

**Factors that determine the acceptance of a job offer by the entry-level
information technology graduate from the North West Province.**

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**Mini-dissertation submitted in partial fulfilment of the requirements for the degree Master
in Business Administration at the Potchefstroom Campus of the North-West University**

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November 2010

ACKNOWLEDGEMENTS

I wish to thank those individuals who supported and guided me to complete this research successfully.

I owe a special debt of gratitude to Dr. Christoff Botha, for his guidance and motivation during the completion of this research and to Dr. Hanlie Moss who never allowed me to give up.

To my family and loved ones, you are the best, thank you for your support, love and understanding even though you had to make many sacrifices.

I thank God for putting all these wonderful people in my life, for leading me this far, for giving me the strength to complete this, regardless.

ABSTRACT

The unemployment rate has become a major concern for policy makers in South Africa and therefore the National Plan for Higher Education states that higher education training providers should produce more graduates to address this problem. This resulted in a labour force that has grown rapidly and has become younger and more educated. It would therefore be expected that graduates with a post-matric tertiary qualification would be in high demand, resulting in a low graduate unemployment rate.

The reality is that the unemployment rate among graduates has increased. This is not only a concern for the policymakers of South Africa but also for a private higher education training provider situated in the North West Province, specialising in information technology (IT) qualifications (and whose students and alumni participated in this study as part of the study population).

The majority of the IT jobs available to their students are in the Gauteng province which means their graduates often need to relocate. As for all other entry level graduates they also have to make choices - when to decline or accept a job offer.

This study determines what the expectations of these entry level IT graduates are and the factors that might influence their decision to accept or decline a job offer. For the training provider it is important to know what the challenges are that their graduates encounter. The factors contributing to unemployment among these IT graduates were also investigated.

LIST OF KEY TERMS

Factors

Job offer

Entry level IT Graduate

Current students

Digital divide

Metropolitan area

Rural area

Perceived

OPSOMMING

Die werkloosheidsyfer is 'n wesenlike bekommernis vir besluitnemers in Suid-Afrika en daarom vereis die Nasionale Plan vir Hoër Onderwys dat hoër onderwys opleidingsinstansies meer gegradueerdes moet lewer om die probleem aan te spreek. Dit het 'n vinnig-groeiende, jonger, meer opgeleide werksmag tot gevolg gehad. Dit sou dus verwag kon word dat gegradueerdes met 'n naskoolse kwalifikasie hoog in aanvraag sou wees, wat 'n lae gegradueerde werkloosheidsyfer sou meebring.

Die werklikheid is egter dat die werkloosheidsyfer onder gegradueerdes toegeneem het. Dit is 'n bekommernis nie slegs vir besluitnemers in Suid-Afrika nie, maar ook vir die privaat hoër onderwysinstansie in die Noordwes-Provinsie wat spesialiseer in inligtingstechnologie (IT) kwalifikasies (en wie se studente en oud-studente aan hierdie studie deelgeneem het as deel van die studie-populasiegroep).

Die meerderheid IT werksgeleenthede beskikbaar vir hulle studente is in die Gauteng-provinsie, wat beteken dat hulle gegradueerdes dikwels moet verhuis. Soos alle ander intreevlak gegradueerdes, moet hulle ook keuses maak - wanneer om 'n werksaanbod te aanvaar of van die hand te wys.

Hierdie studie bepaal wat die verwagtinge van hierdie intreevlak gegradueerdes is, en die faktore wat hulle besluit om 'n werksaanbod te aanvaar of te verwerp, beïnvloed. Vir die opleidingsinstansie is dit belangrik om te weet wat die uitdagings is wat hulle gegradueerdes in die gesig staar. Die faktore wat tot werkloosheid onder hierdie IT gegradueerdes bydra, is ook ondersoek.

TREFWOORDE

Faktore

Werksaanbod

Intreevlak IT Graduant

Huidige studente

Digitale verdeling

Platteland

Persepsie

LIST OF ABBREVIATIONS

AsgiSA	Accelerated and Shared Growth Initiative for South Africa
DTI	Department of Trade and Industry (South African Government)
GDP	Gross Domestic Product
GEAR	Government's Growth, Employment and Redistribution programme
LFS	Labour Force Survey
OHS	October Household Survey
SAITIS	South African Industry Strategy Project

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CHAPTER 1: NATURE AND SCOPE OF STUDY

1.1. INTRODUCTION

The unemployment rate has become a major concern for policymakers in South Africa and employment growth has not met the expectations of GEAR (Government's Growth, Employment and Redistribution programme) (Oosthuizen, 2006:1). The majority of the youth lack the necessary skills while the labour market demands skilled and educated workers. The result is a mismatch between what the employees have to offer and what the employers demand (Pauw *et al.*, 2008:45). AsgiSA (Accelerated and Shared Growth Initiative for South Africa) has identified skills shortages as one of the main reasons for the lack of growth in South Africa (AsgiSA, 2006:6).

The South African National Plan for Higher Education states that higher education training providers should produce more graduates. A 20% increase for the age group 20-24 was set as target for the next 10-15 years (National Plan for Higher Education, 2001:20). A special attempt was made by the Minister of Education to sustain the supply of employable graduates and to improve the efficiency of higher education (Cele & Menon, 2006:24).

However, evidence does exist that the labour force has become better educated. It would therefore be perceived that graduates with a post-matric tertiary qualification, which could be a diploma, technical qualification or certificate, would be in high demand resulting in the graduate unemployment rate to be low. On the contrary, it has been found that, compared to the overall unemployment rate, unemployment amongst graduates have been growing the fastest (Pauw *et al.*, 2008:46-47).

The current economic crisis, the productivity levels of the South African labour force and the political uncertainty may all have contributed to the number of the current employment opportunities available, but there could be other factors also influencing the graduate employment rate. Therefore a thorough investigation is required to identify those factors that can be addressed to ensure that the graduates do find employment, thereby increasing the graduate employment rate.

1.2. BACKGROUND & PROBLEM STATEMENT

Even though the labour force has grown rapidly and has become younger and more educated, the increased demand for skilled labour does not seem to be able to meet the expectations of the new entry level graduates.

It has become extremely important for higher education training providers to have a good employment record of their graduates. Competitiveness among higher education training providers and financial pressure have resulted in employment rate becoming one of the indicators of the quality of training offered by these institutions (Spies & Van Niekerk, n.d.:84). It has become clear that a tertiary qualification (certificate, diploma or degree) is no more a guarantee for a well-paid, professional job. Since the unemployment rate has increased among graduates, the reasons why graduates accept/reject job opportunities may have become a crucial factor (Villar *et al.*, 2000:390).

According to Oosthuizen (2006:9), the OHS (October Household Survey) and the LFS (Labour Force Survey) provides a better picture of the employment situation in South-Africa. The OHS of 1995 and the LFS of 2005 indicated that 61% of the increase in the labour force was due to the youth (age 15-34) entering the labour market compared to only 41% of employment available to this age group (Pauw *et al.*, 2008:32-47). Important differences are apparent when comparing overall unemployment rate to unemployment rate of participants with a tertiary qualification. According to Pauw *et al.* race also plays a role as employed white persons holding a tertiary education grew from 31% to 38%. This is a result of demand by the labour market and not as a result of the available workforce. Pauw *et al.* further acknowledge that the level of education seems to play a significant role in employment. Even though it seems as though the "tertiary educated individual" suffers less from unemployment, the unemployment rate for this category increased from 6.6% in 1995 compared to 10.4% in 2004.

Pauw *et al.* (2008:4) identify the following as possible reasons for unemployment of graduates: type of qualification, quality of education, continued discrimination and graduate expectation. It is obvious then that a tertiary qualification is no guarantee for employment and the possible reasons for the rise in unemployment need to be examined.

In South Africa, there is an ongoing attempt to create jobs for the unemployed. Productivity is, however, a serious problem in South Africa which could contribute to the current economic

crisis as less productivity leads to more job losses. Not only are there less job opportunities but there has also been a culture change: lifetime employment is making way for the entrepreneurial freelancers and stability is making way for more flexible staffing options as companies are making use of more contract workers.

The current economic downturn is an international phenomenon which has a direct effect on the decline in job opportunities. During challenging times like these it is even more difficult to find employment that fits your skills and interest. It seems as though employers try to obtain the best workforce at the lowest cost and more advanced skills are required from employees to enable companies to manage with a smaller workforce. During difficult times like these it is especially important for the entry level graduate not to have unrealistic expectations.

The information technology (IT) industry worldwide is faced with a specific challenge: constant change. This is also a challenge for the information technology student, the IT professional and training providers.

The following questions arising from this challenge have been identified (Pauw *et al.*, 2008:48-56).

- What are the desired competencies of information technology professionals?
- Should they obtain a degree, diploma or certificate?
- What are the employment opportunities?

Employability is not only difficult to define but also to measure (Cranmer, 2006:172). During their studies students gain knowledge as well certain skills. The study methodology followed could provide opportunities for extensive self-motivation, time management and self-discipline. But is this enough to prepare them for a career? How employable are they really? De la Harpe *et al.* (2000:232) argue that employers are concerned that undergraduate programs are failing to provide graduates with the necessary skills for their careers - a phenomenon experienced worldwide. In a study in 2004, Harvey and Bowers-Brown have pointed out that similar expectations exist regarding employability of graduates throughout the world but different methods are used in the preparation process to comply with these expectations. An empirical study conducted by Brown and Scase (1994) indicated that certain employer perceptions may exist regarding the 'quality of graduates' from certain training providers, resulting in preference given to graduates from specific training providers.

In this study it is envisaged to determine the factors that encourage an entry level IT graduate to accept employment (referred to as pull factors) or decline employment (referred to as push factors).

It is also important to determine:

- What the expectations are regarding job offers and compensation.
- What obstacles do they encounter – what are the reasons for not accepting offers?
- On whom do they rely for recruitment assistance – what is the role of the recruitment agency?
- What do they regard as important factors when applying for employment?
- What kinds of job offers are made to these graduates – contract/permanent appointments?
- What factors are regarded as important by employers that could give a graduate a competitive advantage?

Various factors like the current economic downturn, the productivity levels of South African employees and the political uncertainty contribute to the currently available employment opportunities, but there may be other factors that could also influence the acceptance/rejection of a job offer. Therefore, a thorough investigation is required to identify those factors that can be addressed to ensure that successful placement of graduate students are done.

1.3. RESEARCH OBJECTIVES

1.3.1. Primary objective

The primary objective of this research is to determine the factors that might influence the decision to accept or decline a job offer by the entry level IT graduate from the North West Province.

1.3.2. Secondary objectives

- Determine the compilation of the study population.
- Determine the financial obligations of the graduated students.
- Determine the current employment status of the graduated students.
- What role does the recruitment agency play in the successful placement of the entry level IT graduate?
- Doctoral studies after being employed – what is the current situation regarding the entry level IT graduate?

- Determine the factors that play a role when the entry level IT graduate evaluates a job opportunity.
- What are the expectations and perceptions of the entry level IT graduate regarding an acceptable offer? E.g. the current students' perception regarding living expenses versus the actual expenses incurred and salaries earned by the entry level IT graduate.
- Identify whether there is a significant difference between living expenses incurred and salaries earned in rural areas versus metropolitan areas.

1.4. METHODOLOGY

The research method consists of a literature review and an empirical study.

The aim of the empirical study was to obtain the research objectives from an availability sample of a specific study population. A survey design was used and the target population consisted of two groups. Two specific areas were identified for the purpose of this study, referred to as the metropolitan area which includes all towns and cities in Gauteng, and the rural area which includes all towns and cities in the North West Province. Information was obtained by making use of questionnaires specifically designed to obtain the information required for this specific research study.

CHAPTER 2: TECHNOLOGY AND SKILLS SHORTAGES

2.1. INTRODUCTION

Over the past few decades many things have changed and numerous advancements have taken place. The Industrial Age had to give way to the Information Age, bringing about new challenges and new opportunities.

During the early 21st century communication barriers were crossed and communication in South Africa changed forever. By 2006 more than 60% of the population were using cell phones. Even though it is regarded by some as a luxury, communication has become essential even to the lower income groups.

When looking at the history of information technology and telecommunications it seems as though some advancements stand out among all others during each decade. For example, during the eighties it was the personal computer and during the nineties the internet. Unfortunately not all levels of the community benefit from these advances. It seems as though those who need it the most benefit the least, as they cannot afford it.

2.2. TECHNOLOGICAL ADVANCEMENTS

One of the challenges facing the South African Information, Communication and Technology (ICT) sector is to cross the digital divide at an affordable price so that everybody can benefit. The digital divide can be defined as the difference in the accessibility to information and communication technology, as it exists between the rich and the poor (Howard *et al.*, 2010:110; Megwa, 2007:336). Not only has technological advancement improved the way we do things but it also brought employment and business opportunities for many. Access to the ICT sector can be regarded as a key advantage in today's competitive world (Howard *et al.*, 2010:110).

Technology touches on all aspects of our lives. It ensures continuous improvement at a rapid pace – an important requirement if you want to remain competitive at all times. The ICT industry is fast-paced, dynamic and characterised by change. This is a challenge for the South African ICT players who have to ensure that South Africa remains at the cutting edge of technology. Furthermore this holds a challenge for training providers to adapt their qualifications and training programs to keep up with the rapid changes taking place in this sector.

2.3. THE ROLE OF INFORMATION TECHNOLOGY IN THE BUSINESS WORLD

Information Technology (IT) drives the information age. Business and IT has become so entwined that the borders are difficult to identify. Companies make the most of technology in an attempt to be the best or to transform their business in something bigger and better. According to Moore's law, IT capacity doubles every 18 months (Van der Merwe, n.d.:103).

In some cases technology is used for strategic purposes. According to Van der Merwe, Insight's 2002 Balanced Scorecard Survey revealed that 47% of business executives regarded IT as a problem solver and 28% indicated that IT had input in their business strategy (Van der Merwe, n.d.:100).

Unfortunately it is also true that IT's contribution has not always been positive. Andy Kite, Gartner research director, said that up to 20% of the \$2,7 trillion spent on technology was wasted. This was as a result of companies who invested too much in new technology and didn't know how to utilize and implement the new technology. IT purchases are often made hoping that bigger and faster would maintain a strategic advantage.

Gartner suggests that there are changes taking place in the way business views technology. It is clear that demand has changed. But the following question remains to be answered: how much value does IT really add to business? Henkie Vogel is quoted by Van der Merwe (n.d.:101) to doubt whether technology can improve business, as according to him "it simply gets you to the wrong answer faster."

Technology innovation has assisted towards business transformation but often major technology investments are required to run business today, especially where interactive business processes require modern technology.

2.4. THE IT EMPLOYEE

Therefore, even during economic downturn, information technology will always be in demand and required to keep up with the challenges of the ever changing business world. This is good news for our entry level IT graduates. The only challenge facing them will be to keep up with the latest demands and technological advancements and to ensure that they are always be one step ahead of their competition . That can only be achieved by constant up-skilling and training.

Therefore IT graduates enter the labour market with high expectations of not only finding employment, but also opportunities to extend their knowledge and gain experience.

2.5. THE IT INDUSTRY IN SOUTH AFRICA

At the start of the new millennium a special attempt was made by the Directorate: Electrical, Electronic and Allied Industries of the South African Department of Trade and Industry (DTI) and the Canadian International Development Agency to develop a strong IT industry in South Africa. The project was known as SAITIS (South African Industry Strategy Project).

The aim of the project was to create a broader base of wealth and economic growth in South Africa and encompassed all aspects of IT. Research conducted included both the public and private sectors and consisted of two major focus areas, being the status of the IT industry in South Africa and the status of IT related jobs and skills.

The following long term goals were identified for the project:

- Economic and social benefits.
- Promotion of the IT industry.
- Improve South Africa's role in the global economy.

Determining the actual contribution of IT to national gross domestic product (GDP) is complicated as companies diversify and cannot always be classified in specific sectors. High growth rates have been noted and part of the growth is due to companies outsourcing their IT requirements, according to the SAITIS baseline study (SAITIS, 2000:8).

IT has had a huge impact on organisations and the workplace. It has made globalisation possible, work is outsourced and stable employment is no longer the norm. There is a "spread of liberalisation" which will draw neighbouring countries together to work together as partners. Liberalisation of telecommunication has taken place over the past decade and the market has opened up for competition. SAITIS found that at the time of conducting the project, the developing countries have not benefited much as liberalisation has contributed to an insignificant increase of investments and employment.

The use of the internet has increased and it is used for entertainment and business alike. Although internet usage in Africa has increased, it also has challenges to face: poor telephone

infrastructure, low international bandwidth and high dial-up tariffs. Internet is still out of reach of rural dwellers due to lack of resources.

2.6. THE SKILLS SHORTAGE

The short supply of professional skills in South Africa is a result of an increasing demand for IT services and also due to a lack of coordination between the education system and the labour market (SAITIS, 2000:11). The industry also has to deal with other factors that contribute to the skills shortage such as:

- *Retention of IT staff*

Organisations often lose highly skilled people due to high salaries offered by competitors. Complying with labour legislation is an additional challenge as a shortage of black IT professionals exists (SAITIS, 2000:11).

- *Brain drain*

The brain drain has been identified as the most common cause for the skills shortage. A demand for South African IT professionals exists in the international market and includes both experienced and inexperienced professionals. South Africa is seen as a 'soft target' due to the high crime rate, the performance of the rand and the high level of IT skills available (SAITIS, 2000:12).

- *'Job hopping'*

The IT industry is familiar with the tendency of the IT professional constantly seeking opportunities to gain new skills and explore new challenges.

- *Black empowerment*

Major steps have been taken to rectify the inequalities in the IT sector and to encourage black empowerment. According to the SAITIS baseline study report, the growth of the IT industry will depend on its ability to stimulate the growth of the Broad-based Black Economic Employment (BBBEE) sector (SAITIS, 2000:12).

The SAITIS IT Jobs and Skills survey also revealed the following which is relevant for the purposes of this study:

- A significant under-investment in IT skills training.

- Sectoral distribution of IT staff (just under 2% of staff taking part in the survey were IT staff).
- IT staff can be categorised in the eight domains.
- 25% respondents were involved in system development.
- 14% respondents were involved in information system management.
- 14% respondents were involved in computer operations.
- 14% respondents were involved in end-user computing.
- 70% respondents were of the white population group.

2.7. EMPLOYMENT AND EMPLOYABILITY

From the employer's perspective, judging whether a graduate is employable depends upon whether the graduate exhibits the attributes which employers value. De la Harpe *et al.* (2000:232) refer to these attributes as the ability to be flexible, multi-skilled and willing to continue studying and improving skills - referred to as lifelong learning.

In today's job market young people are required to have a broader skills base which includes so-called 'soft skills'. Soft skills are defined as being, amongst others, professional, enthusiastic about your work, having integrity, ethics and initiative (Lewis, 2007:18). De la Harpe *et al.* (2000:232) refer to the skills required as generic skills or professional skills which will include communication, problem solving, critical thinking, teamwork and IT literacy.

Cranmer (2006:172) states that employability is not only difficult to define but also to measure. During their studies students gain knowledge as well certain skills. The study methodology followed provides opportunity for extensive self-motivation, time management and self-discipline. But is this enough to prepare them for a career? De la Harpe *et al.* (2000:232) state that employers are concerned that undergraduate programs are failing to provide graduates with the necessary skills for their careers - a phenomenon experienced worldwide. Harvey and Bowers-Brown have pointed out that similar expectations exist regarding **employability of graduates** throughout the world but different methods are used in the preparation process to comply with these expectations. An empirical study conducted by Brown and Scase in 1994 indicated that certain **employer perceptions** may exist regarding the '**quality of graduates**' from certain training providers resulting in preference given to graduates from specific training institutes (Cranmer, 2006:173).

According to a study conducted by Turban *et al.*, job applicants may have to consider the matching of their current skills with the requirements of the position available. The study provided several recommendations which could be of great value for recruitment agencies assisting the entry level graduate. It was recommended that the recruitment agencies must ensure that the recruitment process accommodates the most important attributes and it is therefore important that detailed information regarding the actual work and career possibilities are provided. On the other hand organizations must conduct their own research to investigate why applicants are rejecting job offers and then use this information to present the job offer in a more positive way (Turban *et al.*, 1993:78).

2.7.1. Important attributes

The research conducted by Turban *et al.* (1993:77) revealed that the most important attributes affecting job offer acceptance, were 'type of work' and 'advancement opportunities'. 'Location' was the main reason for a job offer to be rejected. 'Type of work' being the most preferred job attribute was also the most important reason for accepting a job offer and second most important reason for rejecting a job offer.

Studies conducted to date indicate that job attribute preference differences depend upon whether the applicant accepts or rejects the offer. Continued research is required for recruiting and placing of graduates (the process) and to identify the factors influencing job decisions because of environmental factors challenging organizations, the shortage of qualified workers and fewer people entering the labour market (Turban *et al.*, 1993:79).

2.7.2. The recruitment process

During the recruitment stage employers attempt to attract the employee that will add the most value to the organization. A two-way decision making process takes place during which effective communication and reliable information is required. The role players, the employer as well as the applicant, require reliable information to make the right decision. Effective communication will ensure that both parties involved obtain relevant information that will enable them to make the correct choice and to eliminate uncertainties (Jennings *et al.*, 2003:291).

2.7.3. The role of benefits

According to Jennings *et al.* (2003:292) benefits can be used as an "effective tool" to increase the possibility of an applicant to accept a job offer but only if it is communicated effectively.

Benefits are regarded as the extras one receives over and above salary, and these differ significantly among organizations. Offering benefits could have a positive impact on an organization's recruitment efforts if the quality and value of the benefits are communicated properly. Jennings *et al.* noted that a prerequisite exists – effective communication of these benefits prior to employment and even after starting. According to the last-mentioned authors, research has indicated that even current employees often lack knowledge regarding the benefits offered by the organization. They are often unaware of all the benefits available and the financial value thereof.

Jennings *et al.* divide benefits into two groups:

- Traditional benefits: could include disability insurance, health insurance, retirement funds and life insurance.
- Non-traditional benefits: could include flexible working hours, sponsored day-care centers for children, retirement plans, etc.

Research has indicated that employers often under-valuate the benefits and therefore do not pay enough attention to it during the recruitment process. This could lead to unnecessary increase of spending on benefits without making the position more attractive.

2.7.4. Further training

McMurtney *et al.* (2008:101) state that the skill set of the entry level IT professional often requires further training after completion of studies. It is critical for organizations and training providers to understand and be aware of the skills of the entry level graduate/IT professional. The training providers must be aware of what essential skills are required by the organization so that they can adapt their training programs and curricula accordingly. The organization on the other hand must also be aware of the skill set of the entry level graduate so that they do not have unrealistic expectations and can arrange for effective further training. Rapid advances in information technology require frequent and ongoing training and up-skilling, it seems as although technical skills are essential, the most important skills required for the entry level IT graduate are soft skills, e.g. problem-solving, critical thinking and team skills. McMurtney *et al.* indicated that the importance of skills also depends on age, gender, IT experience and management level .

High turnover and late delivery have been associated with information technology projects for a long time. McMurtney *et al.* note that if entry level IT graduates do not have the correct skills set, they can't work effectively and are limited in their value adding, and the organization has to incur additional cost for training.

2.7.5. Perceptions

According to Bartol *et al.* (2002:797-798) a "holistic view" of the IT worker's job perception is required. Bartol *et al.* note that IT and organizational behaviour research indicated that rewards (tangible & intangible) have a great influence on an individuals' job perception. Rewards can be divided into two groups: tangible rewards, e.g. compensation and benefits and intangible rewards, e.g. balance between work and personal life, opportunities for development, management support etc. Evidence exist that compensation (tangible reward) influences performance and affects retention patterns. However, the over-emphasis thereof may encourage job-hopping. Bartol *et al.* therefore suggest that compensation should not be the only rewarding factor and should be combined with other rewarding factors.

2.7.6. Work load

Work overload and work exhaustion are common under IT workers and often contribute to increased staff turnover. Companies are increasingly implementing programs aimed at increasing satisfaction and encouraging good performance and retention. Studies conducted by Bartol *et al.* compared the importance of characteristics in job choice decision to expectations of how much will be present in the accepted job. The study revealed skills development as the most important and travel as the least important (Bartol *et al.*, 2002:800).

2.7.7. Important factors to consider

The decision to accept or to reject a job offer is challenging and should be made with great care as it has short and long term consequences. A number of factors should be taken into consideration when evaluating an offer, but it is important that the most important factors are taken into consideration when making this decision.

Tyler (1983:7) identifies the following factors as the most important:

- Money.
- Opportunity.
- Location.

According to the Tyler only these factors should be taken into consideration. A common mistake is to give other less important factors the same emphasis. These less important factors could include some of the following e.g. need to be close to relatives, travel requirements, relocations and expenses (Tyler, 1983:7).

Another mistake that is often made when a person is dissatisfied with his/her current position and so desperate to find something else to do that he/she does not evaluate the offer properly and accept something else for the wrong reasons – he/she just wants to move on.

Money - we are all money motivated to a certain extent. How much we earn is often perceived by some as an indication of success. A company compensates its employees for the service they provide by giving them remuneration (money) at the end of the month. However, compensation is not limited to money only and could include bonuses, benefits, deferred compensation and other items. If money is the reason for someone to accept a new job, Tyler suggests that he/she makes it worth his/her while. According to Tyler, most people will not settle for less than a 15% increase. He recommends that the total package should be taken into consideration when evaluating an offer. A compensation package is often negotiable and requires proper planning. Negotiating would include coming up with suggestions and alternatives until both prospects are satisfied. Numerous surveys have revealed that money is not the most important factor when considering what it is people want from their jobs. Challenge, type of work and the people they work with are much more important. People expect a salary increase due to the risk involved in the job - the more risk involved, the higher the perceived salary (Tyler, 1983:8).

Opportunity - an opportunity in an employment environment might be a chance to do one's own thing, to get away from an uncomfortable situation or to grow. In general it means a chance to expand a person's responsibilities, duties or extent of control. It was found that most individuals want to expand – they want to grow, they are interested in new and exciting challenges (Tyler, 1983:6).

According to Tyler a person needs to gather as much information as possible when investigating new opportunities. This can be done by talking to people. One will need to identify the strengths and weaknesses of the organization; learn more about the position:

- How long has it been vacant?
- The reasons for it being vacant?
- How many people have filled that position over the past five years?

- How is performance appraised?
- Where are the people who used to be in that position now?

Whether it is really an opportunity needs to be determined. The prospective employee needs to enquire about his/her career path should he/she decide to accept, and to determine the prospects for the industry. When gathering information the same questions must be asked every time it is in order to let instinct be a judge. Tyler (1983:9) identifies evaluating opportunity as the most difficult to assess.

Location – according to Tyler many positions are declined due to location and he raises caution when considering location as a reason to accept or decline. Tyler suggests that a site visit be conducted prior to a decision being made.

2.8. CONCLUSION

A common mistake that often occurs is when less important factors influence a person's final decision on accepting a job offer or not. The final decision should be based on the important factors and this should be applied to all positions being evaluated. The most important factors must be kept in mind, especially when someone is extremely unhappy or under pressure in his/her current position. Tyler (1983:9) recommends that a person should accept a job offer if 2/3 of the most important factors are present and decline if only one of the three is present. Keeping the three most important factors in mind at all times and applying the same set of rules may eliminate uncertainty and ensure consistency.

CHAPTER 3: EMPIRICAL RESEARCH

3.1. INTRODUCTION

The aim of the empirical research was to obtain the research objectives from an availability sample of a specific study population. A survey design was used and the target population consisted of two groups. Two specific areas were identified for the purpose of this study, referred to as the metropolitan area which includes all towns and cities in Gauteng, and the rural area which includes all towns and cities in the North West Province. Information was obtained by making use of questionnaires specifically designed to obtain the information required for this specific research study.

3.2. EMPIRICAL STUDY

3.2.1. Research design

The purpose of research design is to plan and structure a research project in such a way that it enhances the validity of the research findings. A survey design was used to obtain the research objective from an availability sample from a study population for a specific period. The survey technique of data collection gathers information from the sample by means of questionnaires. Questionnaires were distributed by means of e-mail to graduated students and manually to current students. The research was descriptive and explorative.

3.2.2. Study population and sample

The study population was compiled from graduated students and current students from a private higher education training provider situated in the North West Province. An availability sample was identified from 2007 and 2008 graduates (N=75) consisting of entry level IT graduates, referred to as graduates, and from 2009 current students (N=64), referred to as students, who should be entering the job market in 2010. Replies were received from 92% students and 55% graduates. These participants form the sample that will be analysed in this chapter.

3.2.3. Measuring instrument

The measuring instrument consisted of two questionnaires specifically compiled for the graduates and students.

The first questionnaire was handed to the students who completed the questionnaires in class. The aim was to compare the students' perceptions/expectations regarding living expenses and salaries with the actual experience of the graduates employed in the metropolitan area and rural areas respectively.

The second questionnaire was distributed to the graduates by e-mail. The aim was to obtain information regarding demographics, working history after studies and the factors that play a role in the acceptance or decline of a job offer.

The questionnaires were circulated prior to being distributed to all 12 principals of CTI across the country as well as a recruitment agency for their input and approval.

3.2.4. Research procedure

The measuring battery was compiled. A letter motivating the research was included. The questionnaire also included a brief explanation of the purpose of the questionnaire and the reason for the study, instructions on how the questionnaire should be answered and details on when and how the questionnaires should be returned. Informed consent from participants was implicitly given through their participation in the completion of the questionnaire.

3.2.5. Statistical analysis

The statistical analysis was conducted with the assistance of the Statistical Consultation Services of the North-West University by means of SPSS 17.0 for Windows (SPSS Inc., 2009) and STATISTICA version 9.0, a data analysis software system (StatSoft Inc., 2009).

Descriptive and inferential statistics (t-tests) were used to analyse the data associated with the various constructs to reach the objectives of this research.

Shaughnessy and Zehmeister (1997) regard description as the procedures by which events and their relationships are defined, classified, catalogued or categorised. Descriptive statistics (e.g. mean, standard deviation) is about collecting, summarizing and presenting data into meaning full information (Levine *et al.*, 2008:2-3). Descriptive statistics is presented and discussed in Section 3.2.5.1.

The statistical significance test (t-test) is used to indicate whether the difference between two means are significant. T-tests were conducted in this study and are discussed in Section 3.2.5.2. If the p-value <0.05 then it indicates that there is a statistical significant difference between the two means. For this study the t-test was used to determine the significance of differences in terms of the perception of students and actual expenses incurred and the differences as they occur between the metropolitan area and rural area. For tests of the difference in perception of expences by students versus actual expences for graduates, independent t-tests were applied. Independent t-tests were also used to test for differences between the actual expences for graduates who work in metropolitan versus rural areas. Dependent t-tests were performed to test for differences between the perceived expences by students in metropolitan and rural areas, as each student had to estimate expected expenses in each of these areas and therefore pairwise (dependent) comparisons could be made.

Note that, since the sample in this study is an availability sample and not a random sample, p-values that attempt to generalize findings to the population is actually not relevant. The data in the sample should be seen as a small population about which conclusions are drawn, rather using statistical inference to generalize to the study population. Effect sizes can then be used to test for differences that are practically important. Practical significance can be understood as a large enough difference to have an effect in practice (Ellis & Steyn, 2003:52-53). In this report, we present both p-values and effect sizes for the sake of completeness. Keep in mind, however, that the emphasis should fall on effect sizes and practical significance.

Cohen (1988) gives the following guidelines for the interpretation of effect size:

Table 3.1: Effect size: Cohen's D-value

Effect size: Cohen's D-Value	
0.2 = small effect	No practical significant difference
0.5 = medium effect	Practical visible difference
0.8 = large effect	Practical significant difference.

The practical significance of results is not only important when the results of population data are reported but also to comment on the practical significance of a statistically significant result (Ellis & Steyn, 2003:53).

3.2.5.1. *Descriptive Statistics*

The compilation of the IT graduates is presented in the following table.

Table 3.2: Compilation of sample of IT graduates

<i>Item</i>	<i>Category</i>	<i>Frequency</i>	<i>Percentage</i>
<i>Gender</i>	Male	36	87.8
	Female	5	12.2
<i>Age</i>	20-23 years	37	90.2
	24-27 years	2	4.9
	28-30 years	1	2.4
	30 years and older	1	2.4
<i>Qualification</i>	Programming:		
	• Information Systems	17	41.5
	• Comprehensive Programming	3	7.3
	ITE (Information Technology Engineering)	18	43.9
	Other	3	7.3
<i>Final Average</i>	60-69%	2	4.9
	70-79%	33	80.5
	80-89%	6	14.6
	90% and above	0	0
<i>Driver's licence</i>	Yes	36	87.8
	No	5	12.2
<i>Do you have a car?</i>	Yes	34	85
	No	7	15

From Table 3.2 the following conclusion can be made: in summary, it can be stated that the study population was represented by a majority of males ranging between the ages of 20 – 23 years. The programming qualifications (Information Systems & Programming) had a slight majority over the ITE (Information Technology Engineering) qualification and the majority of students had a final average between 70 – 79%. The majority have driver's licences and own transport which are regarded as a prerequisite by many employers.

Figure 3.1: Financing of studies

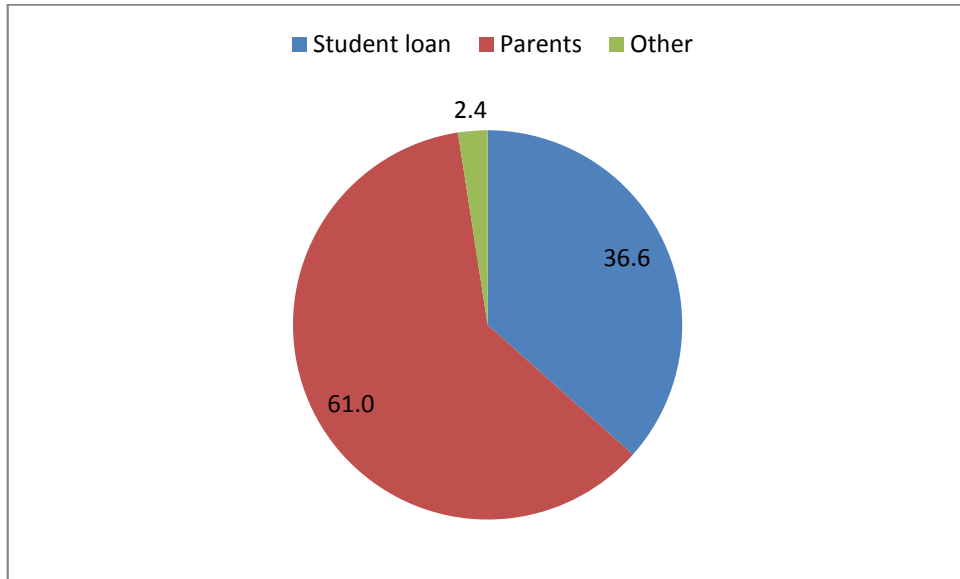
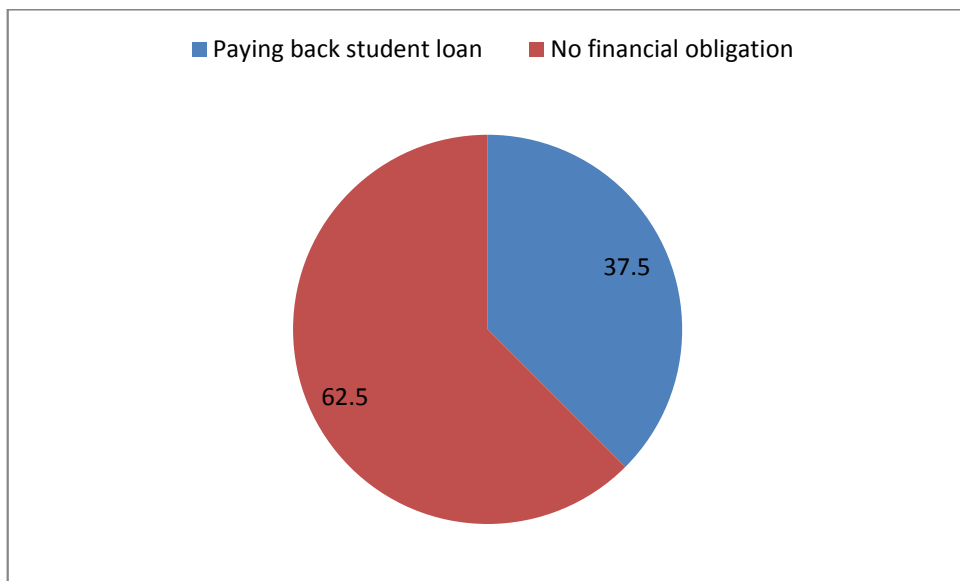


Figure 3.2: Financial obligations



The following conclusion can be made from Figure 3.1 and Figure 3.2 regarding the financial obligations of the graduates: according to the figures 36% of the students financed their studies through a student loan and 37.5% have some kind of financial obligation to pay back money provided for their studies. This is a significant fact and should be kept in mind when accepting a job offer. The students will have to consider any offer with care to determine whether they will be able to meet their financial obligations.

Figure 3.3: Registered with recruitment agency

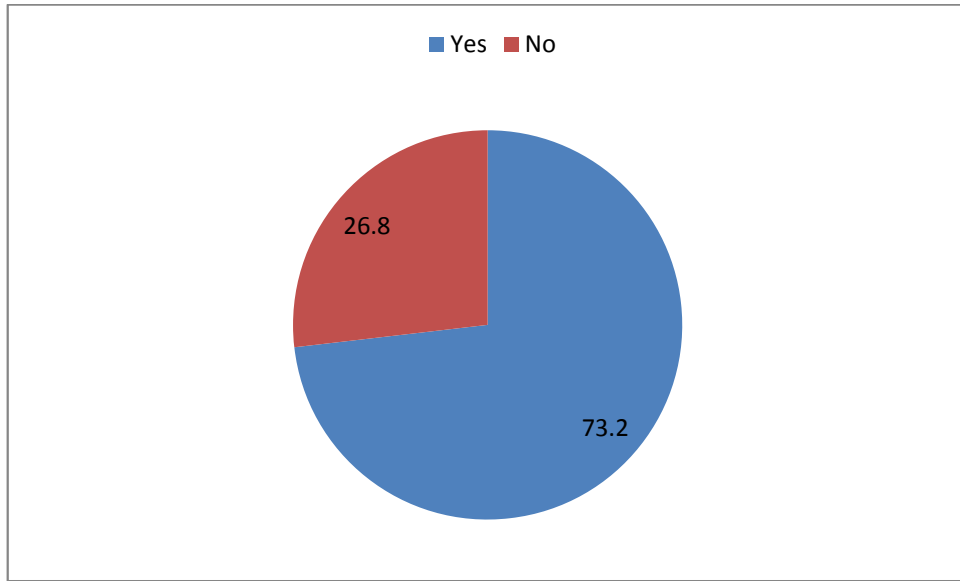


Figure 3.4: Number of interviews arranged by recruitment agency

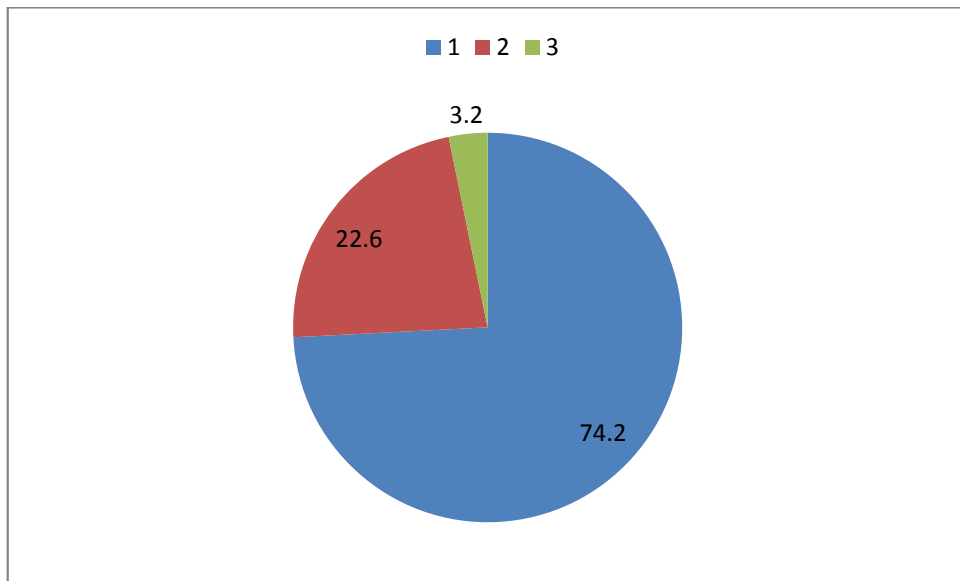
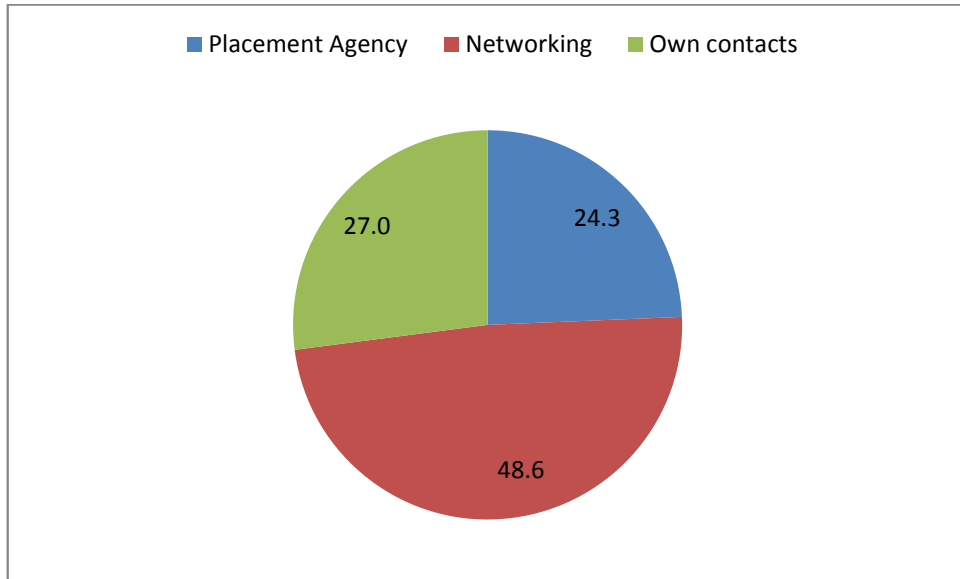


Figure 3.5: Employment due to recruitment agency



According to Figure 3.3 the majority of the students were registered with the recruitment agency which means they were actively assisted to find employment. One interview was arranged for 74.2% of the registered students, two interviews were arranged for 22.6% and only 3.2% got a third interview as indicated by Figure 3.4.

However, the majority of the students (72.9%) found employment without the assistance of the recruitment agency, as can be calculated from Figure 3.5

Figure 3.6: Employment: IT related

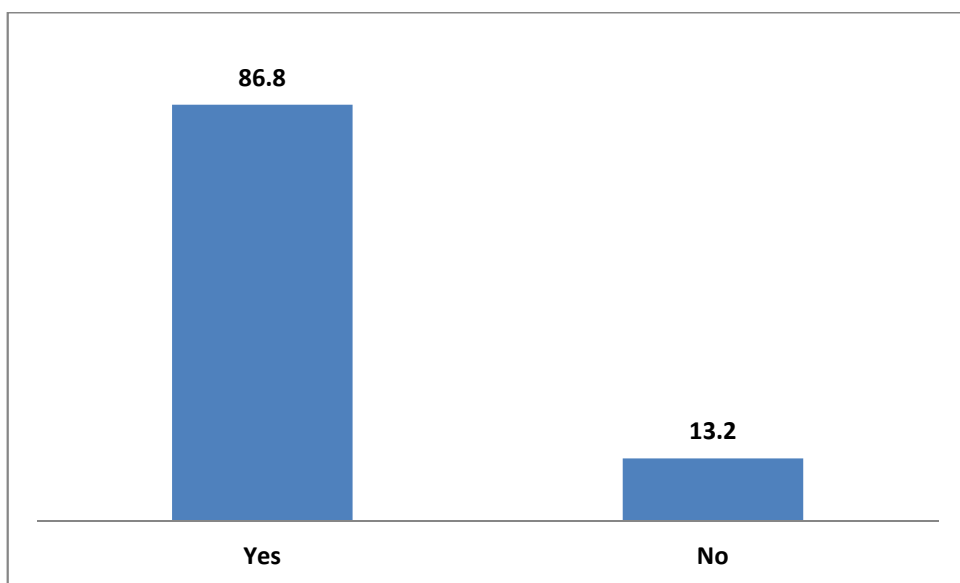
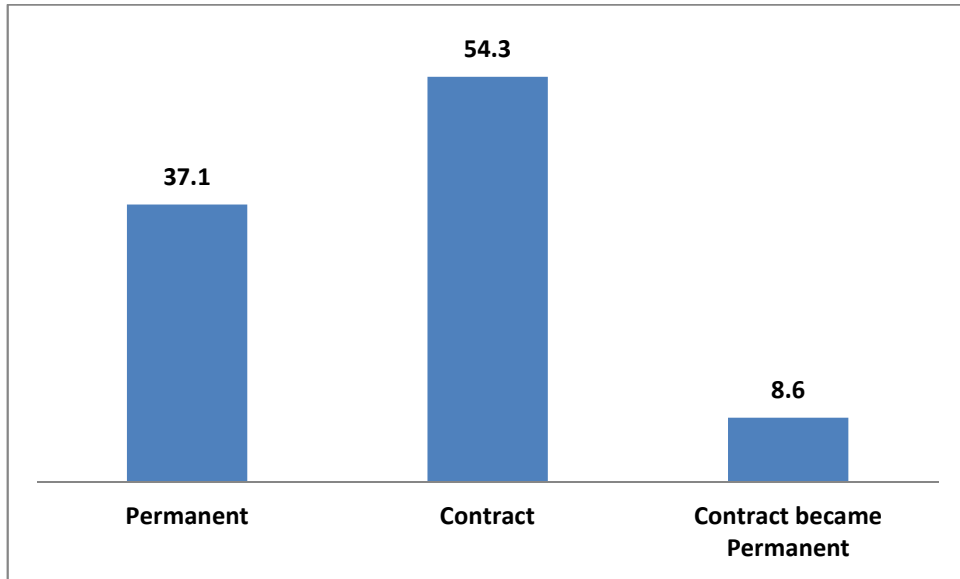


Figure 3.7: Type of employment



From Figure 3.6 the following conclusion can be made regarding the type of employment: a majority of 86.8% of the IT graduates are currently working in the IT industry. The majority of IT graduates are doing contract work (54.3%) and 43.7% are permanently employed (8.6% of them starting doing contract work before becoming permanently employed).

Figure 3.8: Current studies

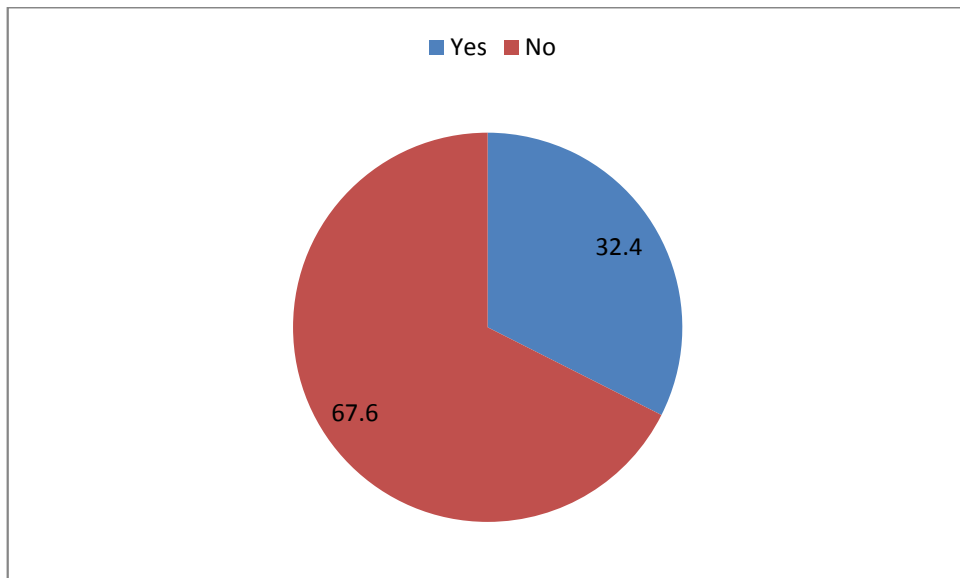
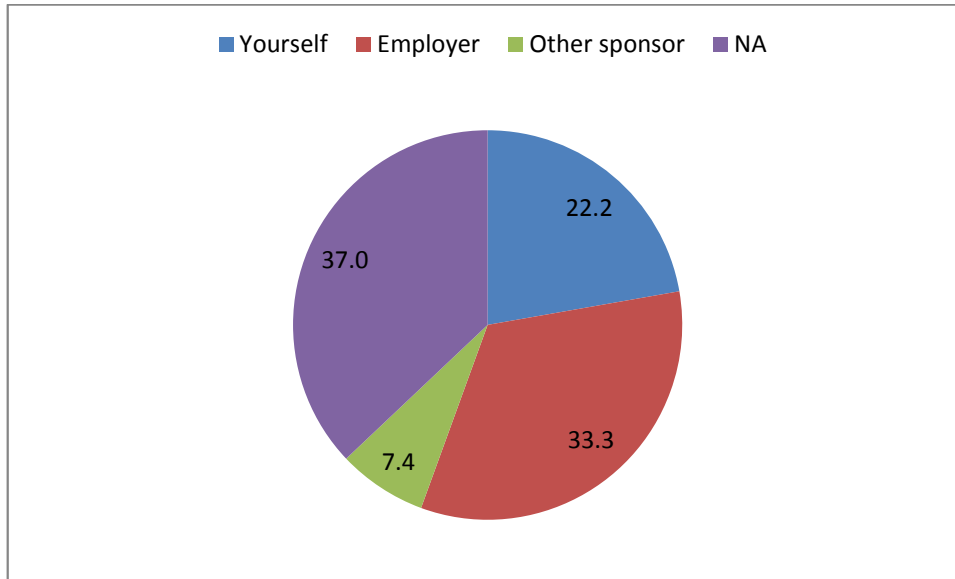


Figure 3.9: Financing of current studies



From Figure 3.8 and Figure 3.9 the following conclusion can be made regarding current studies of graduated students: only 32.4% of the students have continued studying. Of these studies, 33.3% are financed by their employers, 37% is not directly financed and could be regarded as informal training and 29.6% of those currently studying had to finance their studies themselves or had to find other means to finance their studies.

Both the students and the graduates had to rank the importance of certain variables from the most (no.1) to the least important (no.7) which is represented in Table 3.3 and Table 3.4.

Table 3.3: Variables which could have an influence on choice when considering a job offer

	Salary	Further studies	Benefits	Company culture	Location	Safety	Experience
Current Students							
Mean	2.64	3.56	2.86	4.65	3.46	3.07	2.86
Standard deviation	1.86	2.17	1.96	1.77	1.85	2.17	2.39
20							
Graduates							
Mean	2.00	2.80	2.98	3.68	3.61		2.41
Standard deviation	1.18	1.66	1.56	1.64	1.72		1.60

Table 3.4: Comparison: variables influencing choice

Students		Graduates	
1	Salary	1	Salary
2	Benefits & Experience	2	Experience
3	Safety	3	Location
4	Location	4	Company culture
5	Further studies	5	Further studies
6	Company culture	6	Benefits

Table 3.4 indicates the importance of the listed variables for the graduates as well as the current students, ranging from the most important to the least important. From this table the conclusion was made that salary was the most important for both groups. Experience is in the second position, equally important for both groups, although the students regarded benefits just as important as experience. The graduates regarded benefits as the least important of all the variables. The graduates regarded company culture as fairly important while the students regarded it as the least important. Location is almost equally important for both and the students regarded safety more important than location. Keep in mind that safety was excluded from the graduates' selection lists. Further studies were regarded by both groups as not very important.

In the interpretation of these results, it needs to be stated that many students and graduates did not answer this question in the correct way and ranked more than one variable as equally important in many cases. Keep in mind that only 41 graduates completed this question while only 59 students' responses could be included. Even though some of the respondents duplicated the ranking order by assigning the same number to more than one variable none of these were excluded for the purpose of this study.

Table 3.5: Descriptive statistics: Perception (perceived) and actual expenses incurred in the rural vs. metropolitan area.

DESCRIPTIVES	Valid N	Mean	Std.Dev.
Accommodation: Perceived - Metropolitan Area	57	7.14	2.75
Accommodation: Perceived - Rural Area	44	3.52	0.66
Accommodation: Actual - Metropolitan Area	18	4.50	2.15
Accommodation: Actual - Rural Area	16	2.75	1.57
Travel: Perceived - Metropolitan Area	56	2.73	1.34
Travel: Perceived - Rural Area	55	2.11	1.91
Travel: Actual - Metropolitan Area	17	2.71	1.36
Travel: Actual - Rural Area	15	1.73	0.96
Salary: Perceived - Metropolitan Area	54	13,625.00	9,222.070
Salary: Perceived - Rural Area	55	8,504.55	4,758.640
Salary: Actual - Metropolitan Area	18	7,161.57	2,975.32
Salary: Actual - Rural Area	19	4,654.56	3,088.48

Table 3.5 presents descriptive statistics indicating perception/perceived expenses (accommodation and travel) as well as the actual expenses incurred in the metropolitan areas versus the rural areas. Furthermore, salaries perceived are presented together with salaries actually earned with special reference to the metropolitan area and the rural area.

Keep in mind that where one graduate earned more than one salary over a period of time, the average of the salaries was calculated for the purpose of this study.

The responses of the graduates were divided between rural and metropolitan areas as the respondents could only be employed either in the rural area or metropolitan area at that specific time. The 64 students' responses included that the total number of students perceived the expenses to be in both areas. The responses ranged from 57 to 44 due to the fact that not all questions were answered by every respondent.

3.2.5.2. *T-Tests*

T-tests on accommodation expenses are presented in the following table.

Table 3.6: Accommodation expenses

METROPOLITAN AREA						
ACCOMMODATION						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
PERCEIVED	7.14		57	2.75		
ACTUAL	4.50	3.73	18	2.15	<0.001	0.96

RURAL AREA						
ACCOMMODATION						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
PERCEIVED	3.52		44	0.66		
ACTUAL	2.75	2.69	55	1.57	0.01	0.49
ACTUAL ACCOMMODATION EXPENSES						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
METROPOLITAN	4.50		18	2.15		
RURAL	2.75	2.68	16	1.57	0.01	0.81
PERCEIVED ACCOMMODATION EXPENSES						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
METROPOLITAN	6.50			2.09		
RURAL	3.52	9.68	44	0.66	<0.001	1.43

From Table 3.6 the following conclusion can be made regarding the current students' expectation regarding accommodation expenses in the metropolitan areas: the p-value (<0.05) indicates that there is a statistical significant difference supported by a practical important difference (large effect size, $d > 0.8$). The students expect to pay more for accommodation compared to what is actually paid by currently employed graduates in the metropolitan area.

Table 3.6 indicates the following regarding the current students' expectation of accommodation expenses in the rural areas: the p-value (<0.05) indicates that there is a statistical significant difference supported by a practical visible difference (small to medium effect size, between 0.2 - 0.5). The conclusion can be made that the current students expect to pay more for accommodation compared to what is actually paid by currently employed graduates in the rural area.

From Table 3.6 the following conclusion can be made regarding actual accommodation expenses in the metropolitan area vs. the rural area: the p-value (<0.05) indicates that there is a statistical significant difference supported by a practical important difference (large effect size, $d > 0.8$). This means that the currently employed graduates are in fact paying more for accommodation in the metropolitan area than in the rural area.

Comparing the accommodation expenses **perceived** by the current students in the **metropolitan area vs. the rural area**: according to Table 3.6 the p-value (<0.05) indicates that there is a statistical significant difference supported by a practical important difference (large effect size, $d > 0.8$). This means that the current students expect to pay more for accommodation in the metropolitan area compared to the rural area, which is confirmed by the graduates' responses.

T-test results for the actual and perceived travel expenses in the metropolitan and the rural area is presented in the following table.

Table 3.7: Travel expenses.

METROPOLITAN AREA						
TRAVEL						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
PERCEIVED	2.73		56	1.34		
ACTUAL	2.71	0.07	17	1.36	0.94	0.02
RURAL AREA						
TRAVEL						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
PERCEIVED	2.11		55	1.91		
ACTUAL	1.73	0.73	15	0.96	0.47	0.20
ACTUAL TRAVEL EXPENSES						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
METROPOLITAN	2.71		17	1.36		
RURAL	1.73	2.31	15	0.96	0.03	0.72
PERCEIVED TRAVEL EXPENSES						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
METROPOLITAN	2.76			1.34		
RURAL	2.11	2.26	44	1.93	0.03	0.34

From Table 3.7 the following conclusion can be made regarding travelling expenses: comparing the perceived travel expenses to the actual expenses incurred in the metropolitan area, the p-value (>0.05) indicates that there is no statistical significant difference and the d-value that there is no practical significant difference (small effect size, $d < 0.2$). What students expect to spend on travelling expenses are equivalent to what is actually spent by the currently employed graduates working in the metropolitan areas.

Comparing the perceived travel expenses of the current students to the actual expenses incurred by the currently employed graduates in the rural area. The p-value (>0.05) indicates that there is no statistical significant difference and the d-value that there is no practical difference (small to medium effect size, $d = 0.2$). What students expect to spend on travelling expenses are equivalent to what is actually spent by the currently employed graduates working in the Rural areas.

Comparing the actual expenses incurred for travelling in the Metropolitan area vs. the Rural area by the currently employed graduates. The p-value (<0.05) indicates that there is a statistical significant difference supported by a practical visible to important difference (medium to large effect size, i.e. d is between 0.5 and 0.8). This means that the graduates are in fact spending more on travelling in the Metropolitan area than in the Rural area.

Comparing the travelling expenses perceived by the current students in the metropolitan area vs. the rural area: the p-value (<0.05) indicates that there is a statistical significant difference supported by a slight practical visible difference (small to medium effect size, i.e. d lies between 0.2 and 0.5). This means that the current students do expect to pay more for travelling costs in the metropolitan area compared to the rural area, but the difference is practically not very significant.

T-test results for the actual and perceived salaries earned in the metropolitan and the rural areas are presented in the following table.

Table 3.8: Salaries

METROPOLITAN AREA						
SALARIES						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
PERCEIVED	13625.00		54	9222.07		
ACTUAL	7161.57	-2.91	18	2975.32	<0.001	0.70
RURAL AREA						
SALARIES						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
PERCEIVED	8504.55		55	4758.64		
ACTUAL	4654.56	-3.29	19	3088.48	<0.001	0.81
SALARIES ACTUAL						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
METROPOLITAN	7161.57		18	1.36		
RURAL	4654.56	2.51	19	0.96	0.02	0.81
SALARIES PERCEIVED						
	Mean	t-value	Valid N	Std.Dev.	p-value	d-value
METROPOLITAN	13835.00			9488.66		
RURAL	8575.00	7.27	50	4938.98	<0.001	0.55

From Table 3.8 the following conclusion can be made regarding the perceived salaries compared to the actual salaries earned in the metropolitan area: the p-value (<0.05) indicates that there is a statistical significant difference supported by a practical visible to important difference (medium

to large effect size, $d=0.7$). This means that students **expect to earn more in the Metropolitan** area compared to what is **actually earned** by the currently employed graduates in the metropolitan areas.

Comparing the perceived salaries compared to the actual salaries earned in the rural areas, the p-value (<0.05) indicates that there is a statistical significant difference supported by a practical important difference (large effect size, $d>0.8$). Table 3.8 indicate that the graduates are in fact earning less than what the students are expecting to earn in the **rural areas**.

From Table 3.8 the following conclusion can be made regarding **actual salaries** earned in the **metropolitan areas vs. the rural areas**: the p-value (<0.05) indicates that there is a statistical significant difference supported by a practical important difference (large effect, $d>0.8$). This means that the graduates are in fact earning more in the metropolitan area than in the rural area.

Even though the currently employed graduates are earning more in the metropolitan area the difference is not as much as perceived by the current students. The employed graduates working in the rural areas are in fact earning less than perceived by the current students. Overall it seems as though the salary expectation of the current students are much higher than what is actually earned by IT graduates, irrespective of their work location.

3.3. CONCLUSION

Relying on technology for the distribution of the questionnaires to the graduates might have limited the number of responses. Several of the respondents did not complete all questions or responded incorrectly which limited the responses severely in some cases. The variables influencing choice listed in the questionnaire distributed to students included the variable 'safety' but was excluded from the list of the graduates, this could have influenced the accuracy of the comparison between the two groups. Regardless of these challenges, valuable information was gathered that assisted in the conclusion of this research.

CHAPTER 4: FINDINGS AND RECOMMENDATIONS

4.1. INTRODUCTION

A Total of 75 graduates were asked to complete the questionnaires, but only 41 responded. Even though 41 graduates responded, one has to keep in mind that the responses of the graduates were divided between rural and metropolitan areas, as the respondents could only be employed in either the rural area or metropolitan area at that specific time. From the 64 current students who were asked to respond, only 59 responded.

4.2. REPORTING ON MAJOR FINDINGS

From the research it was determined that the study population was represented by a majority of males ranging between the ages of 20 – 23 years, a rather young workforce. There was a slight majority of graduates with programming qualifications (Information Systems & Programming) over the ITE (Information Technology Engineering) qualifications and the majority of students had a final average of between 70 – 79%. From an academic point of view this is a rather high average and the conclusion can be made that they are expected to have sufficient knowledge and skills.

From the literature review it became apparent that a high final average might not be the only measurable when determining the skills base of a graduate. De la Harpe *et al.* (2000:232) state that employers are concerned that undergraduate programs are failing to provide graduates with the necessary skills for their careers. Lewis (2007:18) includes soft skills as part of the required skills base. An empirical study conducted by Brown and Scase in 1994 indicated that certain employer's perceptions may exist regarding the 'quality of graduates' from certain training institutes (Cranmer, 2006:173). McMurtney *et al.* (2008:101) remarked that skills depend on age, gender, IT experience and management level.

The research revealed that even though the majority of the students registered with the recruitment agency, 72.9% found employment without the assistance of the recruitment agency. From the literature review it became apparent that the recruitment agencies should play a much bigger role in the recruiting process to ensure that there is a better fit between the skills of the student and the requirements of the organisation. The organisation should present the position in

a more positive way and ensure that detailed information regarding the actual work and the career possibilities are provided (Turban *et al.*, 1993:78).

From the research it was determined that 86.8% of these graduates are currently working in the IT industry of which 54.3% are doing contract work, 37.1% are permanently employed and 8.6% became permanently employed after doing contract work. This is supported by the literature study which indicated that stable employment is no longer the norm. The high percentage of graduates working in the IT industry is an indication that there is work available for the IT graduates, a fact supported by the findings of the SAITIS baseline study which identified a short supply of professional skills in SA as a result of an increasing demand for IT services and other factors contributing to the skills shortage, e.g. retention of IT staff, brain drain, job-hopping and black economic empowerment.

The study revealed that a majority of 62% of the graduates currently employed in the IT industry are employed in the metropolitan area which means they had to relocate.

The financial obligation of the graduates has to be kept in mind as the study revealed that 37.5% had financial obligations to meet. The students will have to consider any offer with care to determine whether they will be able to meet their financial obligations and will have to budget accordingly. This could lead to the decline of a job offer. The research revealed that the current students' perception of salaries and expenses are not always in line with what is actually experienced by the employed graduates. Tyler (1983:8) identified money as one of the most important factors but advises that the total package should be taken into consideration when evaluating an offer.

The majority of the graduates had a drivers licence and own transport which are regarded as prerequisites by many employers and could be a possible reason for a graduate to decline a job offer if he/she does not meet this specific prerequisite.

Furthermore the study revealed that the majority of graduates started off by doing contract work which could be a challenge if the graduate have to move and sign a lease agreement for a period of time which does not meet his/her working contract period - that could be another possible reason for declining a job offer. Tyler (1983:9) suggests that the graduate needs to gather as much information as possible when investigating a new opportunity – he/she needs to identify the strengths and weaknesses of the organisation, get to know more about the position to

determine whether it is really a worthwhile opportunity. When the current students had to prioritise a list of variables according to importance, safety was placed third and location fourth, these two variables often goes hand in hand. According to Turban *et al.* (1993:78) many positions are declined due to location being unfavourable to the job applicant.

The study revealed that the importance of the listed variables were fairly similar for both groups, with 'salary' being the most important for both groups. Company culture was listed as the least important for the students, which could be as a result of their lack of working experience and exposure to company culture. Graduates, on the other hand, regarded benefits as the least important and this might be due to the fact that fixed term employees might not be offered the same benefits as the permanent staff, or due to the lack of communicating these benefits to them. Location, which could include safety aspects, taking into consideration that some areas are regarded as less safe than others, were regarded as fairly important by both groups which might be a consideration when accepting or declining a job offer in a specific area. Further studies were not regarded as too important which is a concerning factor as rapid advances in IT require frequent and on-going training and up-skilling. Employers do not seem to be too keen to invest in the up-skilling of the graduates and this could be due to the fact that they are not permanently employed and that the retention of IT staff has become a challenge for employers.

The study revealed that 67.6% of the graduates were not involved in any further training or studies. Of the 32.4% studying, only 33.3% are financed by their employers. Keep in mind that 54.3% are doing contract work and the return on investment could be regarded as low by the employer when sponsoring contract workers for further study. McMurtney *et al.* (2008:101) maintained that the skill set of the entry level IT professional often require further training after completion of studies. Rapid advances in IT require frequent and on-going training and up-skilling. A special need for soft skills was identified (McMurtney *et al.*, 2008:101). A study conducted by Bartol *et al.* (2002:800) indicated skills development as the most important characteristic in job choice decision.

From this study it is clear that the current students' perception regarding salaries and expenses are not in line with what is actually experienced. Salary was also first on the priority list. Bartol *et al.* (2002:798) suggest that compensation should not be the only reason when considering a job offer.

This study revealed that the current students' perception that accommodation in the metropolitan area is more expensive than in the rural areas is correct. However their perception regarding accommodation expenses in both the rural and metropolitan is higher than what is actually paid for accommodation by the employed graduates.

The students' expectations regarding travelling costs are in line with what is actually spent irrespective of the area employed in. The only determining factor will be the travelling distance. Current students are in fact spending more on travelling in the metropolitan area than in the rural area.

It has to be kept in mind that where one graduate earned more than one salary over a period of time, the average of the salaries were calculated for the purpose of this study.

The study revealed that the current students are expecting to earn more in the metropolitan area than in the rural area. The current students' expectations regarding the earning potential in the metropolitan areas and the rural areas are in fact higher compared to what is actually earned. Overall it seems as though the salary expectation of the current students are much higher than what is actually earned by IT graduates irrespective of their work location.

4.3. CONCLUSION

From the study it is clear that the current students will need to do some thorough research on the living expenses and the earning potential in both metropolitan and rural areas. Even though rewards do have a great influence on the individual's job perception, the over-emphasis of it may encourage job-hopping (Bartol *et al.*, 2002:797).

CHAPTER 5: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS FOR FURTHER STUDY

In this chapter the conclusion regarding the literature study and the results of the empirical research will be made. Shortcomings of the research will be discussed and recommendations for future research will be provided.

5.1. CONCLUSION

The primary objective of this research was to determine the factors that might influence the decision to accept or decline a job offer by the entry level IT graduate from the North West Province.

The compilation of the study population was determined and the financial obligations, regarding funding of studies of the graduates were determined. It was confirmed that the majority of these graduates working in the IT industry were employed in the metropolitan area.

The factors that play a role when the IT graduate evaluates a job offer were investigated, identifying the push factors (factors that play a role in the decline of a job offer) and the pull factors (factors that play a role in the acceptance of a job offer).

Furthermore the expectations of the current students were determined and the role of the recruitment agency was researched.

5.2. LIMITATIONS

The study population was limited to only a small number of students as the specific training provider accommodates only a small number of students per year. It included the 2009 current students and the graduates of the previous year. Of these respondents, some did not answer all the questions or did not follow instructions as indicated, limiting the responses even more. The questionnaire did not make specific provision for rating the push factors (those reasons why students will not accept a job offer) and the reasons for acceptance was limited to the list provided in the questionnaire.

5.3. RECOMMENDATIONS

The decision to accept or reject a job offer is challenging and should be made with great care as it has short and long term consequences. Only the most important factors should be taken into consideration when evaluating an offer. As much information as possible should be gathered regarding the position, to determine whether it is really an opportunity for growth.

It must be kept in mind that a driver's licence and own transport will always be regarded as an advantage to prospective employers. The graduates need to identify the strengths and weaknesses of the organisation and learn more about the position to determine whether it is really a worthwhile opportunity. Rapid advances in IT require frequent and ongoing training and skills development, making the opportunity for further studies and up-skilling important. Monetary compensation should not be the only reason when considering a job offer and the total package should be taken into consideration when evaluating a job offer.

The study population included only students and graduates from one of the so called rural campuses and future studies in this regard should include more students from other campuses in rural areas who find themselves in a position where they will have to relocate to the metropolitan area when offered employment there.

REFERENCE LIST

ASGISA (Accelerated and Shared Growth Initiative for South Africa). 2006. A catalyst for accelerated and shared growth – South Africa: background document. *Media briefing by Deputy President Phumxile Mlambo-Ngcuka, 6 February 2006*. Available online at: <http://www.led.co.za/content/catalyst-accelerated-shared-growth-south-africa-asgisa-media-briefing/> Date of access 25 March 2009.

BARTOL K.M., VENKATESH, B., WILLIAMSON, I.O. & LUI, W.A. 2002. Study of entry-level information technology workers: employee expectations and job perceptions. (*In Proceedings of the Twenty-Third International Conference on Information Systems. p. 797-801.*)

BROWN, P. & SCASE, R. 1994. Higher education and corporate realities. London University College. Available online at: <http://www/hefce.ac.uk/pubs/rereports/2002/rd19-02/> Date of access 31 January 2005.

CELE, N. & MENON, K. 2006. Social exclusion, access and the restructuring of higher education in South Africa. *South African journal of higher education*, 20(3):24.

COHEN, N.J. 1988. Statistical power analysis for behavioural sciences. 2nd ed. Hillsdale, New Jersey: Erlbaum.

CRANMER, S. 2006. Enhancing graduate employability: best intentions and mixed outcomes. *Studies of higher education*, 31(2):169-184, April.

DE LA HARPE, B., RADLOFF, A. & WYBER, J. 2000. Quality and generic (professional) skills. *Quality in higher education*, 6(3):231-243.

ELLIS, S.M. & STEYN, H.S. 2003. Practical significance (effect sizes) versus or a combination with statistical significance (p-values). *Management dynamics*, 12(4):51-53.

HARVEY, L. & BOWERS-BROWN, T. 2004. Employability cross-country comparisons, graduate market trends, Winter 2004/5. Available online at:

[http:// www.prospects.ac.uk/cms/Showpage/Home_page/pl!emlpid](http://www.prospects.ac.uk/cms/Showpage/Home_page/pl!emlpid) Date of access 23 March 2005.

HOWARD, P.N., BUSCH, L. & SHEETS, P. 2010. Comparing digital divides: internet access and social inequality in Canada and the United States. *Canadian journal of communication*, 35(2010):109-128.

JENNINGS, M., WERBEL, J.D. & POWER, M.L. 2003. The impact of benefits on graduating student willingness to accept job offers. *The journal of business communication*, 40(4):289-302, October .

LEVINE, D.M., STEPHAN, D.F., KREHBIEL, T.C. & BERENSON, M.L. 2008. Statistics for managers. 5th ed. New Jersey: Pearson Prentice Hall.

LEWIS, C.D. 2007. Get ready, get set, get to work: *Techniques: connecting education and careers*, 82(5):18-19, May .

McMURTNEY, M.E., DOWNEY, J.P., ZWELTMANN, S.M. & FRIEDMAN, W.H. 2008. Critical skill set of entry-level IT professionals: an empirical examination of perceptions from field personnel. *Journal of information technology education*, 7:101-120.

MEGWA, E.R. 2007. Bridging the digital divide: community radio's potential for extending information and communication technology benefits to poor rural communities in South Africa. *The Howard journal of communications*, 18:335-352.

OOSTHUIZEN, M. 2006. The post-apartheid labour market: 1995-2004. DPRU Working paper No. 06/103, Development Policy Research Unit, University of Cape-Town.

PAUW, K., OOSTUIZEN, M. & VAN DER WESTHUIZEN, C. 2008. Graduate unemployment in the face of skills shortages: a labour market paradox. *South African journal of economics*, 76:32-56, March.

SAITIS (South African Industry Strategy Project). 2000. A survey of the IT industry and related jobs and skills in South Africa. Baseline study survey report, January 2000.

SHAUGHNESSY, J.J. & ZEHMEISTER, E.B. 1997. Research methods in psychology. 4th ed. New York: McGraw-Hill.

SOUTH AFRICA. National Plan for Higher Education. 2001. Pretoria: Government Printer. 20 p.

SPIES, M.M.E. & VAN NIEKERK, T.M. n.d. Employability of the Central University of Technology, Free State graduates: a case study.

SPSS Inc. 2009. SPSS* 15.0 for Windows, Release 15.0.0, Copyright* by SPSS Inc., Chicago, Illinois. www.spss.com.

STATSOFT, Inc. 2009. STATISTICA (data analysis software system), version 9.0. www.statsoft.com

TURBAN, D.B., EYRING, A.R. & CAMPION, J.E. 1993. Job attributes: preferences compared with reasons given for accepting and rejecting job offers. *Journal of occupational and organizational psychology*, 66:71-81).

TYLER J.L. 1983. Love 'em or leave 'em: evaluating job offers. *Business horizons*, May-June.

VAN DER MERWE, P. n.d. Does business drive IT or does IT drive business? *Convergence*, 4(1):100-103.

VILLAR, E., JUAN, J., COROMINAS, E. & CAPELL, D. 2000. What kind of networking strategy advice should career counsellors offer university graduates searching for a job? *British journal of guidance and counselling*, 28(3):390, Aug.

ANNEXURE A: GRADUATES' QUESTIONNAIRE

Dear CTI Graduate

I'm currently doing research for my dissertation as I'm in my final study year towards my MBA studies at the NWU.

Research title: Determine the factors that influence the successful placement of the entry level IT graduates for the North West province.

I need your feedback for research purposes and would appreciate your timely response.

Attached find a questionnaire to be completed by you and returned to the following e-mail address: charmainh@cti.co.za **as soon as possible.**

The research questionnaire is to be completed by all CTI graduates of the past two years.

100% confidentiality is guaranteed

Please answer the questions as truthfully as possible since the validity of the research is at stake.

Save the document to your desktop - Rename it according to your surname - complete and save and send to my mail address.

If you do experience problems opening the document notify me and I'll send you another file – I'm currently working in Office 2007

Thank you kindly for your participation and assistance.

Kind Regards,

Charmain Hay

IT GRADUATES' QUESTIONNAIRE

Author: CH Hay

Purpose: Dissertation toward the practical completion of the MBA program at the NWU. The research results will be available to the management of CTI and the recruitment agency.

Research title:

Confidentiality: Your reply will be 100% confidential. Please use the following e-mail address when you reply with your completed answers: charmainh@cti.co.za.

Validity: Please provide the most accurate answers to all questions. This will ensure valid research results.

Key terms: for the purpose of this research: Johannesburg, Pretoria and surroundings will be referred to as Metropolitan area. Cities and towns in the North West Province will be referred to as Rural areas.

Completing the questionnaire: Indicate your selection of preference for a specific question as 'X' in the appropriate cell while leaving all the other cells blank. If a question is not applicable, indicate as 'NA'.

SECTION A: DEMOGRAPHICS

QUESTION 1: GENDER	Male		Female	
QUESTION 2: AGE	20-23	24-27	28-30	30+
QUESTION 3: QUALIFICATION	Information Systems (IS)	Comprehensive Programming (CP)	Information Technology Engineering (ITE)	
QUESTION 4: FINAL AVERAGE	60-69	70-79	80 - 89	90+
QUESTION 5:				

COMPLETION DATE				
QUESTION 6: FINANCING OF YOUR STUDIES	STUDENT LOAN	PARENTS	OTHER	
QUESTION 7: DO YOU HAVE TO PAY BACK YOUR LOAN ONCE EMPLOYED?	YES		NO	
QUESTION 8: DO YOU HAVE A DRIVERS LICENCE?	YES		NO	
QUESTION 9: DO YOU HAVE YOUR OWN CAR?	YES		NO	

SECTION B: THE RECRUITMENT AGENCY

QUESTION 10: DID YOU REGISTER WITH THE RECRUITMENT AGENCY?	YES	NO
<i>If the answer to question 10 is no, question 11 – 14 will be not applicable, proceed to question 15.</i>		
QUESTION 11: HAVE THEY ARRANGED ANY INTERVIEWS FOR YOU TO ATTEND?	YES	NO
QUESTION 12: HOW MANY INTERVIEWS DID THEY ARRANGE FOR YOU?		
QUESTION 13: DID YOU ATTEND ALL THESE INTERVIEWS?	YES	NO

QUESTION 14: IF YOU HAVEN'T ATTENDED ALL INTERVIEWS, WHAT WAS THE REASONS FOR NOT ATTENDING?		
SECTION C:EMPLOYMENT PRIOR TO STUDIES		
QUESTION 15: HAVE YOU BEEN EMPLOYED PRIOR TO YOUR IT STUDIES?	YES	NO
QUESTION 16: DID YOU SPEND TIME OVERSEAS PRIOR TO YOUR IT STUDIES?	YES	NO
SECTION D: AFTER COMPLETION OF STUDIES		
QUESTION 17: A) ARE YOU CURRENTLY EMPLOYED?	YES	NO
B) IS YOUR CURRENT EMPLOYMENT DUE TO: <i>(SELECT ONLY ONE)</i>	RECRUITMENT AGENCY	
	FAMILY/FRIENDS/CONTACTS	
	OTHER	
QUESTION 18: ARE YOU CURRENTLY STUDYING?	YES	NO
<i>If your answer was <u>no</u> proceed to question 19.</i>		
IS YOUR	YES	NO

STUDIES IT RELATED?				
WHO IS FINANCING YOUR STUDIES?	YOURSELF	EMPLOYER	OTHER	NA

SECTION E: EMPLOYMENT HISTORY

QUESTION 19; COMPLETE THE FOLLOWING TABLE.

EMPLOYMENT	IT RELATED(YES/NO)	PERMANENT/CONTRACT/CONTRACT BECAME PERMANENT	SALARY
POSITION 1			
POSITION 2			
POSITION 3			
POSITION 4			
EMPLOYMENT	LOCATION METROPOLITAN/RURAL	HOW MUCH DID YOU SPEND ON ACCOMMODATION PER MONTH	HOW MUCH DID YOU SPEND ON TRAVELING COST PER MONTH
POSITION 1			
POSITION 2			
POSITION 3			
POSITION 4			

QUESTION 20:

Rate the following according to importance on a scale of 1 – 7 (1 most important and 7 least important)

Salary	
Opportunity to study further	
Benefits (travelling allowance, medical aid, pension fund, etc.)	

Culture of the company	
Location of employment	
Opportunity to gain experience	

ANNEXURE B: CURRENT STUDENTS' QUESTIONNAIRE

CURRENT STUDENTS' QUESTIONNAIRE

Author: CH Hay

Purpose: Dissertation toward the practical completion of the MBA program at the NWU. The research results will be available to the management of CTI and the recruitment agency.

Research title:

Confidentiality: Your reply will be 100% confidential. Please use the following e-mail address when you reply with your completed answers: charmainh@cti.co.za.

Validity: Please provide the most accurate answers to all questions. This will ensure valid research results.

Key terms: for the purpose of this research : Johannesburg, Pretoria and surroundings will be referred to as Metropolitan area. Cities and towns in the North West Province will be referred to as Rural areas.

Completing the questionnaire: Indicate your selection of preference for a specific question as 'X' in the appropriate cell while leaving all the other cells blank. If a question is not applicable, indicate as 'NA'.

QUESTION 1:

Current studying:	Comprehensive programming	Information Systems	ITE	
What would you like to do after completion of your studies?				
Find employment	Continue studying in IT	Go overseas	Continue studying – not IT	Other
Are you studying with a student loan?	Yes		No	
Are you responsible for paying back this loan once employed?	Yes		No	
What year did you complete your grade 12?				
Did you spend time overseas?	Yes		No	

QUESTION 2:

What do you expect your	Rural area	
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starting salary to be (per month)	Metropolitan area	
What do you expect accommodation expenses to be (per month)	Rural area	
	Metropolitan area	
What do you expect travelling expenses to be (per month)	Rural area	
	Metropolitan area	

QUESTION 3:

Rate the following according to importance on a scale of 1 – 7 (1 most important and 7 least important)

Salary	
Opportunity to study further	
Benefits (travelling allowance, medical aid, pension fund, etc.)	
Culture of the company	
Location of employment	
Safety	
Opportunity to gain experience	