

# **The Employability of FET Agricultural Graduates in the North West Province**

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## **Declaration**

I, M V Salman solemnly declare that this mini-dissertation hereby submitted is of my own accord. I therefore certify that unless stated, all work contained herein is my own to the best of my knowledge. The thesis is being submitted in partial fulfilment of the requirements for the Degree of Masters in Business Administration (MBA) at the Graduate School of Business & Government Leadership, North West University, Mafikeng Campus. It has not been submitted for any degree or examination at any other University.

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**Date: May 2016**

## **Abstract**

There is consensus among analysts that South Africa's unemployment is structural in the sense that the unemployed generally possess lower skills than what is required in the marketplace. In the context of increasing demand for skilled workers due to technical progress and the need to become more competitive globally, graduate unemployment would be expected to fall (Altizer, 2004). The study will investigate the employability of FET agricultural graduates in North West Province, finding that labour force and employment growth has been concentrated in further educational categories also closing gaps within the training institution. However, against expectations unemployment has risen amongst young and better educated people. The study suggests that the education sector urgently requires continued emphasis and monitoring to ensure that learners are adequately prepared for entry into the labour force that better efforts, to encourage learners to choose directions of study with superior employment prospects; and that investment in young people's soft skills is required.

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# **CHAPTER ONE**

## **OVERVIEW OF THE STUDY**

### **1.1 Introduction**

The nature and severity of the unemployment problem in South Africa is well documented (Kingdon & Knight, 2000). There is consensus that unemployment is structural in the sense that there is a mismatch between the types of workers supplied and those demanded by the economy. The majority of unemployed individuals are poorly educated and possess limited skills, while firms increasingly demand high-skilled workers. This mismatch has developed over many years.

Previous policies have done little, if anything, to close the skills deficit in the economy through the provision of high quality education. At the same time, structural shifts have been taking place in the economy, with production shifting towards more skill- and capital-intensive industries. Pressures to become technologically more advanced have further increased the demand for high skilled workers at the expense of low-skilled workers. .

This chapter discusses the background to problem statement on decision making affecting employability agricultural graduates, problem statement, background, research objectives and research design for NW department of Education supporting ICT implementation in the FET College.

### **1.2 Background to the Study**

In, 1988 the school of agriculture, became a parasternal known as LM Mangope College of Agriculture until 1993. When the transition took place in 1994 the name was changed to Taung Agricultural College. In February 1994 all staff became civil servants and the College offered a three year Diploma in Agriculture accredited by Certification Council for Technikon Education (SERTEC). From 2001 the College lost the intuitional and program accreditation by not meeting the requirement set by SERTEC (Tarp, 2000).

There was a Memorandum of Understanding (MOU) between Taung Agricultural College and Vuselela Technical College at Podumoe to use their centre number for the College to present the N4 National Certificate, N5 National Certificate and N6 National Certificate in Farming Management that took a period of one year and six months for a course work to be completed (Tarp, 2000). After completion of the N6 Certificate a learners should underwent an 18 months practical in Agricultural Mixed Farming so that the learner can obtain the National Diploma in Agriculture from National Department of Education.

The College concurrently resorts to offer accredited Further Education and Training courses at various unit standards from National Qualification Frame-work (NQF 1-4) from Agri-SETA (Husain, et al., 2010). In 2010 the College presented a Diploma in Agriculture (Mix Farming) until the end of 2013. The license used to present the program came from Potchefstroom College of Agriculture since the two Colleges are situated within the North West Province under the Department of Agriculture and Rural Development.

In 2010 the College worked on the programme and institutional accreditation and the College manage to receive a Registration of Qualification with Higher Education on the 28.06.2012 (Husain, et al., 2010). A Qualification called a Diploma in Agriculture in Irrigation at NQF level 06, at minimum credits of 388 and the Qualification ID: 88484. The Irrigation Programme is unique course offered in South Africa.

Tarp, (2000) argues that the college operates in terms of Chapter 3 of the Higher Education Act, 1992 as a Public Higher Institution of Learning. It is clear from the tracking system mechanism that FET College in North West Province produces a lot of graduates and majority are not working.

The research will find out as why most graduates from FET Colleges in North West Province College are not working. The problem statement is to investigate the Decision making affecting employability of FET Further Education and Training) agricultural graduates in North West Province.

### **1.3 Problem Statement**

Mafikeng Campus of the Taung agricultural college is situated in Mafikeng, which is the capital of the North West Province. The town is surrounded by rural villages governed by the tribal system of authority. Game farming, guesthouses and vegetable farming are economic activities in the area. The Mafikeng Campus was formerly known as the Mmabatho Manpower Centre. There are currently 1609 students enrolled at the campus. The campus offers training in nine workshops including a carpentry workshop.

Lehurutshe lies in the north-eastern area of the North West Province. Mafikeng is the capital of the province, but the important regional towns of Zeerust, Dinokana and Lehurutshe also serve the District. The level of poverty that persists in South Africa is linked to the unemployment problem. The fact that households are not directly linked to the formal economy via the labour market, as well as the poor employment growth performance in past decades, have long been matters of great concern for policy maker (Tas, 2010).

African National Congress (ANC) government committed itself to various specific goals, including that of lowering unemployment. Various policy documents came to the fore, most notably the Reconstruction and Development Programme (RDP) in 1994, followed by the Growth, Employment and Redistribution Programme (GEAR) in 1996 (Department of Finance, 1996). GEAR which in many ways still embodies the current macroeconomic policy approach, envisaged sustained growth on a plane as its point of departure and the solution to the low rate of job creation (Tas, 2010).

The authors of GEAR projected that a 6 percent economic growth rate would create an average of 270 000 jobs per annum between 1996 and 2000, which translates into an average annual increase of 2.7 per cent in formal non-agricultural employment (Department of Finance, 1996:7). These optimistic predictions never materialised and formal employment continued to fall, or at best stagnate, during the latter half of the 1990s. Different groups of diplomats (unemployed graduates) are engaged in almost daily protest actions to denounce the current scarcity of job opportunities.

They demand jobs in the public sector. Over the past three decades, a growing group of young graduates have struggled to find adequate job opportunities. The implementation of economic reform, trade liberalisation, privatisation and the rollback of developmental welfare functions at the beginning of the 1980s created a surplus of unemployed university graduates (Emperador, 2007). In the 1990s, the origin of movement and unemployed graduates dates back to the establishment of the Moroccan National Association of Unemployed Graduates (ANDCM) (Emperador, 2007). Since then, the unemployed graduates have become a permanent and highly visible feature of the social protest.

The Development Policy Research Unit (DPRU) recently conducted a series of interviews with twenty of South Africa's largest companies across a range of different sectors (DPRU, 2006). The interviews, broadly on the graduate unemployment problem, traversed a range of issues relating, for example, to the schooling and higher education system, the learner ship programme and SETA (Sector Education and Training Authority) system and the nature of skills shortages.

The survey was mostly qualitative in nature and the intention was to get a sense of the employers' (human resources representatives or managing directors) perceptions about these issues. Although only a handful of firms were interviewed in each of sectors, they collectively account for a sizeable share of employment in each sector, that is 18.1 per cent of mining and quarrying, 3.1 per cent of manufacturing, 2.7 percent of construction, 5.9 per cent of transport, communication and storage and 3.4 per cent of financial and business services (DPRU, 2006). The survey should, however, not be as statistically representative of all large firms in South Africa.

Many of the firms interviewed have lost crucial skills in the last decade due to emigration, while poaching by competitors is widespread due to general shortages of managers and more experienced workers. As a result recruitment focuses heavily on attracting skills as well as experience. This is probably the main reason why skills shortages are unlikely to have a significant impact on graduate recruitment. The DPRU (2006) study distinguishes between two key types of skills shortages.

These are, firstly, shortages of (experienced) technical workers, such as artisans and engineers, and secondly, shortages of general business managers at a middle-management level. Technical skills shortages are partly explained by declining enrolment in engineering sciences at tertiary institutions during the 1990s.

Kraak and Perold (2003) argue that it is ironic that institutions of technology are witnessing a dramatic decline in a key hard technology field while graduations in softer non-technical subjects expand. Employers get the impression that students would much rather obtain (for example) a human science degree than a technical diploma, despite the lower employment prospects attached to the former. As a result enrolment is highly skewed towards universities.

There are two university students for every FET college student, the exact opposite ratio to that in the United Kingdom (DPRU, 2006). Workplace training at manufacturing firms has also been declining, partly due to the unfavourable economic conditions that existed during the 1980s and 1990s (Kraak & Perold, 2003), while an uncertain policy environment with respect to the future of workplace training programmes probably also contributed to this (DPRU, 2006). The result is a shortage of people with a combination of technical skills and some years of experience.

Lui and Wall (2006) state that the critic may observe that shortages at management level are simply a problem of insufficient firm-level training and ineffective talent management strategies within firms. Poaching and emigration (the so-called brain drain) also contribute to the problem. Looking at, for example, the age distribution of civil engineering professionals in South Africa, one finds that there is a large group of experienced engineers in their late forties and older, while in contrast there are insufficient numbers of mid-career staff to carry out the bulk of production (Lawless, 2006). This has severe implications, not only for production levels, but also for entry-level recruitment, especially in industries where the ratio of management level to entry-level staff is high. As long as vacancies persist at management level, entry-level (graduate) recruitment will be restricted since there will be no one to train new staff members.

To perceive quality in higher education scenario the first question needs to be addressed will be: where does an institution stand in the regional, national and international context? Higher education serves a variety of purposes and relates to a variety of interests and the variety of interests especially enlists highly vocal stakeholders such as students, teaching staff, general staff, management, community, each stakeholder has his/ her personal expectations regarding the performance and outcome of the system and of individual institutions with which he/she is involve directly or indirectly. Those whose contribute to the costs of higher education have a greater interest is the system being able to retain a value for their contribution.

The Government as the largest provider of funds for higher education has a specific interest in institutional accountability for using public resources. So do the students who pay fees (Cheung et al., 2001). Quality has to satisfy these stakeholders firstly. Then it come the consumers of the products of higher education that is the employers. The employers and the society necessarily expect that the products of FET Colleges should be employable and the term quality has to satisfy these.

#### **1.4 Research Objectives**

The objective of the study is to assess the factors affecting to close all gaps internally and externally so that unemployed graduates should be employed to make a substantial contribution to the economy of country.

- To determine the graduates employability of Agricultural FET institutions in North West Province.
- To investigate the needs and expectations for graduates employee of agricultural industries and organizations from FET institutions in North West Province.
- To investigate the agricultural FET institutions in North West Province in terms of program delivery, the planning, implementation, monitoring and evaluation.

- To investigate the agricultural program development offered by FET institutions in North West Province in terms of skills, knowledge, competency and curriculum outcome.

## **1.5 Research**

The collection of data will primarily entail both the qualitative and quantitative research approaches. A questionnaire will be used to elicit information for analysis and also for reporting and recommendations. The study is that the quality of education produced from FET Colleges in North West Province for agriculture program is not recognised by the agricultural employers for graduate's employment. It shows gaps from the decision makers as far as the unemployed is concern.

Purposeful Random Sampling approach will be used to the nature of the agricultural industries, where there are fewer employers than in other industries as well as the fact that the graduates are known. The graduates will be sample according to availability. A minimum of 20 graduates will be sampled and interview. The College Management of two FET Campuses namely Taung Agricultural College and Taletso FET College in North West Province will be visited for the completion of the questionnaires.

The population frame will be used to select a sample and the response rate determine how well results can be generalised to the population as a whole. The sample used in a large cross-sectional study is often taken from the whole population. This is the optimum situation: if the sample is selected using a random technique it is likely that it will be highly representative. In order for the results to be representative of the population, however, not only must the selected sample be representative but so must the responders.

Non-responsive is a problem in wide-scale surveys; techniques to minimise nonresponsive include telephone and mail prompting, second and third mailing of surveys, letters outlining the importance of replying and a range of incentives. The level of nonresponsive is one concern, but a greater one still is that of biased

response, where a person is more likely to respond when they have a particular characteristic or set of characteristics.

The expertise of a statistician will be obtained either from the University of North-West or University of South Africa. Finally, the result from the above mentioned will be presented to the Provincial and National Government or any other relevant Government structures going forward.

## **1.6 Plan of the Study**

The study consists of five chapters that can be summarised as follows:

Chapter 1 – Introduction to the Study

Chapter 2 – Literature Review

Chapter 3 – Research Methodology

Chapter 4 – Data Discussion

Chapter 5 – Managerial Guidelines and Research Questions answered

## **1.7 Summary**

In line with results, the research will conclude that decision making affecting employability of FET (Further Education and Training) agricultural graduates in North West Province. Some of these factors can be mitigated internally while others are related to the economic situation in the country and will require strategic policy shift at national level. It showed the objectives as well as research design and the plan of the study. The next chapter will have an introduction of the chapter, followed by literature review. Literature reviews will contain subheading that will explain the crucial aspect of the study. Lastly the research questions will be obtained with conclusion of the chapter.

## **CHAPTER 2**

### **OVERVIEW OF THE LITERATURE REVIEW**

#### **2.1 Introduction**

It is therefore imperative for graduates to know employers' expectations in order to increase their marketability in the labour market (Winterbotham et al., 2001). On the other hand, such awareness of graduates' abilities and preferences is considered equally critical on the part of the organisation in order to craft effective recruitment strategies and address the employees' needs.

In between the graduates and employers are the universities and colleges whose primary role is to prepare students for today's competitive employment market either as employees or entrepreneurs (Bawden et al., 1984). Present employers at the national and global economies tend to recruit graduates with soft skills competencies.

Keywords utilised to obtain the research articles are definitions, needs, processes, models, requirements, systems, services, management, training, skills, environment, rationale, change, advisor, genders, business, generalists, vocationally-orientated education, relevance and effects. Search engines utilised to obtain this information are Duckduckgo and Google Scholar for articles while electronic databases such as Science Direct and EBSCO were also consulted. The chapter deals with the literature review.

#### **2.2 The Need for Generalists**

Bawden et al. (1984) argue that the essence of agriculture is their complexes inter activeness whilst its dynamics frequently result in situations which could be improved both feasibly and desirably. A systems approach helps the manager and his advisory technologists cope with these complex, messy situations. Experiential learning methodologies provide appropriate ways for learning how to develop 'situation-improving' abilities, and implicit in such methodologies is the development of the autonomy of the individual learner.

Kuruppu and Gruber (2006) argue that understanding the information needs, information-seeking behaviour, and information use of academic science scholars is challenging. Biological and agricultural sciences are two closely-related scientific fields with, in many ways, overlapping knowledge bases. While biological scientists examine the fundamental aspects of living systems and their interaction with the environment, agricultural scientists focus on more applied aspects such as national and global food production, food consumption, and the biosafety of humans and the environment.

Since the close association of these two scientific fields, biological and agricultural scientists often conduct interdisciplinary research activities (Kim & Brymer, 2011). In this complex environment it is difficult for researchers to efficiently track the discoveries even in their own concentrations. Preparing the next generation of scientists and scholars to become proactive and anticipatory in those developing scientific fields is a challenge for university educators. Academic librarians play a critical role in the endeavour by providing scholarly library resources, services to fulfil the needs of scholars in biological and agricultural sciences and related disciplines (Kuruppu & Gruber, 2006).

Jayaraj (1992) argues that the degree programs are rather general in nature, aimed at giving a vision into the scientific and technical processes of agriculture. However, students' understanding and comprehension of agriculture as a dynamic and integrated production system were not clearly and adequately articulated. In moving from a microeconomic house hold approach to a macroeconomic equilibrium approach some detail is inevitably suppressed. As usual, there are numerous pitfalls for the generaliser (Ali & Kumar, 2011).

According to Jayaraj (1992), students will later work as generalists or specialists must learn to appreciate that agriculture, rural development represent broad and complex systems. Therefore, because of a broad comprehension of the various components of agriculture and related areas the farm graduates surpass in many competitive examinations conducted at the national level.

Qui and Wang (2001) notes that the first strategic consideration concerns the goals and aspirations of a region and the measures needed to ensure that its agricultural universities/colleges become true development institutions in support of these time-based and need-oriented goals. Proposed action programs of the agricultural universities and colleges concerning new teaching programs, the revision of existing curricula, the linkage of different educational programs, and institutional cooperation in research must be tailored to current and future regional/national requirements. Once the needs-based programs are satisfied then it is equally important to examine the demand for and supply of generalists from time to time using the self-evaluation chart.

Furthermore, Cheung (2001) notes that in using the chart in the direction of future agricultural education can be evaluated in terms. Indian agriculture is characterized by declining terms of trade, increasing crop productivity, subdivision and fragmentation of land holdings and increasing female education. Agricultural universities in India are different with rural universities. More than 75% of the population depend on agriculture and allied activities and this is expected to remain the dominant state of affairs in the future.

Hence, the important function of an agricultural university will be to train manpower for future agricultural research, extension and other related areas and institutions. Jayaraj (1992) argues that most of the challenges for agricultural universities are to sustain a sharp focus on the problems of small and marginal farmers who constitute the bulk of the farming sector.

### **2.3 Rationale for Change**

Davis et al. (2011) argues that farmer field schools are not designed to develop technology but rather be used in part for advanced groups, while still retaining the focus on involved and experiential learning. Furthermore, there is an element of adaptive research with often changes in use of technologies, inputs, varieties, breeds and management practices.

Mokotjo and Kalusopa 2010) argue that information services provided by Agricultural Information Service (AIS) were somewhat of quality in terms of relevancy, sufficiency and currency. Therefore, improved productivity but wasn't widely accessible to farmers. The various problems that obstruct the utilisation of the AIS services were due to in failure visiting farmers at their respective areas, wrong broadcasting time, lack of promotion of AIS services and lack of training of farmers on how to use AIS services.

Mokotjo and Kalusopa 2010) state that the business of agricultural research, development and extension has undergone a change in Australia since the late 1980s, moving from a domain controlled by government departments to a situation of multiple actors and where rural industries now directly contribute funds towards research, development and extension efforts. However, traditionally-recognised systems will encourage public policy makers, industry representatives, researchers in the business of agriculture to consider how they meet the future capacity and flexibility needs of their agricultural industries.

Agricultural industries are energetic entities that run with changes in prosperity sometimes expanding and other times were contracting (Davis et al., 2011). The conversion from a dependent to a market-orientated paradigm facilitated changes in the fabric and disposition of farming enterprises in Australia. Leading examples of this are the contractions observed in the wool and dairy industries since the 1990s whereas the wool industry's price stabilisation scheme failed and the dairy industry was deregulated providing exposure to market forces for both of these sectors.

Flynn et al. (2013) note that the food and drink industry is the single largest manufacturing sector in the EU and also one of the most complexes in terms of diversity of businesses. Yet the European food industry is in the lower part of the innovation performance ranking and has been losing relative position in the global food market. One of the reasons might be the technological changes and the lack of corresponding training to provide food and drink sector professionals with the necessary knowledge, skills and competencies. Another could be the difficulty in

forecasting skill needs for a promptly changing sector which recently shifted from a product-centred industry to a customer-centred market

Edgar et al. (2012) argue that potential exists for higher education classrooms to change and diversify as new electronic technologies emerge. However, the rate of technology adoption and integration in the classroom lags because it is difficult for educators to determine the value and benefit of these technologies in terms of teaching and learning.

Therefore, the significance of ICT to career success and graduating students' perceptions concerning inadequate ICT skills other agriculture colleges and departments should examine required student ICT use in their courses. It is useful in designing appropriate educational experiences to prepare graduates for career entry and advancement on university campuses (Heeks, 2002).

By focusing on provision for education through the provision of curriculum content and efforts to increase enrolment, approaches to pedagogy, curricula, assessment frameworks and learning environments that support quality learning one can encourage learning that encompasses both particular areas of knowledge and skill. Furthermore, it is the development of individual's, communities' capacity to deal with future uncertainty and rapid environmental, economic and political change (Quenani-Petrela & Wolf, 2007).

## **2.4 Meeting Requirements**

Kuruppu and Gruber (2006) argue that academic librarians are well-positioned to assist students by facilitating access to scientific information and by helping with the sense of the information environment. It is vital that librarians understand the needs of the communities they serve and move proactively to fulfil those needs in order to remain relevant in supporting the scientific.

Zamani-Miandashti (2013) argues that students are moving away from the library and toward the World Wide Web to obtain information for completing class assignments and doing research. In the emerging electronic environment knowledge about the information seeking of students through the Internet is vital for those wanting to help

them efficiently meet their information needs. The Theory of Planned Behaviour (TPB) has been successfully applied to predict behaviour and intentions in various situations.

Shenaifi (2013) argues that the College of Agriculture candidates viewed agriculture as being logical and technical. The agricultural industry places importance on the background and experience of graduates even if students are from cities and do not have a farm background.

Tas (2010) states that the high level of personal capacity, the relevant professional competence and technical skills are crucial for a graduate's successful transition to the workplace. Employers in the agricultural domain seem to be more interested in graduates who can work in teams, who possess hands-on experience, who are able to diagnose problems, and who are committed and honest. Employers suggested certain strategies to enhance generic skills and the employability of agricultural graduates.

Therefore, proposed an integration of curriculum with supervised agricultural experience programmes (Shenaifi, 2013). Through agricultural experience, students will become motivated to learn, take responsibility for their learning and approach learning with a holistic perspective that promotes the development of desirable attributes.

Tarp (2000) argues that students are encouraged to work with a group of peers with whom they can share experiences, reflect on these experiences; begin to articulate their strengths and weaknesses in a safe learning environment that encourages further learning. An experiential learning experience such as managing a farm is suggested by employers as a tool to enhance students' employability.

## **2.5 Limits to Vocationally-Orientated Education**

Since academically-oriented education has been progressively shown to be counter-productive in terms of its inability to prepare school dropouts and leavers with job-related skills the third World country policy makers, planners and educators were

persuaded to pursue a practical-materialist approach as an alternative education system (Selvaratnam, 1988).

Developing countries need younger people to go in for vocational education of all types, agriculture as well as technical and overcome the traditional aversion toward manual labour. Selvaratnam (1988) notes that Third World countries did not have an industrial tradition or base and an established vocational training experience. This uncritical adoption of Western models was basic because of the fact that adaptation to local situations required considerable extra resources in terms of original intellectual and skill expertise and resources (Selvaratnam, 1988).

Husain (2010) endorses education with a combination of a cluster of practical skills, rather than in knowledge in vocation in the Third World. This form of integrated education) 20could give an individual an all-round training such as, reduce the long established opposition between academic, technical and vocational education, check the growing educational stratification, be cost-effective and prepare individuals to come to terms with their essentially agricultural base as well as the rapidly changing technological and industrial scene.

Furthermore, a workforce with a sound broad education can easily upgrade their skills and equip themselves for jobs in the new industries as old ones are phased out. Beduwe and Giret (2011) argue that educational institutions in Sub-Saharan Africa are limited by a lack of capacity to develop and deliver relevant up-to-date and competency-based training. There is a need to focus on small businesses and entrepreneurship within the agri-business sector. This is important in countries such as Tanzania where 80% of the economy is based on agriculture.

Flynn et al. (2013) notes that the framework that is meant to apply to all the subjects of vocational programmes from the Certificate of Professional Competence (CAP) to the University Technology Diploma (DUT) cannot replace even qualitative analyses that would provide a qualified approach to the question and further detail.

Therefore, is essential to note that occupations have a technical skill requirement which forces employers to recruit young workers with specific qualifications and sometimes within vocational markets. Flynn et al. (2013) note that these constraints

related to technical level of the different occupations or the fact that some skills are transferable from one occupation to another and are an essential dimension of the analysis of education discrepancies.

Mercer et al. (2011) notes that pilot courses are being developed, beginning with a set of courses in horticulture and will serve as templates for future course development as well as providing initial training experience for instructors at the Kihonda Regional Vocational Training and Service Centre in Morogoro, Tanzania.

Cooper and Schindler (2003) argue that the Education for Employment project will improve instructional capacity at the Kihonda Regional Vocational Training and Service Centre in Morogoro. Education for Employment project provide students with up-to-date, relevant course material designed to meet the needs of the region. Therefore, short courses will address specific topics identified by local businesses as being needed in meeting their future needs. Continued close communications with regional businesses and the establishment of a program advisory board will ensure the maintenance of an industry-driven curriculum that will attract future students to Kihonda.

Sargent and Matthews (1997) note that In France, vocational training courses provided at the secondary education level lead to diplomas called CAP (Certificate of Professional Competence), BEP (or Vocational Studies Certificate, Vocational Baccalaureate. When provided at the first stage of tertiary education they lead to Advanced Technician's Certificate or University Technology Diploma. The contents of these training programmes are developed by Consultative Vocational Committees in partnership with professionals and experts. In France, no diploma of technological and vocational education can be created or modified without the consent of these committees.

## **2.6 Models of Agriculture as a Human Activity**

Bawden et al. (1984) argues that the farming systems are the crucial key in the grading of systems that represent agriculture. Management is common to all and the

innovating-allocating operating model serves a useful purpose. The management of an organisational system as comprising three interrelated subsystems or levels of goal-directed activity:

(a) At the operations level the primary task is carrying out stated objectives effectively and efficiently. Objectives tend to be optimising and problem-solving techniques have a basic computational focus. Bawden et al. (1984) argues that operations are relatively insulated from changes in the systems environment and hence comparatively stable and fixed.

(b) The strategic and restoration level is concerned with relating the organisation with the environment developing strategic plans and providing adjusting mechanisms to handle changes. Objectives tend to be satisficing and problem solving had a critical focus. The strategic level is open to the systems environment and innovations are responses to its dynamic and variable nature.

(c) At the allocating and co-ordinating level the primary concern is integration of the internal operations and allocation. O'Sullivan and O'Sullivan (2012) argue that much remains to be done in developing complex and insightful gender aware models. Therefore, Khayri et al. (2012) suggest that the introduction of gender into computable equilibrium models of the sorts that have been used to investigate income distribution and structural adjustment.

O'Sullivan and O'Sullivan (2012) argue that the value of collaborative evaluation as a model that promotes program learning can be found in both the words collaborative and evaluation. Yet reflecting on the value of the collaborative process in and of itself in the context of what evaluation is should not be ignored. Collaboration works.

Husain et al. (2010) state that human capital development is an effort to achieve cost savings and improve the performance of the industry. Therefore, human capital as an important element for upgrading company performance to improve productivity of employees and sustainability to compete. Human capital is a process involving training, education and professional initiatives to improve the knowledge, skills, abilities, values and social assets that will lead to employee job satisfaction and performance while improving the performance of the company.

## 2.7 Agriculture Systems

Flynn et al (2013) states that agricultural education tends to focus on the aspect of managing that reflects a background of the policy-makers, often without recognition of it as an aspect of managing. Agricultural scientists focus on operations such as farm management economists on allocations and macroeconomists on the strategic level. It is unusual to find an operational conceptual framework for educational policy which encompasses all three.

A systems paradigm and an understanding of the function of technology may be prerequisites. The intellectual framework for approaches to problem solving is built on four generalised models of ways agricultural problems are, or might be, approached. Bawden et al. (1984) argue that the models are seen as representing a grading of approaches to problems of increasing complexity and lack of definition. The four approaches are:

- A reductionist scientific approach.
- A reductionist technological approach.
- A hard systems approach.
- A soft systems approach.

Alibeigi and Zarafshani (2006) argue that the agriculture sector has become increasingly information-dependent requiring a wide range of scientific and technical information for effective decision-making by the farming community. However, large scale information irregularity existing in almost all stages of the agricultural supply chain in developing countries leads to the exploitation of the farming community and generates inadequacies across the chain. This is one of the problems faced by the farmers in developing countries including India.

Yang and Lui (2012) note that after the reform and opening up policy, The Chinese government put in the idea of agricultural specialisation development. However, non-specialised production is still the main mode due to the small scale of agricultural

production and institutional factors which impedes the development of modern agriculture in rural China.

Therefore, the central government takes series of policies and measures to solve the issue concerning agriculture, countryside and farmers. These policies show that it is necessary to develop modern agriculture and change agriculture development mode. Also, it emphasises to develop farmer cooperatives and rural service organisation to build the agriculture products market system (Beduwe & Giret, 2011).

Information and knowledge are important factors for accelerating agricultural development through appropriate production planning, adoption of improved cultivation practices and effective post-harvest management and marketing (Ali & Kumarl, 2011). However, the need for information and knowledge varies across several stages of the supply chain as the agriculture systems in India are fragmented.

Mcgrath and Akoojee (1997) state that the choice of one or the other is influenced by the objectives to be achieved the context of the problem and the abilities related to the education of the problem solver. These differences are sequences of key events in each process. Agricultural systems lie at the interface of natural systems and the purposeful activities of people. The pressures for change are massive and are associated with those as insightful as cultural forces and natural evolutionary forces. Spontaneous perturbations in physical and financial environmental elements also provide impetus for innovative alterations.

Beduwe and Giret (2011) argue that the success of German workers in achieving a fit between their vocational education and their subsequent employment thus becomes a question of the policy in evaluating the efficiency of the German vocational education system. Given that mismatch represents an instrument for assessing training programmes, it seems reasonable to operate on the assumption that young people who find a job in an area related to their studies tend to secure a better professional situation than those who find a job in an area unrelated to their training.

## **2.8 Gender and Agriculture**

Qui and Wang (2001) argue that the rising mass of microeconomic evidence supporting the key role which women play in the development process has led to calls for consideration of gender issues in economic policy-making. O'Sullivan and O'Sullivan (2012) argue that female wage rates tend to improve with improved technology in cassava. Women have the possibility of transferring time formerly devoted to cassava production to such as domestic chores or leisure. Therefore, female wage gains for agricultural labour would tend to be even sturdier following technological change in cassava due to an effective decline in the supply of female agricultural labour.

Quenani-Petrela and Wolf (2007) argue that the gender wage gap in the industry has implications for agri-business companies. Bureau of Labour Statistics projects that women's labour force participation rates are expected to keep rising, and the majority of expected jobs to be created over the next decade will be filled by women. This implies that companies must actively compete to attract and retain workers from this group, by creating and expanding policies that facilitate the integration of work and family responsibilities.

By implementing programs such as child care services, work-hours flexibility will help women in the industry to effectively balance their work and family life and give businesses a competitive advantage to hire and retain the best-qualified employees, male or female. Further, companies should try to find ways to help the advancement, promotion of the women employees to leadership and management positions (Quenani-Petrela & Wolf, 2007).

Yang and Lui (2012) argues that acknowledgment of the vital role of women cultivators in food production should lead to a focus on increasing their productivity in growing staple foods such as cassava. Consequently, technical change in cassava appears to be a strong lever for increasing rural household welfare. Technological change in agriculture and marketing system improvements interact with significant

benefits accruing to both male and female occupants of rural households. These interaction effects are significant in both the risk and no risk consequences.

## **2.9 Relevance and Effects**

Singh et al. (2012) note that the multi-national business enterprises national and local enterprises are challenging traditional Institutions of Higher Education (HEIs) to change their orientations through trends towards market-like mechanisms and entrepreneurial behaviour which challenge the structure of the Higher Education (HE) curricula. Teaching, learning, assessment and to a lesser extent research have been affected by this economically sanctioned call to ensure graduates' employability and marketability.

Maxwell (2005) states that the universities are relevant to the needs of a nation in progress to ensure effectiveness, productivity, relevance and transparencies in operational proceedings, accreditation, auditing exercises, quality control academics, curricula, pedagogies and administrative practices. Furthermore, these mechanisms, aims and practices of Institutions of Higher Education have been revamped to suit the pragmatic demands of the socio-economic context in which these universities exist.

The Conference Board of Canada developed the Employability Skills Profile (ESP) in 1990, which composed of three parts, academic skills, personal management skills and teamwork skills (Rasula et al., 2013). Furthermore in 1994, Human Resources Skills Development of Canada produced a nine essential elements; text reading skills, using a document, writing, numbers, communicate with thinking skills, working with others, using computers and continuous learning. Efforts to develop these skills continued with the expansions of Employability Skills 2000 which combines elements of employability skills and Essential Skills (Rasula et al. 2013).

Tas (2010) states that ICT for development is a term that is used to define the applications of ICTs for the socioeconomically disadvantaged groups. In other words, the ICT is applying Information Technologies for poverty reduction purposes. Furthermore, the concept has evolved from when it started just as the ICT industry along with the Internet now the possibilities for collaboration have increased. Since

information and communication technologies will be shaping the future, the jobs acquired in the ICT industry will be legal.

Khayri et al. (2012) argue that the concept of entrepreneurship is given importance so that of the engine of economy and culture change. Development of entrepreneurial culture, support for entrepreneurs and job creation in the agricultural sector seems to be necessary. This necessity, in agricultural higher education that its duty is to provide human specialist resources is supplementary.

Furthermore, factors for barriers to enhance entrepreneurship in the agricultural higher education were reduced to five main factors include unsuitable selection and training methods, inappropriate content and educational planning, communication barriers, lack of entrepreneurial training courses and books on agriculture and poor assessment and instructional programs (Khayri et al., 2012).

The agricultural education system should train for entrepreneurial graduates needs to be modified in all its parts. To accomplish this dynamic interaction with the agricultural Colleges and labour market needs it is suggested that changing in syllabus delegate to departments instead of ministry and universities (Mercer et al., 2011).

## **2.10 Research Questions**

Much of the problem statement had been resolved. However, there are still some items missing and the research questions help with this. These are:

- How employable are FET College graduates in NWU agriculture using one of the colleges as a soundboard?
- What are the needs and expectation of agricultural industries and organisations from agricultural FET institutions and the graduates?
- Why agricultural FET College graduates in the NWU are not marketable?
- What are the training gaps within agricultural FET institution in North West Province?

## **2.11 Summary**

In this chapter, articles have been summarised and discussed. The following chapter will be an analysis of the questionnaire. It also showed the issues that were not addressed. The chapter has addressed many of the things that impact on the skills acquired by the Taung agricultural college that are sufficient for employment of agricultural students. This is no way comprehensive but still good enough for a mini-dissertation. The next chapter will discuss the research methodology.

# **CHAPTER 3**

## **RESEARCH METHODOLOGY**

### **3.1 Introduction**

In the previous chapter, the problem was specified in terms of three research questions that remain unanswered from the literature reviewed. The problem the student identified was that there were no sound guidelines available for practitioners on how to appoint a qualified FET agricultural student.

The aim of the study was to determine the extent to which the qualifications obtained affects employability of FET (Further Education and Training) agricultural graduates in the North West Province. This chapter defines the research methodology used in this study, the data collection method chosen, types of questions that can be asked on the instrument and development of the questionnaire, the survey population and sample size determination; data handling and conclude with a conclusion.

### **3.2 Research Types**

#### **3.2.1 Qualitative and Quantitative Research**

Cooper et al. (2003) .argue that there is a distinction between quantitative and qualitative research and data has different characteristics but they require different techniques for their analysis. Natural sciences have concentrated on quantitative analysis while qualitative analytical methods were evolved.

Qualitative research is a method of inquiry appropriated in different academic disciplines, traditionally in the social science, market research and similar contexts. Qualitative methods investigates the why and how of decision making, what, where and when (Creswell, 2003). Quantitative research produce information on the cases studied and any conclusions are informative guesses.

Quantitative methods can be used to verify which of the hypotheses are true. Highlights its quantifiable nature and are concerned with identifying its predictive categorising organisations into cultural or by measuring distinct elements or dimensions of culture in as objective way as possible (Bryman et al., 2004).

### **3.2.2 What Research method(s) used in the Study**

The qualitative approach can aid in the purposes of description, interpretation, verification and evaluation. Quantitative research is aiming at observation studies, correlation research, development designs and survey research (Maxwell, 2005). This study utilised the quantitative approach.

### **3.2.3 The data required**

Primary data refers to original information that is collected by the researcher precisely for the study at hand. That is data obtained through interview and surveys. Secondary data refers to information that has been formerly gathered by someone else for some other purpose which can be reused by the researcher (Leedy & Ormrod, 2005).

Secondary sources include books, journal articles, and reports. Leedy and Ormrod (2005) refers to primary data as layer closest to the truth and secondary data as a layer father away which not derived from the truth itself but from the primary data instead.

## **3.3 Data Collection Method**

A survey was conducted to collect information in relation to the agricultural students from a SA University. Only the survey construction is discussed here.

### **3.3.1 Method for collecting primary data**

The questionnaire was used as a method to collect primary data in the research study. There are other ways of gathering information from participants if such information cannot be obtained by observation. The various ways of collecting data from participants is through interviews, questionnaires and observation as these methods have their advantage and disadvantages (Bless et al., 1998).

## **a) Interviews**

Bryman et al. (2008) argue that the interviews are structured in qualitative research. In a structure interview the researcher will ask standard questions.

## **b) Structured interview**

Altizer (2004) states that structured interviews involve total control over the format of the questions and that in answers and the structured interview is administered face to face with a respondent.

### **3.3.2 Semi structured interview**

A semi-structured interview is where the interviewer still has an indistinct list of issue to be addressed and questions to be answered. Therefore, the interviewer should be prepared to be flexible in terms of the order in which the topics are considered to let the interviewee develop ideas and speak widely on the issues raised by the researcher (Bryman et al., 2014).

### **3.3.3 Unstructured interview**

Unstructured interview involves the extent to which emphasis is placed on the interviewee's thoughts. The researcher's role is to be as modest as possible and start introducing a theme or topic and letting the interviewee develop his or her ideas and pursue his or her train of thought (Leedy & Omrod, 2005).

## **a) Survey**

A survey is characterised by the efficient collection of numeric or quantitative data from a group of entities using direct observation. The aim of a survey may be to:

- Describe (investigative research);
- Examine correlations and associations;
- Explore differences;
- Identify a development; and
- Test a theoretical model.

In this study, primary data was collected by means of survey using a structured questionnaire that was emailed to the respondents who were asked to fill in the questionnaire. The reason for taking this route is time and cost efficiency given the geographic location of units and the size of the university.

A survey is a virtuous way of getting a picture of the current state of a group, a community, an organisation, an electorate, a set of corporations, a profession. These surveys are snapshots, picture of a particular point or period in time, although there are longitudinal surveys which take place over longer periods. Leedy and Ormrod (2005) agree that the survey research capture a fleeting moment in time much as a camera takes a singly-frame photograph of an on-going activity. A survey is the collection of information on an extensive range of cases, each case being investigated on the specific aspect under consideration (Bryman & Burgess, 1994).

### 3.3.4 Questionnaire

A questionnaire is a structured way of getting information from respondents by means of a scheduled structure. This method is based on an established questionnaire a set of questions with fixed wording and sequence of presentation as and indications of how to answer each question (Bryman & Burgess, 1994). A structured questionnaire was favoured because it can be scrutinised to ensure proper response to the questions raised. Hague and Jackson (1999) argue that means of the questionnaire is to draw accurate information from the respondents, to provide structure to interviews, to provide a standard form on which facts, comments and attitudes can be drawn and to facilitates data processing.

<b>Advantages</b>	<b>Disadvantage</b>
Wide coverage	Poor response rate
Cheat	Incomplete or poorly completed answers
Pre-coded data	Limit and shape nature of answers
Abolish the effect of personal contact with	Unable to verify truth of answers

**Table 3.1:** Advantage and disadvantages of questionnaires (Bryman & Burgess, 1994).

The questionnaire was used as the data gathering tool. It allowed for the collection of quantifiable and qualitative data and allow for the analysis of this data to determine patterns and relationships. The survey questionnaire was set using a word document. The respondents who were selected were asked to complete the questionnaire.

The questionnaires were as brief as possible and solicit the information essential to the research project (Leedy & Ormrod, 2005). In order to aid in maximising the number of responses to the questionnaire, the number of questions were limited to 22 questions.

The first section of the questionnaire was aimed at gathering biographical data on the respondents including age, gender, qualifications and frequency as the level of decisions that are made by a respondent, while the second section focused on specific questions with regards to the extent to which the use of decision making affects employability of FET (Further Education and Training) agricultural graduates in the North West Province. All questions required a Lickert type response (Bryman et al., 2008).

#### **3.3.4.1 Advantage and Disadvantage of Mailed questionnaires**

The advantage is that coverage of the selected respondents can be realised with little time or costs. It is easier to select 2000 or even 5000 people in different areas of a country and sent them questionnaire by email. Although this advantage seems to be considerable, self-administered questionnaires and emailed questionnaire have disadvantages when used in developing countries (Cooper et al., 2003).

<b>A short disclaimer describing the purpose of the study – Refer to Appendix A</b>	
<b>A letter to the respondents Appendix B</b>	
<b>Questionnaire – Refer to Appendix A</b>	
<b>‘Thank You’ – Refer to Appendix A</b>	
<b>PART 1</b>	Personal Particulars: Names, address telephone number/cell numbers and signature.
<b>PART 2</b> <b>Questions 1 to 6</b>	General Personal Particulars gathers biographical data on the respondents including age, gender, qualifications, etc.
<b>PART 3</b> <b>Questions 7 to15</b>	Focuses on specific questions with regards to the communication/collaboration problem in the FET college graduates in the North West agriculture?
<b>PART 4</b> <b>Questions 16 to 18</b>	Focuses on specific questions with regards to needs, expectations of agricultural industries and organisations from agricultural FET institutions and the graduates.
<b>PART 5</b> <b>Questions 19 to 22</b>	Focuses on specific questions with regards to the capabilities of to what are the training gaps within agricultural FET institution in North West Province and why agricultural FET College graduates in North West are not marketable

**Table 3 2:** Questionnaire Outline.

### **3.3.4.2 Sampling Method**

Sampling strategy is a design and the size depends on the research paradigm. The quantitative method requires unsystematic and representative sampling characterised by bigger samples (Leedy & Ormrod, 2005). Fink et al. (1995) define sampling as a means of asking any portion of the population as representative of the target population of 20. The final sample will be listed in Chapter 4.

The participants had to meet the following criteria to be included in the sample:

- Participants must be a lower, middle, manager and other finance employees.

- The participants must have worked at least three years. Three year is chosen due to the fact that it is considered a fair experience to perform in one's position.

### 3.3.4.3 Types of variable

Each question in a questionnaire or collected in quantitative research gives rise to a variable and a variable is an empirically observable characteristic of some phenomenon. This can take on more than one value or response category such as gender, job level, level of agreement with a statement, profit, percentage of budget spent on advertising (Diamantorpoulos & Sechlegelmilch, 2004).

### 3.3.4.4 Types of variables

**Nominal variables** – the response categories can be placed in any order and the number assigned to the response categories has no other property except to serve as labels.

- Nominal Variable allow us to categorise responses
- For a nominal variable one can determine how frequency or what percentage of responses fall in each category
- The response categories should be mutually exclusive and collectively exhaustive
- Numbers assigned to the categories have no numerical meaning.
- Nominal scale: With this type of scale a variable is measured in terms of two or more qualitatively different categories such as male and female. The scale indicates differences of category but these have no arithmetic value (Bryman et al., 2012).

**Ordinal variable** - As with nominal scales, an ordinal scale contains two or more categories that allow the difference of variables in terms of the categories. As the name implies some degree of ordering is involved as different points on the scale indicate the quantity being measured (Bryman et al., 2012).

- An ordinal variable allows one to categorise responses

- Can determine how many of responses are in each category
- The order of the numbers assigned to ordinal variable do not have meaning
- An ordinal variable allows one to rank or order responses
- The difference between consecutive categories need not be the same.

**Ratio variable** – a numerical variable where there is some standard unit of the property being measured. The distance between consecutive numbers is the same. Hence one can make accurate statements on the differences between cases.

- A ratio variable allows one to categories responses
- One can determine how many of responses are in each category
- The numbers assigned to a ratio variable have numerical meaning
- A ratio allows us to rank or order responses
- The distance between two cases can be calculated, that how much more or less of the measure property cases contain
- The ratio of two responses can be calculated

A combination of variables was be used in the survey. In order to identify participants, Nominal and ordinal variables would be used. Survey questions would vary from ordinal to ratio variable, depending on how the questions are posed. Therefore, multiplication and division of points on a ratio scale becomes meaningful (Bless et al., 1998).

### **3.4 Ethical Consideration Pertaining to the Study**

Bryman et al. (2014) argue that ethic in terms of the personal relationships is often involved in research projects. Social research, other forms of research which study people and their relationships to each other, to the world, need to be sensitive about issues of ethical behaviour. Researchers must be aware of necessary ethical standards which should be observed to avoid any harm which might be caused by carrying out or publishing the results of the research project.

According to Bryman et al. (2014) the researcher can delete all names, identifiers from the data and report on the broad categories of responses to help ensure confidentiality. In this study, participants remained anonymous and the participation was entirely voluntary. It was considered unethical to use any personal details of respondents in the reports, which can identify who the respondent is. Participants were assured that the information provided would not be used for any purpose other than stated. Participation in the questionnaires was voluntarily, confidentiality was considered ensuring the protection of the respondents.

### **3.5 Summary of Data Analysis**

In this chapter the justification for the choices of research method was given. An overview of the research approach was presented. Quantitative research method will be used to gather information required for the study. Questionnaires were used as data-gathering tools, thus giving the study credibility. Advantages and disadvantages of qualitative research, quantitative research and questionnaires were discussed in this chapter. The following chapter will deal with data presentation, interpretation and analysis.

# CHAPTER 4

## DATA DISCUSSION

### 4.1 Introduction

This chapter sketches out the findings used in this study in order to answer the research questions that came under review. Kim and Brymer (2012) describe research methodology as the essential logical steps taken to connect the research questions and objectives to data collection, analysis and interpretation.

This chapter therefore discusses the research findings and provides analysis and interpretation of data. Questions were asked, the analysis was done based on the application of Pearson correlation coefficient and value. The Pearson correlation method correlates that are listed variables with each other and indicate which of the resulting relationships are statistically substantial.

Thirty five (35) questionnaires were distributed to the agricultural college students and al genders. A total of 35 questionnaires were returned meaning that the rate of return was 100%.The sample is a status from 35 students at the agricultural college.

### 4.2 Analysis of Variables

#### 4.2.1 Demographic variables

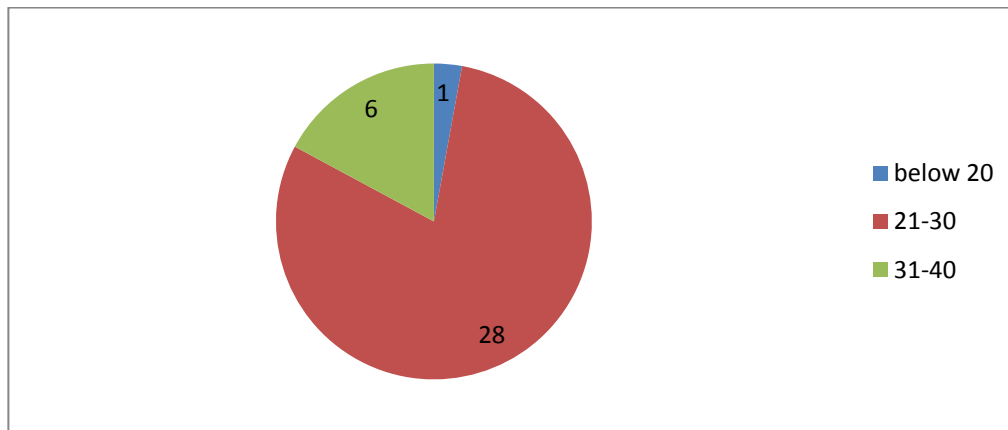
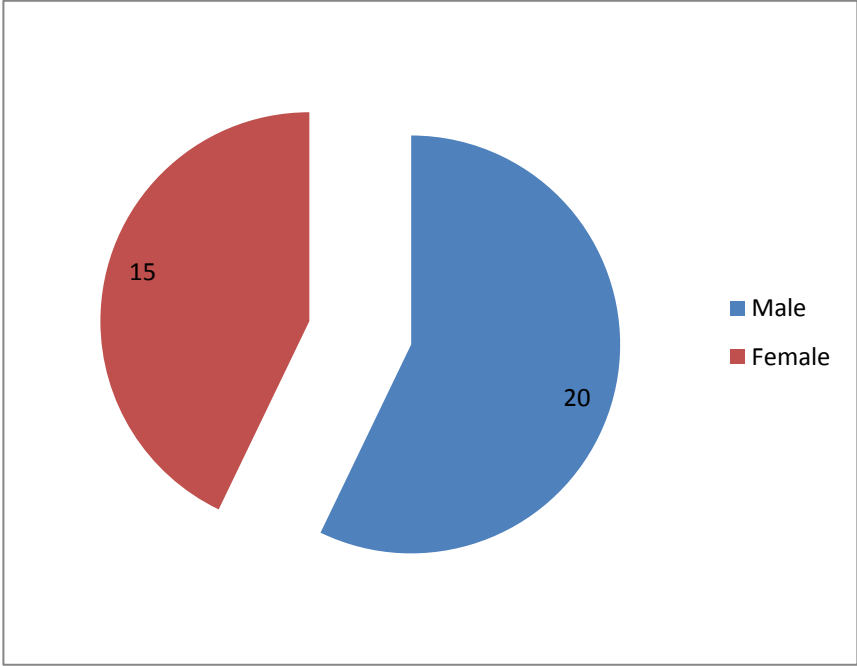


Figure 4.1: Age Distribution

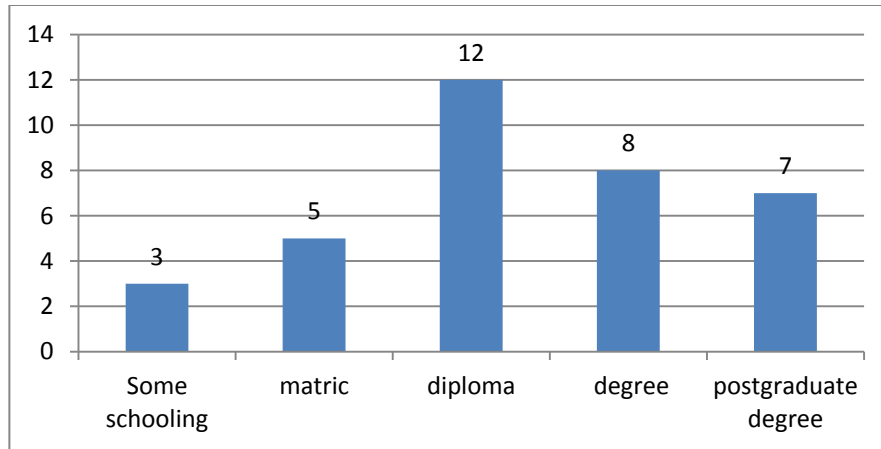
The majority of respondents were aged between 21 and 30 years. This implies that the majority of respondents are aged between 21 and 30 years. This is an average age group within a working class that may have acquired some work experience to understand the role of skills development and its significance in decision making.



**Figure.4.2: Gender Distribution**

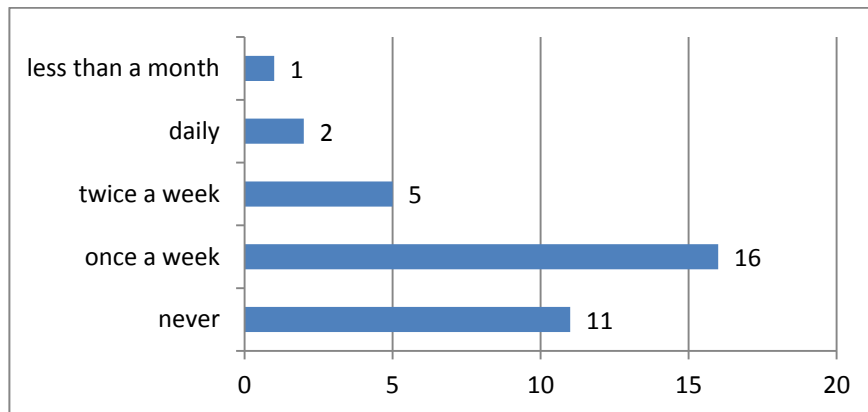
Figure 4.2 indicates that out of a total sample of 35 respondents, 15 were female. No choice was given to sex and the sample breakdown is considered as being a rational representative of the demographics of the graduates at the North West agricultural campus.

These figures reflect that the agriculture roles are male orientated. There is strong racial and gender bias in the experience of joblessness and Africans, particularly female South Africans. South African females were denied access to development in agriculture and had received no recognition for their skill levels and on-the-job knowledge (McGrath & Akoojee, 2007). The burden of unemployment falls on the African population because jobs that exist for them are casual, low-wage and are without benefits.



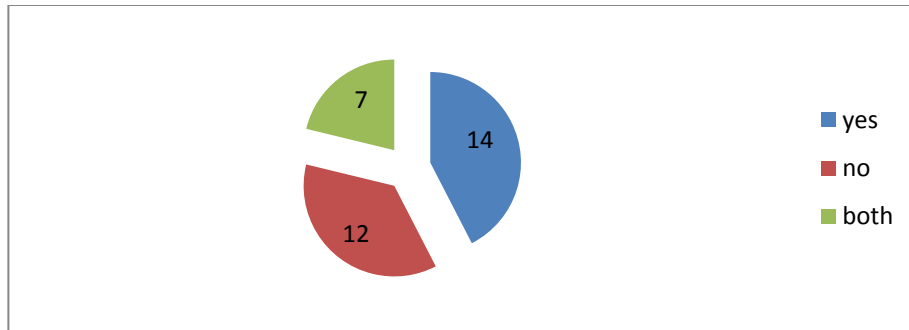
**Figure 4.3: What is your highest level of education?**

Figure 4.3 indicates that the respondents' education status is up to standard, as the majority of the respondents have a matric, diploma or degree (27) and seven respondents have a postgraduate degree. The respondents' educational status is an indicator for the better handling of projects should improve their education through further studies. Some schooling is required where a student attend a course to update his or her on new ideas.



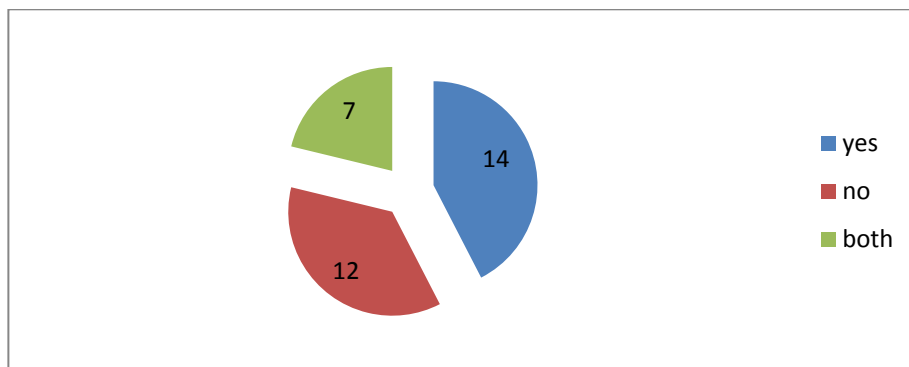
**Figure 4.4: How often are FET students delivering ICT empowered lessons?**

Figure 4.4 shows that most respondents are delivering ICT empowered lesson often. They are likely to do all their activities in less than normal times a week that the rest of the respondents.



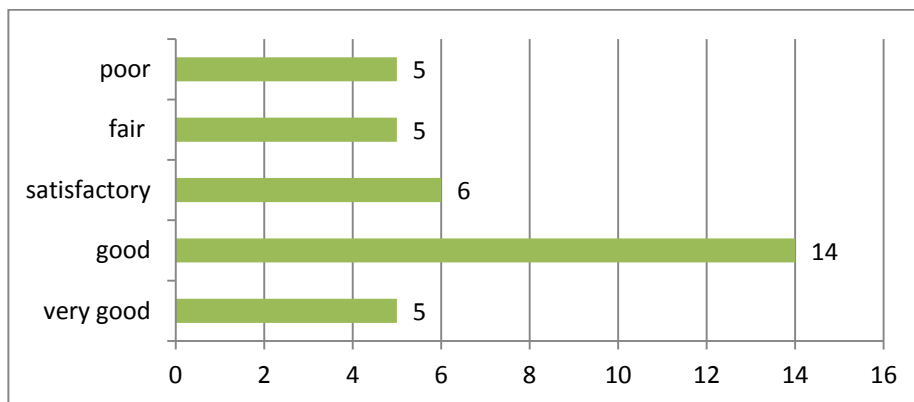
**Figure 4.5: Are subject objectives integrated with ICT components?**

Figure 4.5 shows that most of respondents had subject objectives integrated with ICT components. Decision making is based on the intervention of government's agencies and large organisations causing the dominance of external often foreign capital and the taking no notice of individuals nationally (Liu and Wall, 2006). There is a noticeable gap between government desire to improve the environment and its actual achievements. Beduwe and Giret (2011) note that the framework that applies to all the subjects of vocational programmes from the Certificate of Professional Competence (CAP) to the University Technology Diploma (DUT) cannot replace qualitative analyses that would provide a qualified approach to the question and further detail. Bawden et al. (1984) argues that the choice of one or the other is influenced by the objectives to be achieved. Therefore, the context of the problem and the abilities related to the education of the problem solver. These differences are sequences of key events in each process. Agricultural systems lie at the interface of natural systems and the purposeful activities of people.



**Figure 4.6: How are FET students skills rated in the selected ICT application tools?**

Figure 4.6 indicates that most FET students are skills rated in the selected ICT application tools (25). The national response to the recession provided little in terms of the strife for equity. Rasula et al. (2013) state that Human Resources Skills Development of Canada produced a nine essential elements; text reading skills, using a document, writing, numbers, communicate with thinking skills, working with others, using computers and continuous learning. Efforts to develop these skills continued with the expansions of Employability Skills 2000 which combines elements of employability skills and Essential Skills (Altizer, 2004). Tas (2010) states that ICT for development is a term that is used to define the applications of ICTs for the socioeconomically disadvantaged groups. In other words, the ICT is applying IT for poverty reduction purposes. Furthermore, the concept has evolved from when it started just as the ICT industry along with the Internet now the possibilities for collaboration have increased. Since ICT will be shaping the future, the jobs acquired in the ICT industry will be legal.

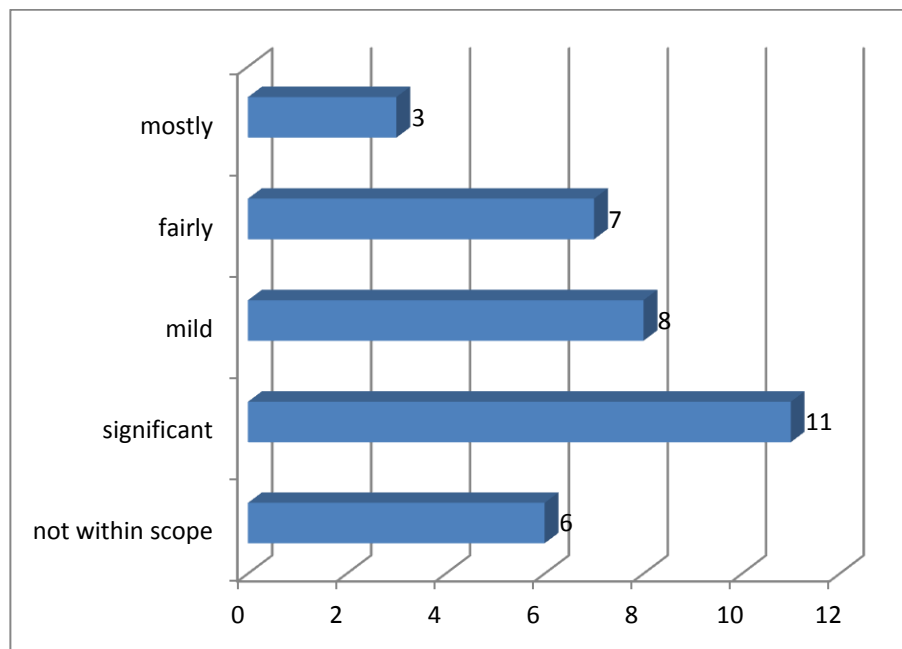


**Figure 4.7: What are the challenges in integrating ICT in FET students and learning activities?**

Most of the respondents (28) agree that they know what the challenges in integrating ICT in FET students and learning activities is. Qui and Wang (2001) argue that the lack of coordination and networks between organisations apprehensive with training and with self-employment start-ups have led to a disorganised approach to informal micro-enterprise support. Therefore, employee attitudinal and social skills are regarded to be critical for one to be successful. Academic librarians play a role in the endeavour by providing scholarly library resources, services to fulfil the needs of

scholars in biological and agricultural sciences and related disciplines (Kuruppu & Gruber, 2006).

Jayaraj (1992) argues that most of the challenges for agricultural universities are to sustain a sharp focus on the problems of small and marginal farmers who constitute the bulk of the farming sector. Davis et al. (2011) argue that farmer field schools are not designed to develop technology but rather be used in part for advanced groups, while still retaining the focus on involved and experiential learning. Furthermore, there is an element of adaptive research with often changes in use of technologies, inputs, varieties, breeds and management practices.

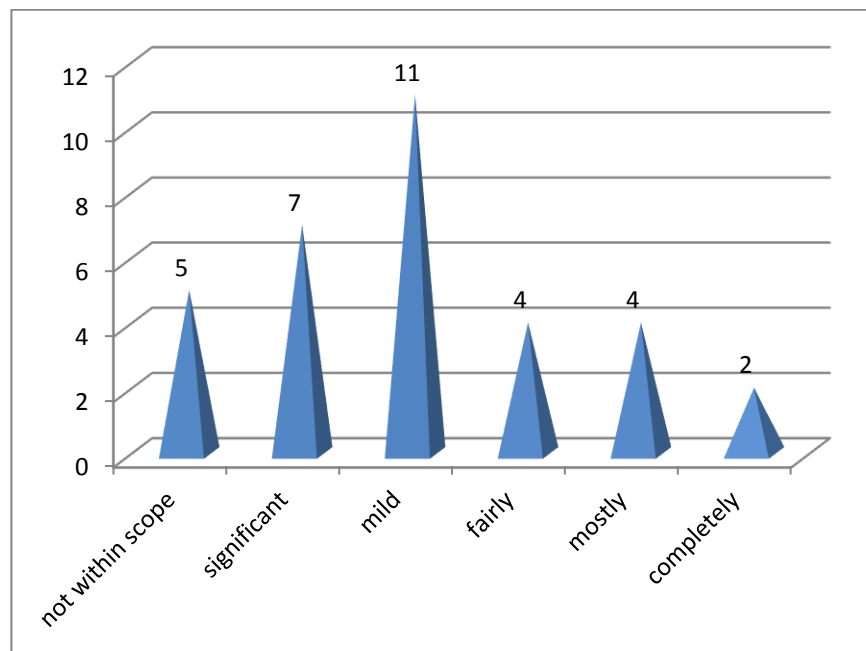


**Figure 4.8: What are FET views on how ICT has been used in FET today?**

Many of the respondents agree (25) that ICT had challenges that affected the use in FET today. Cheung et al. (2001) define an individual that performs complex tasks while working without help or supervision as an experienced and well trained worker. Shenaifi (2013) argues that the College of Agriculture candidates viewed agriculture as being logical and technical. The agricultural industry places importance on the background and experience of graduates even if students are from cities and do not have a farm background. Employers in the agricultural domain seem to be more

interested in graduates who can work in teams, who possess hands-on experience, who are able to diagnose problems, and who are committed and honest.

Ali and Kumarl (2011) argue that the agriculture sector has become increasingly information-dependent requiring a wide range of scientific and technical information for effective decision-making by the farming community. However, large scale information irregularity existing in almost all stages of the agricultural supply chain in developing countries leads to the exploitation of the farming community and generates inadequacies across the chain. This is one of the problems faced by the farmers in developing countries including India.



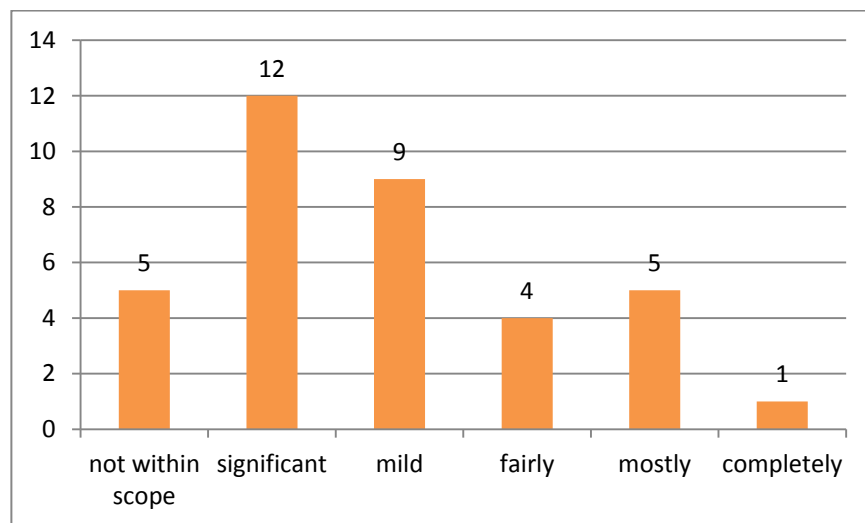
**Figure 4.9: What are the views on ICTs future direction in FET??**

Most of the respondents agreed (31) that the view on ICTs future direction in FET is in place in Mafikeng. The graph above indicates that the majority of the respondents know what the importance of adequate people resources to be allocated throughout but there is a lack of judgement but is a positive result. Proposed action programs of the agricultural universities and colleges concerning new teaching programs, the revision of existing curricula, the linkage of different educational programs, and institutional cooperation in research must be tailored to current and future regional/national requirements. Once the needs-based programs are satisfied then it

is equally important to examine the demand for and supply of generalists from time to time using the self-evaluation chart.

Jayaraj (1992) argues that in using the chart in the direction of future agricultural education can be evaluated in terms. Indian agriculture is characterised by declining terms of trade, increasing crop productivity, subdivision and fragmentation of land holdings and increasing female education. Agricultural universities in India are different with rural universities.

More than 75% of the population depend on agriculture and allied activities and this is expected to remain the dominant state of affairs in the future and the function of an agricultural university will be to train manpower for future agricultural research, extension and other related areas and institutions. Jayaraj (1992) argues that most of the challenges for agricultural universities are to sustain a sharp focus on the problems of small and marginal farmers who constitute the bulk of the farming sector.



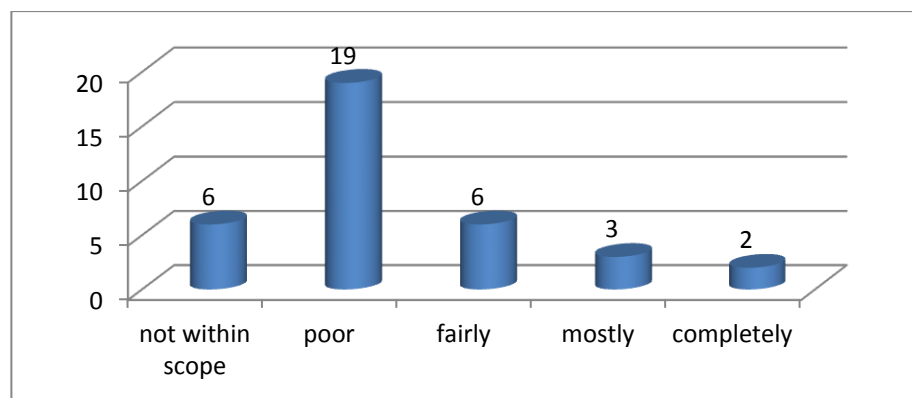
**Figure 4.10: How do FET College Graduates use ICT tools in their classes?**

Figure 4.10 indicates that the majority of respondents disagree (30) that they use ICT tools in their classes. This is a negative result. Information security must be addressed as a commercial governance responsibility which should involve risk management exertions, reporting and accountability on the ration of executive leadership and boards of directors (Kim & Brymer, 2012). Most of the respondents believe that appropriate ICT tools are essential and they are eager for continuous

training and managerial delegations to develop further in their skills. Alibeigi and Zarafshani (2006) argue that students are encouraged to work with a group of peers with whom they can share experiences, reflect on these experiences; begin to articulate their strengths and weaknesses in a safe learning environment that encourages further learning.

Experiential learning experiences such as managing a farm are suggested by employers as a tool to enhance students' employability. Edgar et al. (2012) note that potential exists for higher education classrooms to change and diversify as new electronic technologies emerge. However, the rate of technology adoption and integration in the classroom lags because it is difficult for educators to determine the value and benefit of these technologies in terms of teaching and learning.

Therefore, the significance of ICT to career success and graduating students' perceptions concerning inadequate ICT skills other agriculture colleges and departments should examine required student ICT use in their courses. It is useful in designing appropriate educational experiences to prepare graduates for career entry and advancement on university campuses (Edgar et al., 2012



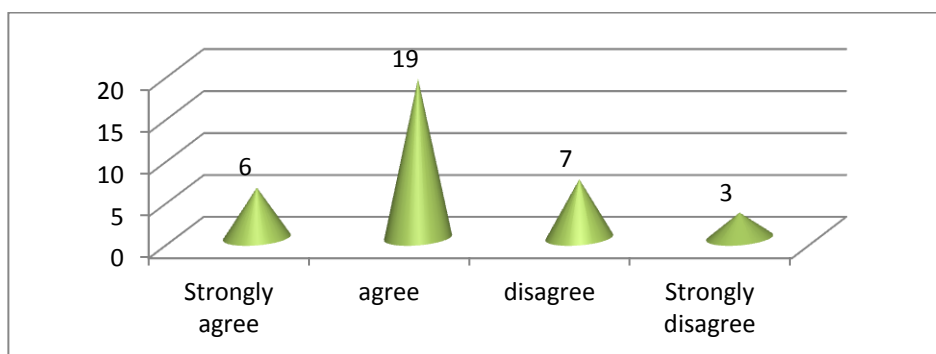
**Figure.4.11: Does ICT integration reduce the FET College Graduates administration burden?**

Most of the respondents agree (25) that ICT integration reduces the FET College Graduates administration burden. This means that the majority of the respondents identify what the importance of adequate management support and commitment throughout, but there is a lack of awareness and decision but it's a positive result.

Therefore, the respondents rely and need leadership qualities from a manager to lead those (Heeks, 2002). The organisation determines its own ethics and the transmission of an organisation's ethical values are made by its employees'. Also, the respondents depend on leadership qualities from a manager to lead them (Sargent and Matthews, 1997). Selvaratnam (1988) endorses education with a combination of a cluster of practical skills, rather than in knowledge in vocation in the Third World.

This form of integrated education could give an individual an all-round training such as, reduce the long established opposition between academic, technical and vocational education, check the growing educational stratification, be cost-effective and prepare individuals to come to terms with their essentially agricultural base as well as the rapidly changing technological and industrial scene.

Furthermore, a workforce with a sound broad education can easily upgrade their skills and equip themselves for jobs in the new industries as old ones are phased out. Beduwe and Giret (2011) argue that educational institutions in Sub-Saharan Africa are limited by a lack of capacity to develop and deliver relevant up-to-date and competency-based training. There is a need to focus on small businesses and entrepreneurship within the agri-business sector. This is important in countries such as Tanzania where 80% of the economy is based on agriculture.



**Figure 4.12: Has the Internet proved to be a useful source of ideas and information for teachers?**

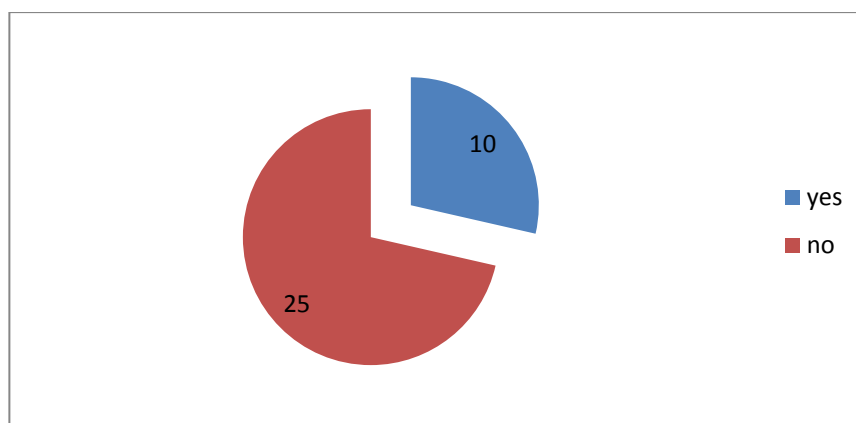
Figure 4.12 indicates that most of the respondents disagree (25) that the Internet proved to be a useful source of ideas and information for teachers. The respondents between 21-30 years understand the importance of accountability placed on the

planning for their function. Management is beneficial, essential and helpful for staff members to run all the operations in the organisation (Edgar, 2012).

Governance provides a structure for determining organisational objectives and monitoring performance to ensure that objectives are attained. Zamani-Miandashti (2013) argues that students are moving away from the library and toward the World Wide Web to obtain information for completing class assignments and doing research.

In the emerging electronic environment knowledge about the information seeking of students through the Internet is vital for those wanting to help them efficiently meet their information needs. The Theory of Planned Behaviour (TPB) has been successfully applied to predict behaviour and intentions in various situations.

Yang and Lui (2012) note that after the reform and opening up policy, Chinese government put in the idea of agricultural specialisation development. However, non-specialised production is still the main mode due to the small scale of agricultural production and institutional factors which impedes the development of modern agriculture in rural China.



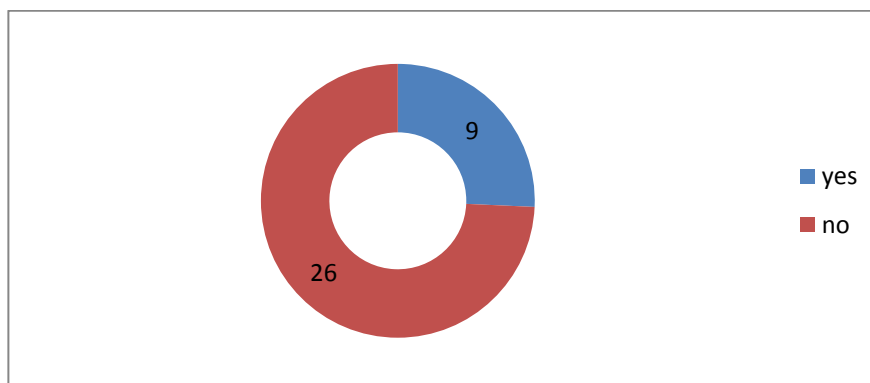
**Figure 4.13: Are FET College Graduates trained with ICT skills at pre-service or in-service?**

Figure 4.13 indicates that the majority of respondents disagree (26) that FET College Graduates were trained with ICT skills at pre-service or in-service. This is a negative

finding. Most of respondents acknowledge that the Business is essential for their success and this is in accordance with Quenani-Petrela and Wolf (2007).

Beduwe and Giret (2011) argue that the success of German workers in achieving a fit between their vocational education and their subsequent employment thus becomes a question of the policy in evaluating the efficiency of the German vocational education system. Given that mismatch represents an instrument for assessing training programmes, it seems reasonable to operate on the assumption that young people who find a job in an area related to their studies tend to secure a better professional situation than those who find a job in an area unrelated to their training.

Furthermore, factors for barriers to enhance entrepreneurship in the agricultural higher education were reduced to five main factors include unsuitable selection and training methods, inappropriate content and educational planning, communication barriers, lack of entrepreneurial training courses and books on agriculture and poor assessment and instructional programs (Khayri et al., 2012).

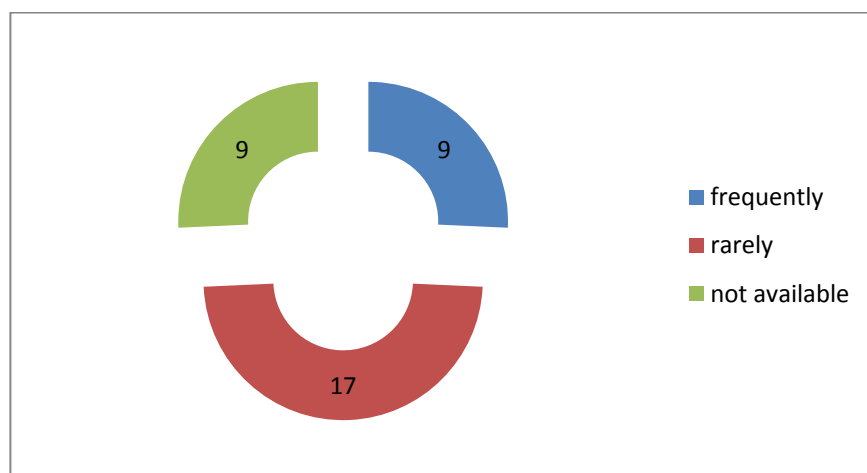


**Figure 4.14: How often do FET College Graduates get support for the distance training?**

The majority of respondents (26) disagree that they get support for distance training. This is a negative result. Thus, each identity level provides an alternative basis for self-regulation, and alternative ways to define leadership. Jayaraj (1992) notes that the first strategic consideration concerns the goals and aspirations of a region and the measures needed to ensure that its agricultural universities/colleges become true development institutions in support of these time-based and need-oriented goals.

Proposed action programs of the agricultural universities and colleges concerning new teaching programs, the revision of existing curricula, the linkage of different educational programs, and institutional cooperation in research must be tailored to current and future regional/national requirements. Once the needs-based programs are satisfied then it is equally important to examine the demand for and supply of generalists from time to time using the self-evaluation chart.

By focusing on provision for education through the provision of curriculum content and efforts to increase enrolment, approaches to pedagogy, curricula, assessment frameworks and learning environments that support quality learning one can encourage learning that encompasses both particular areas of knowledge and skill. Furthermore, the development of individual's, communities' capacity is to deal with future uncertainty and rapid environmental, economic and political change (Quenani-Petrela & Wolf, 2007).

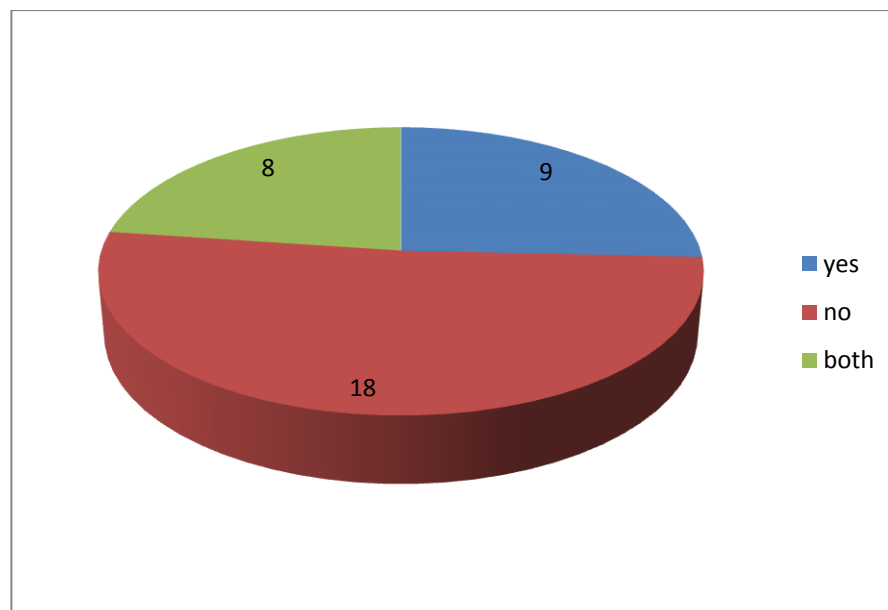


**Figure 4.15: Were teachers trained in technical support for their FET tasks?**

Figure 4.15 indicates that most of the respondents (18) disagree that teachers trained in technical support for their FET tasks. The majority of respondents believe that appropriate planning measures are necessary to complete and execute their work. Khayri et al. (2012) argue that the rising mass of microeconomic evidence supporting the key role which women play in the development process has led to calls for consideration of gender issues in economic policy-making. Khayri et al. (2012) argues that female wage rates tend to improve with improved technology in

cassava. Women have the possibility of transferring time formerly devoted to cassava production to such as domestic chores or leisure.

Therefore, female wage gains for agricultural labour would tend to be even sturdier following technological change in cassava due to an effective decline in the supply of female agricultural labour. Khayri et al. (2012) argue that the concept of entrepreneurship is given importance so that of the engine of economy and culture change. Development of entrepreneurial culture, support for entrepreneurs and job creation in the agricultural sector seems to be necessary. This necessity, in agricultural higher education that its duty is to provide human specialist resources is supplementary.



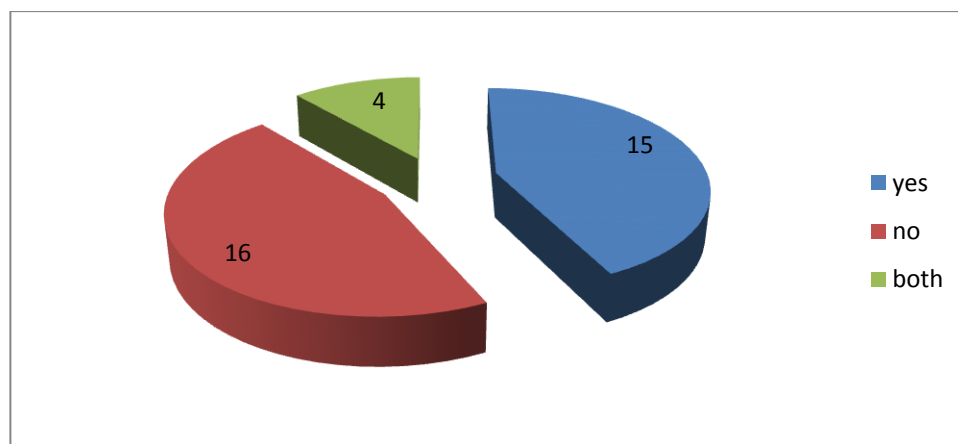
**Figure 4.16: Does the NW department of Education support the ICT implementation in FET College?**

Figure 4.16 shows that 16 respondents disagree that the NW department of Education supported the ICT implementation in the FET College. Enterprise Resource Planning (ERP) initiative can be viewed as a strategic IT decision to add value to the organisation's IT infrastructure, and to be safeguarded by effective IT governance methods. By implementing programs such as child care services, work-

hours flexibility will help women in the industry to effectively balance their work and family life and give businesses a competitive advantage to hire and retain the best-qualified employees, male or female.

Further, companies should try to find ways to help the advancement, promotion of the women employees to leadership and management positions (Quenani-Petrela & Wolf, 2007). Therefore, the central government takes series of policies and measures to solve the issue concerning agriculture, countryside and farmers. These policies show that it is necessary to develop modern agriculture and change agriculture development mode.

Also, it emphasises to develop farmer cooperatives and rural service organisation to build the agriculture products market system (Yang & Lui, 2012). Information and knowledge are important factors for accelerating agricultural development through appropriate production planning, adoption of improved cultivation practices and effective post-harvest management and marketing (Ali & Kumarl, 2011). However, the need for information and knowledge varies across several stages of the supply chain as the agriculture systems in India are fragmented.



**Figure. Error! No text of specified style in document..1: Does the NW department of Education support the ICT implementation in FET College?**

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### **4.3 Correlations**

The correlation between age and has the Internet proved to be a useful source of ideas and information for teachers shows -0.724– a negative association. This means that workers are not generally happy with the Internet with the use of information available and that teachers between the ages of 21-30 years are not skilled in their functions. The correlation between gender and views on ICTs future direction in FET shows +0.507, is a high positive association. This means that older teachers are happy in their workplace and have sufficient resources on FET for ICT development. The correlation qualification and what are FET views on how ICT has been used in FET today shows -0.619 – a negative association. This could be interpreted that teachers are not satisfied with the role of organising of the ICT strategy through the realisation of FET development in terms of the years and experience they have in the organisation. The correlation between qualification and age shows -0.752, a very high

negative association. This means people are not satisfied with how resources are assigned in their functional areas, especially the age group 21-30 years.

The correlation between how often are FET students delivering ICT empowered lessons and how are FET students skills rated in the selected ICT application tools shows -0.608- a low negative association. This could be interpreted that staff members are not content with the organisation's way of ICT management assigned to teacher's areas and resources available.

The correlation between how often is FET students delivering ICT empowered lessons and how often do FET College Graduates get support for the distance training shows +0.663- a positive association. This indicates that the FET students have the skills in supporting in delivering ICT lessons for distance training. The correlation between does ICT integration reduce the FET College Graduates administration burden and has the Internet proved to be a useful source of ideas and information for teachers shows +0.930- a positive association. This means that FET College Graduates are working as a team with the support of administration, teachers and have experience in the IT.

The correlation between does ICT integration reduce the FET College Graduates administration burden and does the NW department of Education support the ICT implementation in FET College shows -0.678 – a negative association. This shows that most of the FET College Graduates between the ages of 21-30 years are not well supported by the NWU in the ICT implementation and this doesn't reduce the administration burdens. The correlation between does ICT integration reduce the FET College Graduates administration burden and what are the challenges in integrating ICT in FET students and learning activities shows -0.830 – a negative association. This means that the FET College Graduates are not trained, skilled and the challenges are there for implementing the integration of ICT. The correlation between what are FET views on how ICT has been used in FET today and are FET College Graduates trained with ICT skills at pre-service or in-service shows -+0.556- a

positive association. This means that the FET College Graduates workers believe that their skills are adequate in the pre-service and in-service for ICT.

#### **4.4 Summary**

The next chapter unites all the work done and comprises of the summary of the study, findings per research questions, identifies gap areas, provides opportunities and future research opportunity. The conclusion of the study is drawn and recommendations are also being outlined. Detailed results of the research have been provided and the results have been demonstrated in the form of graphs and stats.

A correlation analysis has been also provided to see the relationships between the variables in this study. The analysis of the results revealed that age, level of education and years of experience are not determinants of whether respondents are positive or negative about the improvement of skills development in Agriculture graduate candidates.

The next chapter presents the recommendations as per the results displayed in this chapter. The recommendations and conclusion will add value in the existing literature. Further research areas are also suggested as an indication of gaps in this field of study.

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The study investigated the current FET College graduates in North West agriculture employability as well as how this department interacts to make the process run smooth in order to ensure the success of training in line with the organisations goals and objectives. There are appropriate processes in place and most of the employees do not understand the organisation's mission and the flaw between departments seemed to be communication. Planning sessions are held and contingency plans are made, but the implementation is not filtered correctly to FET College graduates in North West agriculture.

Accordingly, the study was concerned with posing the following questions in the main: (1) How employable are FET College graduates in North West agriculture? (2) What are the needs and expectation of agricultural industries and organisation's from agricultural FET institutions and the graduates? (3) Why agricultural FET College graduates in North West are not marketable? (4) What are the training gaps within agricultural FET institution in North West Province?

This chapter presents the summary of the study, and address the findings per research question. It also provides managerial guidelines for opportunities. Conclusion of the study will be drawn and recommendations will also be outlined.

#### **5.2 Summary of Study**

The research study was informed by the review of literature which included the following concepts: needs, processes, models, requirements, systems, services, management, training, skills, environment, rationale, change, advisor, genders, business, generalists, vocationally-orientated education, relevance and effects. This was to enable the research study to be defined and suggested appropriately with relevant definitions, theories and other empirical studies.

A variety of research methods such as qualitative and quantitative were used. The research methods looked at instrumentation, research type, population, sampling method, and data gathering method from a theoretical perspective.

A questionnaire was developed and used to gather primary data based on demographics, for example. Age, gender, years of service in the department, and position. Other related questions were used to further extract information or data from the sample population.

### **5.3 Response to the Research Questions**

The main findings of this research in relation to each research question will now be discussed. Each question is followed by a discussion of the findings relating to that question.

#### **5.3.1 How employable are FET College graduates in North West agriculture?**

Selvarathan (1988) states that the flow in educational expansion brought about a number of complex and contentious issues in less developed market economies. The most apparent of them has been the chronic and alarming problem of rising educated unemployment among school leavers and tertiary institution graduates.

The International Labour Organisation's (ILO) employment missions to Kenya, Sri Lanka, Columbia and the Philippines, 1970s and the numerous subsequent regional and country studies of the ILO's World Employment Programme (WEP) have documented the unemployment scenario in Third World countries of Africa, Asia, the Pacific, Latin America and the Caribbean (Selvarathan, 1988).

Singh et al. (2012) argue that the objectives direct towards the needs of working life combining vocational training and theoretical and practical knowledge with special emphasis placed on developing new forms. Therefore, learning should be responsive to employment needs and include the development of skills in employment. Mercer et al. (2011) argues that a competency-based education and training (CBET) curriculum is under development. As part of this activity short courses are being designed and developed to address topics identified by local businesses as being crucial in meeting their future needs.

Gender equality is a concern and although opportunities for women are being officially promoted. Training designed to promote the development of small businesses and entrepreneurship will be of benefit. Youth issues have arisen in spite of universal education and there is a need to re-engage these excluded individuals. Life skills are considered to be an important cross-cutting theme through all training (Edgar et al., 2012). The Education for Employment project will enhance instructional capacity at the Kihonda RVTSC and provide students with demand driven course material designed to meet the needs of the region.

Selvarathan (1988) states that persistent and increasing unemployment rates abating one of the main concerns of Third World Governments. Selvarathan (1988) recommends a broad education with a combination of a cluster of practical skills, rather than in a specialisation in the specific vocation in the Third World.

Integrated education could give an individual versatile training, minimise the long established dichotomy between academic and vocational education, check the growing educational stratification, be cost-effective and prepare individuals to come to terms with their agricultural base, changing technological and industrial scene. In particular, in a changing technological scenario, a workforce with a sound broad education can easily upgrade their skills and equip themselves for jobs in the other industries as old ones are phased out (Selvarathan, 1988).

Singh et al. (2012) argue that the lack of skills as well as communication skills, problem-solving skills, creative decision-making in the current crop of graduates has evoked considerable concern among employers, universities and the public at large, both in Malaysia and abroad.

It has been acknowledged that these capabilities need to be instilled in the student during the course of their studies to ensure they succeed in their career paths. Faced with increasing external expectations and demands there is a need for university administrators and educators to generate adequate measures to develop and assess students' skills and competence before they are considered qualified for work (Singh et al., 2012).

Singh et al. (2012) argue that enabling an effective assessment of students, one should look for a convergence of evidence from different sources that have dealt with this issue. Formal modes of assessments such as those being currently employed provide a picture of only one facet of what students can do in a situation often working individually on paper-and-pencil tasks with limited time to complete the tasks. Over-reliance on such assessments gives an incomplete and distorted, not to mention over-hyped picture of students' performance. As different students have different capabilities, they demonstrate their abilities in different ways.

### **5.3.2 What are the needs and expectation of agricultural industries and organisations from agricultural FET institutions and the graduates?**

Jayaraj (1992) states that the agricultural universities, colleges and research stations are able to assist farmers directly or indirectly through the extension service workers by providing up-to-date, non-degree training programs and needs-based short courses. New location-specific technologies and practical skills, as needed and determined by the farmers, are offered in these courses. Public school teachers also need to be trained in elementary agriculture.

However, while the importance of non-degree programs is well accepted, not all the necessary aspects are currently being examined. In particular, women training programs and apprenticeship training, among others, have to be further strengthened to serve the larger group Jayaraj (1992). Therefore, with total restructuring once every four years to meet the society's needs: introducing inter-disciplinary courses: giving freedom and flexibility the course teachers to impart the latest knowledge in regular classes: providing opportunities for teachers to improve their knowledge and teaching capabilities: integrating research, teaching and extension and improving infrastructure facilities.

Kuruppu and Gruber (2006) argue that teaching faculty expects graduate students to have information seeking skills and therefore, spend little or no time helping students to acquire these skills. None of the participating teaching faculty members directed students to seek help from librarians; some assumed that students would do this on their own.

Kuruppu and Gruber (2006) note that graduate students are expected to possess some information-seeking skills, but many lack the formal opportunities to acquire them. Academic librarians should therefore plan to provide a variety of library instruction programs as well as effective online help, recognising that information needs and information-seeking behaviours vary among scholars. Instruction sessions on information resources need to be short, specific and offered multiple times. E-mail and chat reference might also be used for effective point-of-need assistance and instruction.

It is important to critically evaluate these services for continuous improvement, and also to promote such services vigorously in the academic community. Furthermore, in adding to guiding users to subject-specific resources, librarians should offer more generalised instruction in information management, such as the use of citation management software (Kuruppu & Gruber, 2006).

University libraries need to develop and maintain user-friendly web sites. With the explosion of information resources, creating a website that is both helpful and intuitive for diverse academic communities is a daunting but essential task. Academic libraries also need to regularly assess the usability of their web sites, with focus on continuous improvement and meeting user needs (Kuruppu & Gruber, 2006).

Shenaifi (2013) states that the College of Agriculture graduates viewed agriculture as being both scientific and technical. They have more positive attitudes toward agricultural programs and agriculture as a career than do non-agriculture program. Should the mission of the Colleges of Agricultures in Saudi Arabia be to produce graduates for entry into the agricultural industry, improvement needs to be made in both the identification and retention of students who are accepted into many departments and who are expected to complete a degree within the college. The agricultural industry places considerable importance on the background and experience of graduates. However, all the students are from cities and do not have farm background.

Therefore, of the several options available for implementation, one suggestion is to formulate a separate, five-year undergraduate degree program for the reason that the four-year B.Sc. degree program is too short and more suited to those with academic and scientific interests, in this context and given that no single undergraduate degree program can meet the varied needs, a five-year degree course with emphasis on self-employment as its prime objective is worth consideration (Jayaraj, 1992). The proposed program will cover such areas as seed production, mass production of seedlings and plants, agro-based industries agriculture, apiculture, mushroom, waste utilisation, sugar industries, plantation crops, fabrication of farm equipment's and maintenance, planning irrigation and drainage systems (Jayaraj, 1992).

Timely availability of inputs such as seeds, fertilizer and pesticides both in quantity and quality is very important (Jayaraj, 1992). Past experiences indicate that the private sector can do this job very effectively; thus they have the responsibility for input supply. Clear examples are available in the case of private seed industries which are performing better. Furthermore, service-related institutions such as agro-industries can be further encouraged to provide timely and effective service during peak demands at comparatively cheaper custom-hiring rates for tractors, tillers and sprayers (Jayaraj, 1992).

Quenani-Petrela and Wolf (2012) note that the presence of the gender wage gap in the industry has implications for agribusiness companies. Bureau of Labour Statistics projects that women's labour force participation rates are expected to keep rising, and the majority of expected jobs to be created over the next decade will be filled by women. This implies that companies must actively compete to attract and retain workers from this group, by creating and expanding policies that facilitate the integration of work and family responsibilities.

Quenani-Petrela and Wolf (2012) note that by implementing family-friendly programs (such as child care services, work-hours flexibility) not only will help women in the industry to successfully balance their work and family life, but will give businesses a competitive advantage to hire and retain the best-qualified employees, male or female. Further, to be successful, companies should try to find ways to help the

advancement and promotion of the women employees to leadership and management positions.

### **5.3.3 Why agricultural FET College graduates in North West are not marketable?**

Tarp (2000) notes that computable general equilibrium (CGE) model that explicitly incorporates key features of the Mozambique economy. The key features are the following: detailed accounting of marketing margins, home consumption, risk, and gender roles in agricultural production. Mozambique is rural and poor.

Tarp (2000) argues that agricultural technology improvements induce important welfare gains for the economy and rural households. Regardless of whether risk is a factor in cassava production, technological improvements in cassava production have strong welfare effects. Therefore, risk reduction is a factor in cassava production; impacts of technological improvement in cassava are likely to be particularly positive to rural women. With improved cassava technology, women have the opportunity to allocate time to other activities; including more market-oriented showed that employers rated the importance of employability skills at a high level.

Human capital development is an effort to achieve cost savings and improve the performance of the industry. Husain et al. (2010) define human capital as an element for upgrading company performance and to improve productivity of employees and sustainability to be more competitive. Husain et al. (2010) argues that the cost of developing human capital is increasing by employers expecting educational institutions to produce graduates with employability skills required by the market without additional training from the industry. Therefore, graduates with employability skills will have an advantage in getting jobs in the industry. The institutions of education such as polytechnics must produce graduates who not only have technical skills but also employability skills.

Husain et al. (2010) state that all employers, especially employers in civil engineering, electrical and mechanical placing employability skills as must be owned by all graduates to enable them to compete in the global market. The authorities of education institution should enhance the employability skills of the students either

through the professional development of lecturers, curriculum and co curriculum crops.

Alibeigi and Zarafshani (2006) argue that employer's ranked agricultural knowledge lower because it is regarded as a lower level of cognitive skills and only useful in a specific context. Employers in the agricultural field seem to be interested in graduates who can work in teams, who possess hands-on experience, who are able to diagnose problems and who are committed and honest.

Alibeigi and Zarafshani (2006) suggest that similar characteristics among college graduates. Employers suggested certain strategies to enhance generic skills and the employability of agricultural graduates. They proposed an integration of curriculum with SAEP. Through SAEP, students are likely to become more motivated to learn, take responsibility for their learning, and approach learning with a more holistic perspective that promotes the development of desirable attributes.

This is in line with Problem-Based Learning (PBL) where students are encouraged to work with a group of peers with whom they can share experiences, reflect on these experiences and begin to articulate their strengths and weaknesses in a safe learning environment that encourages further learning. Experiential learning experiences such as managing a farm were also suggested by employers as a tool to enhance students' employability (Alibeigi & Zarafshani, 2006).

Based on these findings it is recommended that the higher agricultural education system in Iran examine the following changes in the curriculum to meet the expectations of agricultural employers (Husain et al., 2010):

1. Explore the adoption of farm projects, self-directed learning or other avenues to acquire skills in communication, problem-solving, and the ethics of agriculture.
2. Incorporate practical teaching in the classroom. If agriculture is truly an applied science, then agricultural students must be given the opportunity to apply

Perspectives the science they have learned in their course work. Employers have indicated that our students lack the skills that come from exposure to real-world situations.

3. Develop a curriculum on agricultural ethics in order to promote honesty, trustfulness, and commitment among agricultural students.
4. Establish an advisory committee to update the curriculum in order to enhance students' employability.
5. Continue to solicit feedback from agricultural employers to alter the curriculum in order to provide agricultural students with the competencies and abilities necessary to be work ready graduates.

#### **5.3.4 What are the training gaps within agricultural FET institution in North West Province?**

The first strategic consideration, therefore, concerns the goals and aspirations of a particular region and the measures needed to ensure that its agricultural universities and colleges become true development institutions in support of these time-based and need-oriented goals (Kuruppu & Gruber, 2006). Therefore, proposed action programs of the agricultural universities and colleges concerning new teaching programs, the revision of existing curricula and the linkage of different educational programs. Furthermore, institutional cooperation in research must be tailored to current and future regional/national requirements.

Bawden et al. (1984) argues that emphasis has been placed on effective learning for agricultural managers and their technologist advisors. Bawden et al. (1984) argues that problem solving and learning are essentially the same psychological processes and that taking a systems approach to investigating problem situations provides a more useful paradigm or learning about agriculture than reductionist, discipline-based approaches.

Experiential learning and autonomy in learning are seen as consistent with this and are basic features of the programmes (Bawden et al., 1984). A conceptual framework for problem solving that incorporates soft and hard systems and scientific reductionist methodologies has been developed. A contingency' approach to situation improving

is emerging as a less restrictive and more realistic alternative to a normative approach to problem solving (Bawden et al., 1984).

Flynn et al. (2013) argues that Training food scientists and technologists (FSTs) to have appropriate skills begins with identification of those skills most desired by employers. Between March 2010 and August 2011, 16 workshops in 16 countries had 315 local FST employers contribute ideas of skills desired in their FSTs. Attendees provided as many skills as possible and these descriptive data were quantified and then analysed with multiple contingency tables and chi squared testing. Of the 3348 skill ideas provided, the most desired skill overall was Communicating, which was identified 13% of the time. Separate analysis of the 792 food sector skills indicated Product Development, at 28%, as the most desired.

Geographical region, employment area and FST level of responsibility all significantly influenced the top 3 choices of overall skills and of food sector skills, indicating that most desired skills in the food industry are not uniform. These results should contribute to the improvement of FST training and thus benefit the European food industry. Industrial relevance: The data presented here suggest that improvements in FST training and the acquisition of soft skills will improve Europe's food workforce as these are the skills employers most desire.

The geographical region influences those skills most desired by industrial employers. Differences in desired skills at different levels of FST responsibility further suggest that continual FST training that is continual professional development and it will contribute to improved FST performance. Data which can improve FST performance and thus contribute to increased innovation and competitiveness of the food and drink industry.

## **5.4 Limitations**

The use of sampling in this study limited the chance of members of the target population to be included in the sample. This limited the potential of the study to extract a complete picture of the challenges from the perspective of other members. Limitation (s) – The funding will be a challenging factor to Invite all FET unemployed

graduates, agricultural employers and College management to have one gathering for interview purposes and completion of questionnaires.

Delimitation (s) – The structured questionnaires will be developed and distributed among un-employed graduates, agricultural employers and College management, the visit will be paid to those who are within the North West Province. The communiqué will also be extended to those are not within the Province.

## **5.5 Managerial Guidelines**

From the results of this study the following guidelines are given to the Agricultural graduates at NWU that have a sustainability solution or are planning to develop and implement sustainability in the future (Kuruppu & Gruber, 2006):

- FET College graduates in North West agriculture have an understanding of what is expected of them, however, training should be implemented whereby they understand the role that they play in the process in other departments in the chain of events.
- Sufficient training is provided by the organisation; however, implementation of material covered has to be monitored by the FET College graduates in North West agriculture department.
- A close monitoring system needs to be put in place in order to track queries as well as turnaround time closely monitored to enable the reduction in costs of duplicating tasks.
- Plans discussed at the beginning of the month need to be implemented and closely monitored by the FET College graduates in North West agriculture department.
- FET College graduates in North West agriculture department should discuss the root level employees in order to get their input as well as to obtain their opinion and thereby ensuring the smooth implementation thereof.
- Contingency plans should be out in place and monitored to cater for absenteeism. This will be achieved by employing experienced FET College

graduates who understands the processes thoroughly. By employing FET College graduates the organisation will not incur addition costs on staff benefits.

- In order for any organisation to develop, changes need to be implemented. A culture of acceptance embracing of change need to be inculcated amongst FET College graduates and they need to be psychologically trained to accept and deal with change in the agricultural department.

## **5.6 Conclusion**

In line with results, the research will conclude that decision making affecting employability of FET (Further Education and Training) agricultural graduates in North West Province. Some of these factors can be mitigated internally while others are related to the economic situation in the country and will require strategic policy shift at national level.

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# APPENDIX A: MATRIX

ARTICLES	Defini- tions of Work flow	Capabi- lities to adopt workflo w	Polici- es and Work flow	e- Scien- ce and Workf low	Levels Use Workflow support systems (WWS)	and Of	M o d el s	W or kfl o w  C h a l l e n g e s	Pr o bl e m s	B e n e f i t s	Fra me wo rks an d Wo rkfl ow
Workflows and e-Science 1	▪	▪	▪	▪	▪		▪	▪		▪	▪
A deductive system for proving workflow models 2	▪										
Correctness criteria for dynamic changes in workflow systems 3	▪			▪	▪			▪		▪	
A reference architecture for workflow management systems 4	▪	▪		▪			▪		▪	▪	▪
Real time scheduling of Workflow Management Systems based on p-time Petri net model with hybrid resources 5	▪	▪	▪		▪			▪	▪		▪
Meta workflow as a control and coordination mechanism for exception handling in workflow systems 6			▪		▪		▪	▪		▪	
Understanding user differences in open-source workflow management 7	▪		▪	▪	▪		▪	▪	▪		▪
A model-driven workflow fragmentation framework for collaborative workflow	▪	▪	▪		▪			▪	▪	▪	

architectures and systems 8										
Handing signature purposes in workflow systems 9		▪			▪		▪	▪	▪	▪
Dynamic workflow change in PDM systems 10		▪			▪				▪	▪
Evolution design of user interfaces for workflow information systems 11	▪	▪	▪	▪	▪		▪	▪	▪	▪
Information assurance metric development framework for electronic bill presentment and payment systems 12		▪		▪	▪			▪	▪	▪
Recommender system based on workflow 13		▪		▪	▪		▪	▪	▪	▪
Metagraphs in workflow support systems 14	▪	▪	▪		▪		▪	▪		▪
Modelling business process with workflow systems Alternative approaches 15			▪	▪	▪		▪	▪		▪
A security framework for a workflow-based grid development platform 16	▪	▪			▪		▪	▪	▪	▪
An operational approach to the design of workflow systems 17	▪				▪		▪	▪	▪	▪
Integrating AI planning techniques with workflow management system 18	▪	▪			▪			▪		▪
The design of intelligent workflow monitoring with agent technology 19	▪		▪	▪			▪	▪	▪	
Collaborative filtering based on workflow space 20		▪	▪						▪	

Goals description and application in migrating workflow system 21	▪		▪			▪	▪		
Developing a reusable workflow engine 22			▪	▪		▪	▪	▪	
A framework for risk assessment based on analysis 23	▪					▪			▪
Estimated financial savings associated with health information exchange 24	▪		▪			▪	▪		▪
A reference model for team-enabled workflow management systems 25	▪	▪	▪	▪	▪	▪	▪	▪	▪

## APPENDIX B: Questionnaire Development Matrix

Question naire section	Types of Research Questions	Quest ion No.	Development Matrix				
			Survey Question/ Statements	Respon se Options	Data Type	Appropria te Data Measure	Appropria te Statistical Test
	<b>Demograp hic Questions</b>	1.1	Please tick your age group in the appropriate block:	21-30, 31-40, 41-50, 51-60, 60+	Discret e	Ordinal	Basic descriptive statistics, single group t test, the z proportion s test the X <sup>2</sup> test.  (Use demograp hic data to characteri se your responde nts)
		1.2	What is your gender?	Male or Female	Dichoto mous	Nominal	
		1.3	How long have you been working at the North West University Financial Department.	1-2, 3-4, 5-6, 7-8, 9-10, 10+	Discret e		
		1.4	Was your involvement in workflow planning for the Financial Department advisor staff from a Financial or Business	Financial or Business	Dichoto mous	Ordinal	

<b>Section 1</b>			perspective?				
		1.5	How many workflow planning implementations have you been involved in including this one?	1, 2, 3, 4, 5+	Discrete	Nominal	
		1.6	What type of post are you in at work?	Managerial or Non-Managerial	Dichotomous		
<b>Section 2</b>	<b>Is there a communication/ collaboration problem in</b>	2.1	Your functional area of workflow planning was implemented within the timelines originally stipulated.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum (= Cline)	Scalar (Likert Scale)	Any member of the $X^2$ Any member of the $X^2$ family or correlation tests, e.g., Phi coefficient,
		2.2	The plant assigned while assuming you understand financial	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	the contingency coefficient and Cramer's V, the

<p><b>the NWU finance department and if identified it will improve the sustainability of workflow management systems?</b></p>	2.3	<p>workflow was appropriate.</p> <p>Workflow planning had enough people resources assigned to it in your functional area.</p>	<p>Strongly Agree - Agree- Disagree -Strongly Disagree</p>	Continuum	Scalar (Likert Scale)	<p>lambda coefficient or the uncertainty coefficient (U) or the Pearson significance test.</p>
	2.4	<p>Your functional area received sufficient and timeous training for workflow planning</p>	<p>Strongly Agree - Agree- Disagree -Strongly Disagree</p>	Continuum	Scalar (Likert scale)	<p>(Continuous data reveal attributes of whatever one studies, allow one to determine general trends and establish significant correlations = correlation trends between two attributes)</p>
	2.5	<p>There are adequate management support and commitment throughout the workflow planning.</p>	<p>Strongly Agree - Agree- Disagree -Strongly Disagree</p>	Continuum	Scalar (Likert Scale)	
	2.6	<p>Satisfactorily accountability was placed on the workflow planning</p>	<p>Strongly Agree - Agree- Disagree -Strongly Disagree</p>	Continuum	Scalar (Likert Scale)	

		team for their function in the project			
2.7	Satisfactorily accountability was placed on the business for their function in the project.	Strongly Agree - Agree- Disagree -Strongly Disagree	Continuum	Scalar (Likert Scale)	
2.8	Project team leaders were sufficiently monitored to ensure that they were fulfilling their functions	Strongly Agree - Agree- Disagree -Strongly Disagree	Continuum	Scalar (Likert Scale)	
2.9	An appropriate planning measure was implemented for strategic planning.	Strongly Agree - Agree- Disagree -Strongly Disagree	Continuum	Scalar (Likert Scale)	
2.10	The original business case adhered to for project workflow planning	Strongly Agree - Agree- Disagree -Strongly Disagree	Continuum	Scalar (Likert Scale)	

<b>Section 3</b>	<b>What are the financial processes in the NWU department and their impact on the sustainability of workflow management system?</b>	3.1	Sufficient strategic planning was exercised throughout the phases of the financial department	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	Any member of the $X^2$ family or correlation tests
		3.2	Did you participate in any workflow planning event?	Yes - No	Dichotomous	Nominal	Basic descriptive statistics, single group t test, the z proportion test the $X^2$ test
		3.3	Were you part of a workflow planning team?	Yes - No	Dichotomous	Nominal	Basic descriptive statistics, single group t test, the z proportion test the $X^2$ test
<b>Section 4</b>	<b>What are the capabilities of workflow management systems, its causes of and its impact on</b>	4.1	Do you know what the Financial Department Business Plan and how workflow planning impacts upon it	Yes - No	Dichotomous	Ordinal	Any member of the $X^2$ Any member of the $X^2$ family or correlation tests, e.g., Phi coefficient, the

<b>reliability?</b>	4.2	The workflow planning was aligned to the business strategy for the 2011/2012 financial year that is the strategic planning policy was appropriate to the Financial department business strategy.	Strongly Agree - Agree- Disagree -Strongly Disagree	Continuum	Scalar (Likert Scale)	contingency coefficient and Cramer's V, the lambda coefficient or the uncertainty coefficient (U) or the Pearson significance test.
	4.3	The concurrent restructuring and centralisation process at Financial department had a negative effect on the workflow planning implementation.	Strongly Agree - Agree- Disagree -Strongly Disagree	Continuum	Scalar (Likert Scale)	(Continuous data reveal attributes of whatever one studies, allow one to determine general trends and establish significant correlation

		4.4	I attend seminars or workshop on workflow planning.	Strongly Agree - Agree- Disagree -Strongly Disagree	Continuum	Scalar (Likert Scale)	s = correlation trends between two attributes)
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# APPENDIX C: QUESTIONNAIRE

FOR OFFICE USE ONLY: Respondent Code: \_\_\_\_\_

## VOLUNTARY QUESTIONNAIRE

“ The Employability of Further Education and Training (FET) Agricultural Graduates, North West Province”

Graduate School NWU

University of South Africa

Researcher: Victor Salman

Supervisor: Prof S. Lubbe

### Note to the Respondent

- We need to your help to understand the extent he Employability of Further Education and Training (FET) Agricultural Graduates, North West Province.
- Although we would like you to help us, you do not have to take part in this survey.
- If you do not want to take part, just hand in the blank questionnaire at the end of the survey session
- What you say in this questionnaire will remain private and confidential. No one will be able to trace your opinions back to you as a person.

### The Questionnaire as four parts:

Part 1 asks permission to use your responses for academic research.

Part 2 asks general personal particulars like your age, gender and home language.

- Part 3 asks about Further Education and Training Agricultural Graduates in North West Province.

### How to complete the questionnaire

- Please answer the questions as truthfully as you can. Also, please be sure to read and follow the directions for each part. If you do not follow the directions, it will make it harder for us to do our project.
- We are only asking you about things that you and your fellow researchers should feel comfortable telling us about. If you don't feel comfortable answering a question, you can indicate that you do not want to answer it. The responses to the questions that you do answer will be kept confidential.
- You can mark each response by making a tick or a cross or encircling each appropriate response, with a PEN (not a pencil), or by filling in the required words or numbers.

### Part 1: Permission to use my responses for academic research

I hereby give permission that my responses may be used for research purposes provided that my identity is not revealed in the published records of the research.	
Initials and surname _____	Postal address: _____
Contact numbers: Home: _____	Cell: _____

No.	<b>PART 2: GENERAL PERSONAL PARTICULARS</b> <b>Please tell us a little about yourself</b> Please mark only ONE option per question below.		3.2	Are subject objectives integrated with ICT components? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Both
2.1	I am a: <input type="checkbox"/> Male <input type="checkbox"/> Female		3.3	How are FET students skills rated in the selected ICT application tools? <input type="checkbox"/> Excellent <input type="checkbox"/> Very Good <input type="checkbox"/> Good <input type="checkbox"/> Satisfactory <input type="checkbox"/> Fair <input type="checkbox"/> Poor
2.2	I am a: <input type="checkbox"/> below 20 years <input type="checkbox"/> 21- 30 years	<input type="checkbox"/> 31 - 40 years <input type="checkbox"/> 41- 50 years <input type="checkbox"/> above 50 years		<b>PART 4: The needs and expectation of agricultural industries and organisations from agricultural FET institutions and the graduates?</b> Please mark only ONE option per question below
2.3	I am a: <input type="checkbox"/> African <input type="checkbox"/> Coloured <input type="checkbox"/> Indian	<input type="checkbox"/> White <input type="checkbox"/> A member of another ethnic group	4.1	What are the challenges in integrating ICT in FET students and learning activities? <input type="checkbox"/> Not within scope <input type="checkbox"/> Significant <input type="checkbox"/> Mild <input type="checkbox"/> Fairly <input type="checkbox"/> Mostly <input type="checkbox"/> Completely
2.4	Indicate your qualification status <input type="checkbox"/> Below matric <input type="checkbox"/> Matric	<input type="checkbox"/> Diploma <input type="checkbox"/> Degree <input type="checkbox"/> Post degree	4.2	What are FET views on how ICT has been used in FET today? (What challenges affect them the most) <input type="checkbox"/> Not within scope <input type="checkbox"/> Significant <input type="checkbox"/> Mild <input type="checkbox"/> Fairly <input type="checkbox"/> Mostly <input type="checkbox"/> Completely
3.1	How often are FET students delivering ICT empowered lessons? <input type="checkbox"/> Never <input type="checkbox"/> Once a week	<input type="checkbox"/> Twice a week <input type="checkbox"/> Daily <input type="checkbox"/> Less than a month		<b>PART 5: Why agricultural FET College graduates in North West are not marketable?</b> Please mark only ONE option per question below

5.1	<p>How do FET College Graduates use ICT tools in their classes?</p> <p><input type="checkbox"/> Not within scope</p> <p><input type="checkbox"/> Poorly</p> <p><input type="checkbox"/> Fairly</p> <p><input type="checkbox"/> Mostly</p> <p><input type="checkbox"/> Completely</p>	6.1	<p>Are FET College Graduates trained with ICT skills at pre-service or in-service?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Not Sure</p>
5.2	<p>Does ICT integration reduce the FET College Graduates administration burden?</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>	6.2	<p>How often do FET College Graduates get support for the distance training?</p> <p><input type="checkbox"/> Frequently</p> <p><input type="checkbox"/> Rarely</p> <p><input type="checkbox"/> Not available</p>
5.3	<p>Has the Internet proved to be a useful source of ideas and information for teachers?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Not Sure</p>	6.3	<p>Were teachers trained in technical support for their FET tasks?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Not Sure</p>
	<p><b>PART 6: What are the training gaps within agricultural FET institution in North West Province?</b></p> <p>Please mark only ONE option per question below.</p>	6.4	<p>Does the NW department of Education support the ICT implementation in FET College?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Not Sure</p>

## Appendix D: Correlations

Correlations										
		Gender	Age	Ethnics	Qualification	Qu1	Qu2	Qu3	Qu4	Qu5
Gender	Pearson Correlation	1	.200	. <sup>a</sup>	.126	-.352 <sup>*</sup>	.149	.482 <sup>**</sup>	-.349 <sup>*</sup>	.048
	Sig. (2-tailed)		.250	.	.472	.038	.394	.003	.040	.784
	N	35	35	35	35	35	35	35	35	35
Age	Pearson Correlation	.200	1	. <sup>a</sup>	-.752 <sup>**</sup>	-.069	-.030	.395 <sup>*</sup>	-.771 <sup>**</sup>	-.619 <sup>**</sup>
	Sig. (2-tailed)	.250		.	.000	.694	.866	.019	.000	.000
	N	35	35	35	35	35	35	35	35	35
Ethnics	Pearson Correlation	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.
	N	35	35	35	35	35	35	35	35	35
Qualifications	Pearson Correlation	.126	-.752 <sup>**</sup>	. <sup>a</sup>	1	-.373 <sup>*</sup>	.214	-.003	.360 <sup>*</sup>	.805 <sup>**</sup>
	Sig. (2-tailed)	.472	.000	.		.027	.217	.985	.033	.000
	N	35	35	35	35	35	35	35	35	35
Qu1	Pearson Correlation	-.352 <sup>*</sup>	-.069	. <sup>a</sup>	-.373 <sup>*</sup>	1	-.427 <sup>*</sup>	-.608 <sup>**</sup>	.341 <sup>*</sup>	-.397 <sup>*</sup>
	Sig. (2-tailed)	.038	.694	.	.027		.010	.000	.045	.018
	N	35	35	35	35	35	35	35	35	35
Qu2	Pearson Correlation	.149	-.030	. <sup>a</sup>	.214	-.427 <sup>*</sup>	1	.288	.021	.404 <sup>*</sup>
	Sig. (2-tailed)	.394	.866	.	.217	.010		.094	.903	.016
	N	35	35	35	35	35	35	35	35	35
Qu3	Pearson Correlation	.482 <sup>**</sup>	.395 <sup>*</sup>	. <sup>a</sup>	-.003	-.608 <sup>**</sup>	.288	1	-.549 <sup>**</sup>	.112

	Sig. (2-tailed)	.003	.019	.	.985	.000	.094		.001	.523
	N	35	35	35	35	35	35	35	35	35
Qu4	Pearson Correlation	-.349 <sup>*</sup>	-.771 <sup>**</sup>	. <sup>a</sup>	.360 <sup>*</sup>	.341 <sup>*</sup>	.021	-.549 <sup>**</sup>	1	.320
	Sig. (2-tailed)	.040	.000	.	.033	.045	.903	.001		.061
	N	35	35	35	35	35	35	35	35	35
Qu5	Pearson Correlation	.048	-.619 <sup>**</sup>	. <sup>a</sup>	.805 <sup>**</sup>	-.397 <sup>*</sup>	.404 <sup>*</sup>	.112	.320	1
	Sig. (2-tailed)	.784	.000	.	.000	.018	.016	.523	.061	
	N	35	35	35	35	35	35	35	35	35
Qu6	Pearson Correlation	.507 <sup>**</sup>	.420 <sup>*</sup>	. <sup>a</sup>	.106	-.428 <sup>*</sup>	.423 <sup>*</sup>	.558 <sup>**</sup>	-.461 <sup>**</sup>	.197
	Sig. (2-tailed)	.002	.012	.	.543	.010	.011	.000	.005	.257
	N	35	35	35	35	35	35	35	35	35
Qu7	Pearson Correlation	.416 <sup>*</sup>	-.032	. <sup>a</sup>	.375 <sup>*</sup>	-.487 <sup>**</sup>	.535 <sup>**</sup>	.316	-.324	.566 <sup>**</sup>
	Sig. (2-tailed)	.013	.854	.	.027	.003	.001	.065	.058	.000
	N	35	35	35	35	35	35	35	35	35
Qu8	Pearson Correlation	.245	.934 <sup>**</sup>	. <sup>a</sup>	-.737 <sup>**</sup>	-.064	.057	.369 <sup>*</sup>	-.830 <sup>**</sup>	-.574 <sup>**</sup>
	Sig. (2-tailed)	.156	.000	.	.000	.713	.745	.029	.000	.000
	N	35	35	35	35	35	35	35	35	35
Qu9	Pearson Correlation	.184	.869 <sup>**</sup>	. <sup>a</sup>	-.724 <sup>**</sup>	-.060	.150	.343 <sup>*</sup>	-.734 <sup>**</sup>	-.528 <sup>**</sup>
	Sig. (2-tailed)	.291	.000	.	.000	.732	.391	.043	.000	.001
	N	35	35	35	35	35	35	35	35	35
Qu10	Pearson Correlation	.184	.869 <sup>**</sup>	. <sup>a</sup>	-.724 <sup>**</sup>	-.060	.150	.343 <sup>*</sup>	-.734 <sup>**</sup>	-.528 <sup>**</sup>
	Sig. (2-tailed)	.291	.000	.	.000	.732	.391	.043	.000	.001
	N	35	35	35	35	35	35	35	35	35

Qu11	Pearson Correlation	-.338*	.000	. <sup>a</sup>	-.368*	.663**	-.168	-.595**	.396*	-.381*
	Sig. (2-tailed)	.047	1.000	.	.029	.000	.335	.000	.019	.024
	N	35	35	35	35	35	35	35	35	35
Qu12	Pearson Correlation	.322	-.116	. <sup>a</sup>	.459**	-.248	-.143	.121	-.010	.173
	Sig. (2-tailed)	.059	.506	.	.006	.151	.412	.490	.956	.319
	N	35	35	35	35	35	35	35	35	35
Qu13	Pearson Correlation	-.370*	-.689**	. <sup>a</sup>	.485**	.207	-.382*	-.331	.385*	.389*
	Sig. (2-tailed)	.029	.000	.	.003	.233	.024	.052	.022	.021
	N	35	35	35	35	35	35	35	35	35

Correlations										
		Qu6	Qu7	Qu8	Qu9	Qu10	Qu11	Qu12	Qu13	
Gender	Pearson Correlation	.507**	.416*	.245	.184	.184	-.338*	.322	-.370*	
	Sig. (2-tailed)	.002	.013	.156	.291	.291	.047	.059	.029	
	N	35	35	35	35	35	35	35	35	35
Age	Pearson Correlation	.420*	-.032	.934**	.869**	.869**	.000	-.116	-.689**	
	Sig. (2-tailed)	.012	.854	.000	.000	.000	1.000	.506	.000	
	N	35	35	35	35	35	35	35	35	35
Ethnics	Pearson Correlation	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	. <sup>a</sup>	
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	
	N	35	35	35	35	35	35	35	35	35
Qualifications	Pearson Correlation	.106	.375*	-.737**	-.724**	-.724**	-.368*	.459**	.485**	
	Sig. (2-tailed)	.543	.027	.000	.000	.000	.029	.006	.003	

	N	35	35	35	35	35	35	35	35
Qu1	Pearson Correlation	-.428 <sup>*</sup>	-.487 <sup>**</sup>	-.064	-.060	-.060	.663 <sup>**</sup>	-.248	.207
	Sig. (2-tailed)	.010	.003	.713	.732	.732	.000	.151	.233
	N	35	35	35	35	35	35	35	35
Qu2	Pearson Correlation	.423 <sup>*</sup>	.535 <sup>**</sup>	.057	.150	.150	-.168	-.143	-.382 <sup>*</sup>
	Sig. (2-tailed)	.011	.001	.745	.391	.391	.335	.412	.024
	N	35	35	35	35	35	35	35	35
Qu3	Pearson Correlation	.558 <sup>**</sup>	.316	.369 <sup>*</sup>	.343 <sup>*</sup>	.343 <sup>*</sup>	-.595 <sup>**</sup>	.121	-.331
	Sig. (2-tailed)	.000	.065	.029	.043	.043	.000	.490	.052
	N	35	35	35	35	35	35	35	35
Qu4	Pearson Correlation	-.461 <sup>**</sup>	-.324	-.830 <sup>**</sup>	-.734 <sup>**</sup>	-.734 <sup>**</sup>	.396 <sup>*</sup>	-.010	.385 <sup>*</sup>
	Sig. (2-tailed)	.005	.058	.000	.000	.000	.019	.956	.022
	N	35	35	35	35	35	35	35	35
Qu5	Pearson Correlation	.197	.566 <sup>**</sup>	-.574 <sup>**</sup>	-.528 <sup>**</sup>	-.528 <sup>**</sup>	-.381 <sup>*</sup>	.173	.389 <sup>*</sup>
	Sig. (2-tailed)	.257	.000	.000	.001	.001	.024	.319	.021
	N	35	35	35	35	35	35	35	35
Qu6	Pearson Correlation	1	.441 <sup>**</sup>	.392 <sup>*</sup>	.365 <sup>*</sup>	.365 <sup>*</sup>	-.160	.223	-.431 <sup>**</sup>
	Sig. (2-tailed)		.008	.020	.031	.031	.358	.197	.010
	N	35	35	35	35	35	35	35	35
Qu7	Pearson Correlation	.441 <sup>**</sup>	1	.156	.145	.145	-.472 <sup>**</sup>	-.034	-.161
	Sig. (2-tailed)	.008		.372	.406	.406	.004	.846	.356
	N	35	35	35	35	35	35	35	35
Qu8	Pearson Correlation	.392 <sup>*</sup>	.156	1	.930 <sup>**</sup>	.930 <sup>**</sup>	.000	-.208	-.678 <sup>**</sup>

	Sig. (2-tailed)	.020	.372		.000	.000	1.000	.231	.000
	N	35	35	35	35	35	35	35	35
Qu9	Pearson Correlation	.365 <sup>*</sup>	.145	.930 <sup>**</sup>	1	1.000 <sup>**</sup>	.000	-.306	-.670 <sup>**</sup>
	Sig. (2-tailed)	.031	.406	.000		.000	1.000	.074	.000
	N	35	35	35	35	35	35	35	35
Qu10	Pearson Correlation	.365 <sup>*</sup>	.145	.930 <sup>**</sup>	1.000 <sup>**</sup>	1	.000	-.306	-.670 <sup>**</sup>
	Sig. (2-tailed)	.031	.406	.000	.000		1.000	.074	.000
	N	35	35	35	35	35	35	35	35
Qu11	Pearson Correlation	-.160	-.472 <sup>**</sup>	.000	.000	.000	1	-.172	-.060
	Sig. (2-tailed)	.358	.004	1.000	1.000	1.000		.324	.733
	N	35	35	35	35	35	35	35	35
Qu12	Pearson Correlation	.223	-.034	-.208	-.306	-.306	-.172	1	.042
	Sig. (2-tailed)	.197	.846	.231	.074	.074	.324		.810
	N	35	35	35	35	35	35	35	35
Qu13	Pearson Correlation	-.431 <sup>**</sup>	-.161	-.678 <sup>**</sup>	-.670 <sup>**</sup>	-.670 <sup>**</sup>	-.060	.042	1
	Sig. (2-tailed)	.010	.356	.000	.000	.000	.733	.810	
	N	35	35	35	35	35	35	35	35

## List of Acronyms

- N (18) – National Road 18
- LM – Lucas Mangope
- SERTEC – Certification Council for Technikon Education
- MOU – Memorandum of Understanding
- N 4, 5 & 6 – National Certificate in Farming Management
- NQF – National Qualification Framework
- ASGISA – Shared Growth Initiative for South Africa
- STEE – Survey of Total Employment and Earnings
- USA – United State of America
- DEST – Department of Education, Science and Training
- ANC – African National Congress
- GEAR – Growth Employment and Redistribution Programme
- RDP – Reconstruction and Development Programme
- ANDCM – National Association of Unemployment Graduates
- DPRU – Development Policy Research Unit
- SETA – Sector Education and Training Authority
- FET – Further Education and Training
- ARC – Agricultural Research Council
- NGO – Non Government Organisation
- SAB – South African Breweries
- PI – Performance Index
- SPSS – Social Science Statistical Packages
- TAC – Taung Agricultural College
- NW – North West