administrative support to those actively participating in the process.	3
I only experienced the change process upon implementation of the changed undergraduate curricula.	4

If you have answered no to any one or more of the above listed questions, you need not complete the questionnaire. Thank you for participating.

If you have answered yes to all above listed questions, please proceed with the questionnaire as indicated.

SECTION A: Participant Background Information

Please mark the option most applicable to you with an X. Please do not mark more than one option per question.

1. Please indicate your highest qualification.

National Senior Certificate (or equivalent)	1
Diploma	2
Degree	3
Honours Degree	4
Master's Degree	5
Doctoral Degree	6

2. Please indicate which category describes your current position within the university.

Instruction/research professional	1
Executive/management professional	2
Support professional	3

3. Which category accurately describes the position you held when you formed part of a process whereby the curriculum of undergraduate programmes was changed.

University Management	1
Executive Dean of a Faculty	2
Deputy-Dean of a Faculty	3
Director of a Faculty School	4
Deputy-Director of a Faculty School	5
Programme Leader	6
Senior Lecturer	7
Lecturer	8
Junior Lecturer	9
Researcher	10
Administrative support staff	11

4. How long have you held the position indicated in question 3?

0 – 1 years	1
1 – 3 years	2
3 – 5 years	3
5 – 10 years	4
More than 10 years	5

SECTION B: Creating the NEED FOR CHANGE related to the experience of change management when transforming undergraduate curricula

Please mark the most appropriate answer with an X as it relates to your experiences of a change management process.

The need for change management to transform the undergraduate academic curricula.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
There was a clear need to transform the undergraduate programmes of the university.	1	2	3	4	5	6
I believed that the university would have an increased competitive advantage from the envisaged change in relation to other universities.	1	2	3	4	5	6
I could see that there was a clear benefit(s) in transforming the undergraduate curricula.	1	2	3	4	5	6
I supported the need to transform the undergraduate curricula.	1	2	3	4	5	6
I understood the need to transform the undergraduate curricula throughout the process.	1	2	3	4	5	6
I was able to participate in the processes whereby the undergraduate programmes were changed.	1	2	3	4	5	6

SECTION C: PLANNING and RESOURCE ALLOCATION during the change management process when transforming undergraduate curricula

Please mark the most appropriate answer with an X as it relates to your experiences of a change management process.

Planning and resources allocation during the change management process when transforming undergraduate curricula.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Specific staff members advocated and motivated staff to successfully complete the process of changing the undergraduate programme.	1	2	3	4	5	6
I experienced the change process as being guided by specific objectives and outcomes.	1	2	3	4	5	6
The process of changing the undergraduate curricula was guided by a clearly defined plan of action.	1	2	3	4	5	6
I was able to participate in the aspects of the planning towards changing the curricula of undergraduate programmes.	1	2	3	4	5	6
I was provided with sufficient resources to partake in the process of changing the undergraduate curricula.	1	2	3	4	5	6

SECTION D: COMMUNICATION related to the experience of change management when transforming undergraduate curricula

Please mark the most appropriate answer with an X as it relates to your experiences of a change management process.

Communication related to the change management process.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
The need and purpose of changing the curricula of the undergraduate programme was clearly communicated to me.	1	2	3	4	5	6
I feel that all staff members who were affected by the change in undergraduate curricula were informed about it.	1	2	3	4	5	6
The university (either through managers or official communications) remained consistent and honest regarding the purpose of the change in the curricula of undergraduate programmes.	1	2	3	4	5	6
I regarded frequent communication with staff on the process of change as important.	1	2	3	4	5	6
I noted that specific individuals were tasked with sharing information with staff on behalf of the university during the process of transforming the undergraduate curricula.	1	2	3	4	5	6
My manager(s) provided frequent communication and information on the unfolding process of changing the undergraduate programmes.	1	2	3	4	5	6
I received useful information from my manager(s) which assisted me in executing my role in the change process.	1	2	3	4	5	6

SECTION E: The CHANGE LEADERSHIP during the experience of change management when transforming undergraduate curricula

Please mark the most appropriate answer with an X as it relates to your experiences of a change management process.

The role of leadership during the change process.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
University managers remained core drivers during the process whereby the undergraduate curricula was changed.	1	2	3	4	5	6
Managers within the university provided direction which guided the process whereby the undergraduate programmes were changed.	1	2	3	4	5	6
During the change process, possible resistance to the change process was identified by managers.	1	2	3	4	5	6
Any resistance to the changing of the undergraduate curricula, was effectively and reasonably managed.	1	2	3	4	5	6
My manager interpreted and understood the university's strategic direction and acted accordingly.	1	2	3	4	5	6
My manager frequently motivated the staff members reporting to them throughout the process of changing the undergraduate curricula.	1	2	3	4	5	6
My manager(s) provided me with support during the process whereby the undergraduate curricula was changed.	1	2	3	4	5	6
My manager recognised the change impact on me and managed it appropriately.	1	2	3	4	5	6

SECTION F: Measuring the experiences related to EVALUATION and MONITORING of the change management process when transforming undergraduate curricula

Please mark the most appropriate answer with an X as it relates to your experiences of a change management process.

Measuring the experiences related to evaluation and monitoring of the change management process when transforming undergraduate curricula.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Progress throughout the process of changing the undergraduate curricula was continuously monitored.	1	2	3	4	5	6
The progress during the process of changing the undergraduate curricula was evaluated against the plan of action communicated at the start of the process.	1	2	3	4	5	6
The plan of action which guided the process of changing the curricula allowed for flexibility if necessary changes had to be made during the transformation process.	1	2	3	4	5	6
My manager(s) celebrated achievements and successes during the change process.	1	2	3	4	5	6
My manager(s) provided frequent feedback on the change process.	1	2	3	4	5	6

SECTION G: EMBEDDING the EFFECTED CHANGES during the change management process when transforming undergraduate curricula

Please mark the most appropriate answer with an X as it relates to your experiences of a change management process.

Embedding the effected changes into the organisation.	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
I experienced the a change in the organisational identity and values which supported the changes made.	1	2	3	4	5	6
Existing structures and policies were amended to support the effected changes.	1	2	3	4	5	6
The effected changes have been embedded into the processes and systems I engage with on a daily basis.	1	2	3	4	5	6
A culture orientated towards supporting the changed curricula was implemented	1	2	3	4	5	6
The effected changes positively impacted on my tasks and responsibilities.	1	2	3	4	5	6
My behaviour and reactions to my work changed following the change process.	1	2	3	4	5	6
I experience the effected changes as beneficial to the university.	1	2	3	4	5	6
I still enjoy working within my current environment after the change process was completed.	1	2	3	4	5	6

Thank you for your time in completing this questionnaire.

ADDENDUM B: ETHICAL APPROVAL



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27 June 2022

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Economic and Management Sciences Research Ethics Committee (EMS-REC)** on 24/06/2022, 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-REC) 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: Investigating the experience of change management when transforming higher education academic curricula in undergraduate programmes
Study Leader/Supervisor (Principal Investigator)/Researcher: Prof L van Staden / Prof A Henrico – MCom in Business Management
Student: Malan, L (24162264)
Extension granted

Ethics number:

N	W	U	-	0	0	0	6	3	-	2	1	-	A	4
Institution				Study Number					Year		Status			

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Application Type:

Commencement date: 27/06/2022

Expiry date: 27/06/2023

Risk:

Low

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.
in 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: 2022.06.28 13:34:17 +02'00'

Prof Mark Rathbone
Chairperson: NWU Economic and Management Sciences Research Ethics Committee

ADDENDUM C: STATISTICAL ANALYSIS CONFIRMATION



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: <http://www.nwu.ac.za>

Statistical Consultation Services
Tel: +27 18 285 2016
Fax: +27 0 87 231 5294
Email: suria.ellis@nwu.ac.za

1 November 2023

Re: Dissertation, Mr Leroux Malan

We hereby confirm that the Statistical Consultation Services of the North-West University analysed the data of the above-mentioned student and assisted with the interpretation of the results. However, any opinion, findings or recommendations contained in this document are those of the author, and the Statistical Consultation Services of the NWU (Potchefstroom Campus) do not accept responsibility for the statistical correctness of the data reported.

Kind regards

A handwritten signature in black ink, appearing to read 'SM Ellis'.

Prof SM Ellis (Pr. Sci. Nat.)

Associate Professor: Statistical Consultation Services

ADDENDUM D: LANGUAGE EDITING CONFIRMATION

Christel Eastes
PO Box 21061
Noordbrug
2522
082 566 4229

14 November 2023

To whom it may concern:

LANGUAGE EDITING

This letter serves as proof that the following document was submitted to the undersigned for language - and technical editing:

Author: L Malan (24162264)
Document type: Dissertation: M. Com. (Business Management), NWU
Title: *Investigating the experience of change management in the transformation of the curricula of selected undergraduate programmes*

Final review comments and recommendations were communicated to the author on 14 November 2023.

Applying changes in order to arrive at a final, approved document remains the responsibility of the document author.

Yours sincerely



CHRISTEL EASTES

Potchefstroom