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THE USE OF PSYCHOLOGICAL CAREER RESOURCES AND GRADUATENESS IN A SELF-DEVELOPMENT PROGRAM OF STUDENT LEADERS

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DECLARATION

I, Elnette Cilliers declare that **"the use of psychological career resources and graduateness in a self-development program of student leaders"** is my own, original work and that all sources used and quoted were given due acknowledgement by means of complete references. I furthermore declare that I understand what plagiarism entails and am aware of the University's policy in this regard. I did not make use of another student's previous work and submitted it as my own, and I did not allow and will not allow anyone to copy my work with the intention of presenting it as his/her own work.

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ABSTRACT

THE USE OF PSYCHOLOGICAL CAREER RESOURCES AND GRADUATENESS IN A SELF-DEVELOPMENT PROGRAM OF STUDENT LEADERS

The changes occurring in the external environment have forced organizations to rethink the structure, processes and management of its assets and overall organization. The rapid changes in technology, accompanied by globalisation, restructuring and job losses have led to changes in the world of work and the careers of individuals. The 21st century workplace will require individuals to possess a different set of skills and competencies if they wish to remain employable. The latter has great implications for higher education institutions as they have played one of the major roles in supplying employers with the skills they demand. Employers are now expecting higher education institutions to not only supply academically qualified individuals, but also graduates who are able to use specific skills and attributes to make a meaningful contribution to the workplace and overall society. Consequently, the concept of graduateness becomes quite significant as it provides an indication of what a student is expected to develop during their stay at an university. In addition, higher education institutions may have leadership development programs aimed at further developing high-potential students. Graduateness may then become especially relevant as it may be used in these programs to ensure full development of students. One may expect that these high-potential individuals should display a higher level of the skills and competencies required by employers as they already show high potential. The latter may lead to the expectation that their employability prospects should supersede that of the 'regular' student.

Graduate employability has received significant attention over the last decade and researchers have attempted to compile models illustrating the concept. The psychological career resources model proposed by Coetzee (2007) will also be addressed as part of the graduate employability models as it provides an alternative approach to the factors that may influence the employability of individuals. Although some of the models mention underlying dispositions and background factors as a factor of graduate employability little research is available on the proposed relationship of these factors and graduateness and graduate employability.

The main purpose of this study is to identify and describe the graduateness and psychological career resources of student leaders at a higher education institution. A theoretical model was developed proposing the potential relationship between graduateness and psychological career resources. A survey was used to collect the necessary data from specific leadership groups from the University of Pretoria. These leadership groups included

Students in Free Enterprise (SIFE), SRC and mentors. The 94 useable questionnaires were used to provide descriptive, correlational and inferential statistics. Descriptive statistics were used to describe the graduateness and psychological career resources of the student leaders. Pearson product correlations, multiple regression analysis and analysis of variance were used to investigate the relationship between graduateness and psychological career resources. Analysis of variance was calculated to determine whether significant differences exist between the socio-demographic variables, graduateness and psychological career resources.

The findings of the empirical study confirmed the theoretical model proposed in the literature review and confirmed the existence of a relationship between graduateness and psychological career resources. The study furthermore found significant differences between gender, status of employment and field of study groups. The findings of the study provided promising results for the student leaders as they scored above-average in all the dimensions of graduateness and psychological career resources. This study has the potential to provide valuable information to students, specifically those in leadership positions. Universities may consider incorporating these two questionnaires into their leadership development program as it may enhance the development of those skills and attributes needed to become employable and meet the employers' requirements. The university may therefore be in a better position to provide employers with satisfactory graduates who are able to make a meaningful and valuable contribution to the workplace, community and society.

KEY TERMS

Boundaryless career; career; career drivers; career enablers; career harmonisers; career preference; career values; employability; graduate attributes; graduate employability; graduateness; protean career; psychological career resources; psychological contract; discipline-specific skills; graduate attributes; graduate employability; generic skills; psychological career resources

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
ANOVA	Analysis of variance
GS	Graduateness Scale
HECQ	Higher Education Quality Council
PCRI	Psychological Career Resources Inventory
PDP	Personal Development Planning
SAS	Statistical Analysis Software
SIFE	Students in Free Enterprise
SRC	Student Representative Council
USEM	Understanding, skills, experience and metacognition

CHAPTER 1: SCIENTIFIC OVERVIEW OF THE RESEARCH

1.1. Background and motivation for the research

The changes that were brought about by the 21st century had a major impact on the work environment. Globalisation, the rapid advances in technology and the demand for meaningful products have forced organizations to rethink the way it structures and manage its assets.

As Karoly and Panis (2004), Pink (2005) and Jerald (2009) have highlighted automation has started to replace people with machines as it has the ability to achieve the same level of efficiency in a shorter time span. Unfortunately, the latter has forced people to rethink their skills and competencies and the relevance thereof in the workplace.

Fortunately, the advances in technology have enabled individuals to improve their lifestyles and overall health. People now have the ability to use technology to improve their research and development facilities aimed at enhancing current processes and applications. In return, people are forced to develop the specific skills needed to accomplish the former.

The rapid technological advances have enabled organizations to interact across borders and get access to not only local, but also international talent. Unfortunately, the latter has implied that people no longer has as strong job security as previously (Karoly & Panis, 2004:129). If people wish to satisfy their employment prospects they will have to rethink their current skills sets and how it may influence their employment prospects.

The increased access to local talent has brought about significant changes in the composition of the workforce. As Erickson (2005:10) notes the workforce has become more diverse which in turn require people to interact with diverse people more effectively and handle different generations successfully.

Unfortunately, the instability and unpredictability of the world of work has influenced the psychological contract between individuals and organizations. The traditional contract valued skills and loyalty where individuals want a stable and secure career. Currently, however, individuals will seek lifelong development with a strong focus on future employability and enhanced quality of life.

The 21st century workplace has transformed the traditional career to a career that is suitable for the specific work environment. The protean career will require a number of things, namely a) individuals needs to manage their own career, b) careers involve a wide range of

experiences, skills and learning and incorporating one's values and interests, c) development remains a continuous process that incorporates challenging assignments, developing relationships, enhancing employability and balancing work and personal life; and d) the ultimate goal of a career is psychological success where the focus is on the development of the whole person and not only the 'work' person. In the protean career the development of oneself remains the individual's responsibility and the individual should be able to learn from experiences and relationships and use it constructively in the workplace (Hall & Mirvis, 1995:9).

Arthur and Rousseau (1996:34-37) suggest that the so-called boundaryless career will force people to utilise current skills to learn new ones where this process is facilitated by the appropriate use of current collaborations.

The changes in the workplace, careers and psychological contract have impacted the skills demand of employers. The report compiled by EnGauge (NCREL & Metiri Group, 2003) have emphasised that individuals will need to display information, and economic and technological literacy. In addition, they will need to be able to display sensitivity towards different cultures and interact successfully with these different groups. Employers will expect people to interact with individuals anywhere in the world and understand and appreciate the interconnectedness between nations, groups and economies.

Harvey, Moon and Geall's (1997) study found that these expectations will influence the degree to which employers seek individuals with a degree. Lees (2002:12) confirmed the latter and argue that employers still believe in the advantages of recruiting graduates and in addition will employ them for their ability to display the skills needed to be successful in the workplace. Consequently, they may expect higher education institutions to develop these key skills and rethink the quality of the individuals they provide to employers (Marock, 2008:10).

A study conducted by the South African Qualifications Authority and Higher Education South Africa (Griesel & Parker, 2009) focused on what attributes employers consider important and expect graduates to have when they enter the workplace. The employers stated that the following were described as important attributes that graduates need to possess when entering the market:

a) basic skills and understanding (communicative competence in English, including the "tools", concepts and strategies through which to demonstrate skills and understanding – oral and written communication skills; understanding the world of work). It furthermore includes technical ability, computer literacy, ability to find and access information);

b) knowledge and intellectual capability (intellectual capability grounded in both discipline and general knowledge and an appropriate approach to knowledge production, and cognitive 'openness' to continue learning);
c) workplace skills and applied knowledge (a proactive approach to problem-solving, located within a context of cultural diversity and changing workplace practices); and
d) personal and interactive skills (sense of identity, self-confidence, negotiation and mediation skills; work in a team and understand and accept differences between people; openness and flexibility.

It is evident from the above-mentioned research that, although a graduate has mastered a specific subject field and has gained the required subject knowledge, employers also have further expectations that they require from graduates. These expectations may have a direct impact on a student's ability to enter the labour market upon graduation.

Furthermore, in a survey conducted amongst 20 South African companies the following reasons for graduate unemployment were identified (Kizito, 2009:4):

a) graduates possessed qualifications but lacked practical skills and experience;

b) the quality of graduates were not acceptable.

The research furthermore indicated that graduates lacked the following skills:

a) time management;

b) communication;

c) creative thinking; and

d) ability to work independently

These research findings emphasised the need to determine the role of higher education systems in the shaping and development of graduates who will possess the required skills, competencies and flexibility to manage this new "fast-paced, continuously changing, knowledge-based economy" (Kizito, 2009:4). The focus is now on higher education institutions and the preparations of students for the world of work.

The latter gave rise to the concept of graduateness. Kitzo (2009:4) explains that while universities are under pressure to produce "market- and labour-ready graduates, universities also need to face the challenges of preparing curricula that will equip adults for work in an unknown, unpredictable and rapidly evolving, super-complex future.

However, there seem to be differing views as to what constitutes graduateness. The Higher Education Quality Council of the United Kingdom (1996) defines graduateness as: “An idea that graduates should be expected to possess certain general qualities as a consequence of their experience of higher education.” Another definition provided by the Council describes graduateness as “the description of a set of qualities that usually mark a person who has undertaken a degree course developed under the auspices of nationally monitored quality systems” (Glover, Youngman & Law 2002:303).

The Library Association (Glover *et al.,* 2002:295) provides the most comprehensive definition by stating that graduateness can be seen as “a set of transferable skills including planning; gathering, selecting, appraising, organising and recording information; communicating and realising results, and evaluating achievements.” Consequently, graduateness will entail the achievement of a set of standards.

These definitions suggest that universities have a responsibility to prepare graduates for the workplace and one way is to ensure that students develop generic skills in a structured way throughout their undergraduate studies. Graduateness as a concept can thus be described as the assumption that upon the completion of studies graduates would have obtained a selection of knowledge, skills and competencies, whether transferrable, cognitive, or operational.

However, the confounding variable in this concept remains the individual human being. His or her graduateness will remain dependent on willingness to learn and to develop the specific skills and attributes. Even more so, the individual will be influenced by different values, drivers and preferences with regards to their specific career. This in turn may influence the specific skills and attributes that one will develop.

Coetzee (2008) confirmed the importance of a person’s specific career values and preferences on career decisions with her focus on a different construct, namely psychological career resources. She emphasizes that because of the increasing unstable environment in which employees currently need to work in, these employees will have to become less dependent on specific organizational career arrangements. This is due to the fact that as employees are exposed to more frequent career transitions, greater challenges arise in making career decisions. This will inevitably force employees to become more adaptable learners. Coetzee (2008) developed a useful theoretical framework to assist employees in realising the importance of these psychological career resources. This framework encompasses four areas.

Psychological Career Resources thus focus on a person's career consciousness, i.e. "a person's conscious career-related cognitions (perceptions, awareness, self-evaluations) of your career preferences, values, skills, attitudes and behaviours that are understood and regarded by people as helpful in realising their goals and achieving career success" (Coetzee, 2008).

There is an indication in the literature that graduateness and the related characteristics should be able to satisfy employers' requirements as described by the surveys conducted. Hence, upon completion of a degree a graduate should possess the qualities, skills, knowledge and characteristics described by the literature. Furthermore, a person's psychological career resources should indicate his or her career consciousness, i.e. "a person's conscious career-related cognitions (perceptions, awareness, self-evaluations) of your career preferences, values, skills, attitudes and behaviours that are understood and regarded by people as helpful in realising their goals and achieving career success" (Coetzee, 2008). The latter may consequently influence the degree to which a student will develop certain skills and competencies.

Both these constructs may become valuable tools for self-development of graduates and students. If students are familiar with the characteristics they should possess upon completion of a degree and are aware of their psychological career resources, they should be able to engage in meaningful self-development activities which in turn may enhance their employability.

1.2. Problem statement

The Australian Chamber of Commerce and Industry emphasises that employers no longer only require technical skills and knowledge, but also seek a series of personal attributes and other broader skills, including self-management, initiative, enterprise and a continuous learning approach (ACCI, 2002:1). If these students occupy a leadership position at the university the expectation may exist that they should already display some of the skills and competencies required by employers.

Based on the above-mentioned statement there is an increased pressure on Higher Education Systems to rethink the university experience and more specifically how they can assist in the development of a number of attributes required by employers, which in turn may lead to a student's graduateness and also enhance a graduate's employability. In addition, higher education institutions may need to reconsider the efficiency and quality of current student leadership programs and developments and the quality of the leaders produced. This in turn, places an increased pressure on university students to rethink their position in the

labour market as well as their graduateness. Furthermore, students may need to reconsider and evaluate their psychological career resources which will display their career consciousness and influence the career decisions made by them and what they view as necessary for career success and employability.

All of the above-mentioned factors may provide valuable information to students about their graduateness, where they see themselves in terms of employability and their career-related cognitions. In turn, this information may assist them to engage in meaningful self-development activities aimed at enhancing their employability. These two constructs may also be incorporated into universities' student leadership programs.

Based on the review of available literature, the following gaps should be highlighted:

a) current literature provides little information regarding undergraduates' and more specifically student leaders' perceptions of their position in the labour market or their graduateness;

b) little literature is available on the use of both a person's psychological career resources and graduateness in their career-related self-development activities; and

c) limited literature is available on the relationship between an undergraduate's view of their graduateness and their psychological career resources and whether such a relationship even exists.

This study can make a significant contribution towards the Industrial and Organizational Psychology and the Higher Education field, as it can indicate how students view themselves with regards to their graduateness and how psychological career resources can be related to it. Based on the data obtained, inferences can be made about what students should do or change to enhance their employability. Should the results lean itself to it, it may be distributed to other similar universities and leadership students as it may assist these entities with their career development planning and leadership development.

1.3. Purpose

The purpose of the research can be divided into general and specific aims.

1.3.1. General purpose

The main purpose of this study is to determine the psychological career resources and graduateness perceptions of students.

When a student becomes aware of their graduateness, perceptions as well as their psychological career resources, this information may be used as a benchmark for comparing themselves to what future employers want.

1.3.2. Specific aims

Literature review

A literature analysis will be conducted to determine:

- the 21st century workplace and the impact on careers, psychological contracts and skills requirements;
- what is meant by the term 'graduateness';
- employer expectations from graduates and the skills, knowledge, qualities and characteristics to function in the new world of work;
- the relationship of graduateness with graduate employability; and
- the theoretical perspectives regarding psychological career resources.

Empirical study

The empirical study will be conducted to determine:

- the psychological career resources of student leaders;
- the graduateness perceptions of student leaders;
- correlations between the psychological career resources and graduateness of student leaders; and
- whether differences in terms of student leaders' psychological career resources and graduateness can be attributed to categories, including age groups, gender, field of study and status of employment.

1.3.3. Research questions with regards to the literature

The following research questions will guide the literature review analysis:

Research question 1: How does the new world of work look and what are the impact thereof on careers, the psychological contract and employers' expectations?

Research question 2: How will these expectations impact Higher Education Institutions and students?

Research question 3: How does the literature describe psychological career resources and graduateness?

1.3.4. Research questions with regards to the empirical study

The following questions will be addressed through the empirical study:

Research question 1: What are the psychological career resources and graduateness perceptions of student leaders?

Research question 2: Does a relationship exist between the psychological career resources and graduateness of student leaders?

Research question 3: Are there any differences between gender, age groups, field of study and status of employment in terms of their psychological career resources and graduateness?

1.3.5. Hypothesis

Hypothesis testing serves as a method for making inferences from the sample and relating it to the population. The process will commence with the researcher having specific ideas regarding the properties of some the variables of the study (Maree, 2007:203).

The following research hypothesis is formulated with a view to address the research objectives of the study:

H01: There is no relationship between psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

H1: There is a relationship between psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

H02: There are no significant differences between gender, age groups, field of study and employment status in terms of their psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

H2: There are significant differences between gender, age groups, field of study and employment status in terms of their psychological career resources (career

preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

1.4. Statement of significance

The various changes in the 21st century workplace have led to changes in the psychological contract and traditional careers. These changes have had a significant impact on the skills requirements of employers and the changing expectations of graduates and higher education institutions.

The latter has led to discussions surrounding graduateness and what it entails. Higher education institutions are forced to rethink the quality of the graduates they produce and whether they are contributing to the development of their students on all levels, personal work and other. Unfortunately the concept of graduateness may at times be rather confusing (Glover *et al*., 2002) and this study may serve to clarify the concept and how it may influence a student's studies and development. There is little research available regarding student leaders and their graduateness and this study may provide valuable information regarding same and how it may be incorporated into leadership programs and development.

In addition, a student's career decisions and development may be influenced by their background factors, dispositions, beliefs and traits. In this regard, the psychological career resources model proposed by Coetzee (2008) may become especially relevant. As Hussain (2007) noted, a student's graduateness may be influenced by these characteristics, traits and beliefs and it may be useful to further investigate the specific influence thereof. This study will specifically add value in this regard as it will attempt to determine whether a relationship exist between a student leader's psychological career resources and graduateness. The investigation of the relationship between the graduateness skills (interactive skills, problem-solving, continuous learning orientation, enterprising skills, presenting and applying information and ethical behaviour) and career preferences, career values, career enablers, career drivers and career harmonisers may provide valuable information regarding the potential influence a student's psychological career resources may have on the development of the so-called generic or graduateness skills.

If this study's findings are significant, higher education institutions may consider utilising these two questionnaires in their career counselling and development programs. In addition, students may be invited to complete the questionnaires at the beginning, middle and end of their studies to identify differences and the influence it may have on their career. With specific reference to the leadership programs available at higher education institutions the questionnaires may be used to identify the strengths and weaknesses of the individuals and

the group and adjust their programs accordingly. The latter may lead to greater development of individuals and more effective utilisation of the program which may enhance the value of the program. It may also enable higher education institutions to identify the skills and competencies it expects from their leaders.

By giving students the opportunity to assess their position as graduates in the labour market as well as how they view their current career paths, decisions, values and attributes will provide them with valuable information about the possible gaps that may exist with relation to employer expectations and the direction their self-development activities should take.

1.5. Research methodology

Quantitative, descriptive research will form the research design of this study and survey research will be conducted to obtain information about the group's opinions. According to Leedy and Ormrod (2005:179), quantitative research can include "either identifying the characteristics of an observed phenomenon or exploring possible correlations among two or more phenomena." This type of research uses statistical methods and analyses to describe the research findings and draw conclusions.

The details of the research design will be addressed in chapter 4.

1.5.1. Determination and description of the sample

According to Saunders, Lewis and Thornhill (2007:610), a sample refers to the "subgroup or part of a larger population". the African context with specific reference to student leaders at a university. The sample will consist of about 90-100 participants. The sampling design and the selection of the sample will be addressed in the research methodology section.

1.5.2. Data collection

Two instruments will be used to collect the data:

- The Psychological Career Resources Inventory (PCRI); and
- Student Graduateness Scale (GS)

The questionnaires will mainly be self-administered as the questionnaires will be distributed via hand. This type of questionnaire will be more advantageous as the participants will be able to complete the questionnaire at a time that is convenient for them. However, a possible disadvantage is that this method can lead to a low response rate and the participants may use the opinions of other parties to complete the questionnaire.

The data collection process and the data collection instruments will be discussed in chapter 4.

1.5.3. Data analysis

According to De Vos (2003) data analysis can be described as the process of dissecting data into vital parts with the aim of obtaining answers to the research questions. Through the data analysis the research hypothesis will also be tested.

This process will entail:

- cleaning and organizing the data for analysis;
- describing the data; and
- testing the hypothesis

The specific data analysis techniques to be used in this study will include descriptive, inferential and common statistics and will be discussed in chapter 4.

1.6. Delimitations

The research study has the following delimitations:

Firstly, the context of the study is limited to a higher education institution in South Africa. In addition, the study is limited to students who are currently in some leadership position at the university.

Secondly, the study is limited to the research available on graduateness and psychological career resources. Consequently, the focus was only on career preferences, career values, career drivers, career enablers and career harmonisers. To ignore the factors that may have an influence on graduateness only the graduateness dimensions of the Student Graduateness Scale were considered. The researcher did not make any attempt to manipulate the information or statistical results and data on the basis of family, spiritual background or any related factors.

Lastly, this research study is only of a foundational nature and consequently the focus is restricted to the relationship between psychological career resources and graduateness. If the existence of such a relationship is confirmed this study may serve as the basis for future research to further explore the relationship and the two constructs. The research methodology used were not capable of identifying a cause-and-effect relationship, but had the capacity to determine the existence of a relationship.

1.7. Definition of key terms

1.7.1. Graduate employability

A set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefit themselves, the workforce, the community and the economy (Yorke & Knight, 2004:3).

1.7.2. Graduateness

An idea that graduates should be expected to possess certain general qualities as a consequence of their experience of higher education (HEQC, 1996 in Mullen, 2008:3).

1.7.3. Graduate attributes

The qualities, skills and understandings a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university courses. They are qualities that also prepare graduates as agents of social good in an unknown future (Bowden, Hart, King, Trigwell & Watts, 2000)

1.7.4. Career preferences and values

“The enduring cognitive or conceptual structures underlying individuals’ thinking about their careers and which define the meaning of a career to them.” (Driver, 1982; Kim, 2005 in Coetzee & Schreuder, 2009:2).

1.7.5. Career drivers

The attitudes that energise people and motivate them towards experimenting with career and employment opportunities that are based on their viewpoints of the possible selves they could become or the possible working roles they could experience (Coetzee, 2008:10).

1.7.6. Career enablers

“Those abilities that help them succeed in their careers.” It refers to an individual’s transferrable skills, including their self or other skills and practical or creative skills (Coetzee, 2008:10).

1.7.7. Career harmonisers

According to Coetzee and Schreuder (2009:2), career harmonisers can be defined as "the psychological attributes which act as promoters of flexibility and resilience." A person's career harmonisers will also serve as controllers of an individual's career drivers and will ensure that people do not over-commit themselves to certain situations.

1.7.8. Psychological career resources

"The set of career-related orientations, values, attitudes, abilities and attributes that lead to self-empowering career behaviour and promote general employability" (Coetzee & Roythorne-Jacobs (2007).

1.8 Chapter layout

The study will consist of the following chapters:

Chapter 1: Scientific overview of research

The fundamental focus of this chapter will be to provide the background and motivation for the research. Based on this the problem and purpose statement with specific aims will be identified. Once this has been established, the research design and methodology applicable to the study and chapter division will be addressed. A summary will conclude this chapter.

Chapter 2: The new world of works

This chapter will address the changes that have occurred in the external environment and the impact it has had on the workplace. The chapter will also give attention to the changes in the psychological contract, careers and skills requirements. The chapter will conclude with an integration of the literature which will serve as a basis for the following chapters.

Chapter 3: Graduateness and graduate employability

This chapter will serve to conceptualise graduateness, graduate employability and psychological career resources. The chapter will conclude with an integration of the literature available and suggest a model illustrating the potential relationship between graduateness and employability.

Chapter 4: Research methodology

A comprehensive description of the empirical research will be provided in this chapter. It will firstly describe the research paradigm chosen. Secondly, it will give attention to the specific inquiry of strategy, the design of the sample, the data collection process and the statistical analysis of such data. The chapter will conclude with a clear formulation of the research hypothesis.

Chapter 5: Research results

This chapter will describe the results obtained from the data collection process and the specific inferences to be drawn from it. The focus will thus be to test the hypotheses identified in chapter three. To discuss the research results descriptive, common and inferential statistics will be utilized.

Chapter 6: Conclusions, limitations and recommendations

The final chapter of the research study will serve as a method for integrating the various results and present the conclusions. The possible limitations related to the study will also be addressed in this chapter. Recommendations related to the two instruments and the use thereof in higher education institutions and leadership development will be discussed. This chapter will conclude with suggestions with regards to the incorporation of research.

1.9 Chapter summary

The main aim of the first chapter was to summarise the essential components of the research study. Consequently, the focus was on the background leading to the study, the problem as identified by the researcher, the main and specific aims of the research and the literature available. Furthermore, it addressed the research methodology of the study, including the design, data collection and analysis. Recognition was furthermore given to the possible limitations related to the proposed study. Chapter 2 will address the research objectives of the literature review.

CHAPTER 2: THE NEW WORLD OF WORK

Keywords: boundaryless career; career; career drivers; career enablers; career harmonisers; career preference; career values; employability; graduate attributes; graduate employability; graduateness; protean career; psychological career resources; psychological contract

2.1. Introduction

Organizations cannot function independently from their external environment. As Gow and McDonald (2000:73) note each company will be influenced by the changes in the external environment and will be forced to change the manner in which it operates and manages its assets. These changes include automation, rapid technological advances, globalisation, changes in the structure of the workforce and many more.

Powell (2001) identified a number of influences these changes will have on the workplace, namely a) greater uncertainty in terms of careers and career paths; b) increased income disparities; c) increased pressures to leverage one's competencies and skills to remain employable; d) increased use of relational contracting, networking and collaboration; e) greater interdependence amongst various companies; and e) ability to become more flexible and adaptable to change.

These changes in the workplace also influenced the nature of careers and introduced a shift from traditional to boundaryless and protean careers. As Hall (1996:11) explains, the individual now has the main responsibility of managing their careers and developing the related competencies. Arthur and Rousseau (1996) agree and add that an individual in the boundaryless career will be responsible for using their current skills to acquire future skills and using networks and collaborations to manage and develop careers. Regardless of the aforementioned factors, if people wish to remain marketable in the new world of work they will need to display the skills and attributes employers require. Although the skills needed in the previous century remain relevant and necessary, its sufficiency is questionable. NCREL and Metiri Group (2003) and Aselstine and Alletson (2006) have identified and described the key skills needed if workers wish to be successful in the 21st century work environment.

The purpose of this chapter is to identify and describe the changing trends in the workplace, the characteristics of the 21st century workplace and career and the skills needed to be successful. The chapter will conclude with an integration of the literature available and will serve as guidance for the coming chapters.

2.2. The traditional workplace

Hitt, Keats and DeMarie (1999) note that in the traditional workplace organizations had clear boundaries, knew what to expect from the environment and a more even level of competition. Organizations had access to more common information and less diversity in international operations. In summary, organizations had a clear picture of their external environment, where they fit in and how they should operate.

Furthermore, Aselstine and Alletson (2006:2) explain that the old world of work had a quite clear approach where employees supplied the workplace with their labour and in turn their income may increase, but their job will still secure. Managers were expected to make the important decisions and set goals. Workers were only expected to carry out these decisions and respect authority. In return, workers will always receive a secure income with cost of living incorporated.

In addition, Powell (2001:8) adds that workers had a fixed job description with explicit duties and responsibilities. Organizations had a clear structure with various departments and careers were restricted to the specific functional area. As long as training and development was job-related it was provided and people loyal to their career would receive some form of financial support in later years.

However, there have been various trends that have significantly influenced the workplace and consequently the way work is organised and conducted. The following sections will describe these trends and the impact it has on the work environment.

2.3. Trends impacting the 21st century workplace

Karoly and Panis (2004), as well as Jerald (2009) describe the following trends that impacted the workplace:

2.3.1. Technological advances

Jerald (2009:2) states that automation, a result of rapid technological advancement has led to humans being replaced with computers and the related machinery and have gradually entered the “white collar” workplace (Levy & Murnane, 2007 in Jerald, 2009:2). Traditionally, people were paid for data collection, analysis of the data in a rather routine manner and distribution to higher level management. Now, however, if at all possible, the tasks will be

automated. Unfortunately, as Powell (2001:23) observes the latter has implied that organizations no longer value the skill development of its employees.

However, Harvey, Moon and Geall (1997) argue that the downsizing caused by automation of tasks have led to an increase in the demand of skills related to problem-solving. Levy and Murnane (2004), in Jerald (2009:3) agree and identified expert thinking and complex communication as the skills that fall beyond the scope of a computer's ability. Expert thinking, according to Levy and Murnane (2004), as cited by Jerald (2009:3) refers to a person's ability to quickly and creatively respond to unexpected problems with no prescribed or predictable solution. Complex communication can be described as interactions aimed at collecting information from individuals and either explaining it or using it to persuade another person. The authors conclude, stating that people with the above-mentioned skills will have brighter job prospects.

2.3.2. Technology

Karoly and Panis (2004) argue that the IT revolution of the past twenty years has significantly influenced the workplace. Technology has discovered methods for extending a person's life span and improving overall health. This in turn has influenced the participation and productivity of the labour force as they age. The participation by disable people were a direct consequence of these technological advances as it is now possible to remediate rather than accommodate disabled people resulting in increased labour activity. Erickson (2005:11) confirms these statements and also adds that technology has provided people with more flexibility, autonomy and may influence their productivity levels.

Powell (2001:25) and Karoly and Panis (2004:125) further note that technological advances will lead to companies forcing workers to engage in research and development activities that will improve current processes and applications. Skilled people will become even more important. As increased pressure will be placed on education institutions to provide these skilled individuals, technology may be utilised effectively to facilitate distance and distributed learning. Therefore, employees will now be able to become lifelong learners. Hitt *et al*. (1998:23) summarise that the 21st century workplace will be characterised by the following features, namely a) rapid technological advances and changes; b) availability of and access to information to improve knowledge and increase the company's competitive advantage and d) the ability to make customer-specific products more quickly and efficiently.

However, these technological changes will result in organizations broadening their markets which may imply entering markets outside national borders.

2.3.3. Globalisation

Friedman (2005), as cited by Jerald (2009:10) explains that the rapid advances in both digital technology and telecommunications have played a significant role in globalisation or the deterioration of social, economic and intellectual borders between countries. Hitt *et al*. (1999:24) add that globalisation has enabled organizations to develop new economic and strategic alliances. As Karoly and Panis (2004:125) observe globalisation has led to more decentralised businesses and the development of so-called e-lancers, where the business only consists of a few individuals linked via electronic networks.

Globalisation has enabled people to develop a more diverse range of interactions with different people and with different knowledge resources. As Jerald (2009:10) explains, one can now function in a team whose members are located on different continents. Erickson (2005:10) agrees and explains that companies have the ability to form regional offices across various countries and function as connected communities. People's prospects of achieving work-life balance have brightened and productivity has generally increased as people may not be required to commute so often.

Unfortunately, as Jerald (2009:25) notes globalisation has led to people no longer competing only with local talent, but with any person anywhere with the appropriate skills and qualifications. Aselstine and Alletson (2006:4) highlight employees have realised that may be required to rotate between jobs to ensure growing compensation and career development. Due to this employee mobility EnGauge (NCREL and Metiri Group, 2003:8) warns that employees will also be forced to use soft skills to adapt to the rapid technological changes. Karoly and Panis (2004:129) elaborates, stating that globalisation has in turn led to issues of job displacement, insecurity and instability and workers will be forced to enhance their marketable skills throughout their employment career. Should an organization not be able to find the required skills and talent from within the necessary steps will be taken to employ the right talent from outside the company (Jerald, 2009:7)

In the context of higher education institutions globalisation will impact it on two ways. Firstly, there is an increased demand on students to acquire the skills perceived critical for job success and the relevant higher education needed. Secondly, the type of knowledge needed has changed. People can no longer simply rely on their knowledge about local people and cultures, but will be forced to enhance their knowledge about people and cultures outside their national borders, i.e. improved global literacy.

2.3.4. Changes in the workforce

Grantham and Ware (2004:25), as well as Aselstine and Alletson (2006:4), note that the changes in labour force participation rates, as well as the age and gender shifts in the U.S. population, have significantly impacted the size and composition of the country's workforce. The new workforce is more equally distributed in terms of age, gender and race. Erickson (2005:10) also noted through the studies conducted that the workforce will become chronologically older as the possibility of longer life spans and decreasing birth rates become visible. Grantham and Ware (2004:26) make the conclusion that the decrease in birth rates is what will cause the more 'senior' employees to remain in employment longer.

A factor that enforces the above-mentioned is Erickson's (2005) finding that mature employees are mostly happier and more engaged in their work than the younger workers. The assumption may be made that younger workers may increasingly compete with these workers for skilled positions which will increase the pressure of delivering the required skills. In addition, managing multiple generations in the workplace is a challenge and managing their different priorities will continue to challenge employers (Grantham & Ware, 2004:25). Erickson (2005:10) also adds that since these different generations have significant different views and values about work itself, employers need to manage these views and expectations individually.

Erickson (2005:10) continues with the changing trends in the workforce highlighting that people may lack the key skill needed for a company's objectives. As Karoly and Panis (2004) also explain, the changes in skill may be a result of the global and technological changes. The workforce will be required to be more skilled and the emphasis may be on the so-called non-cognitive skills, which include the ability to reason on an abstract level, the ability to solve problems and display interpersonal skills. Jerald (2009:16) also emphasises that due to these demographic changes, workers should also be able to handle diversity and different generations successfully.

To describe the diversity of the workforce Erickson (2005:14) provides a model displaying the different segments visible in the 21st century workforce.

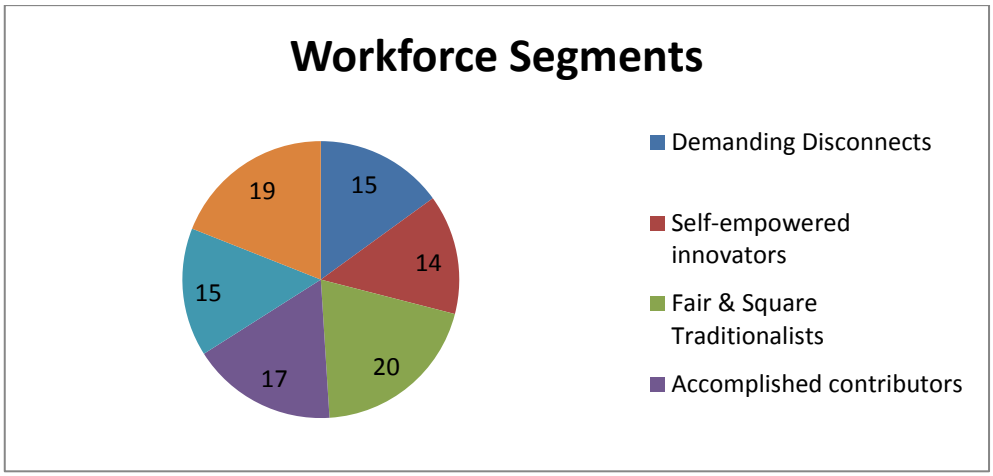


Figure 2.1: Workforce Segments (Source: Erickson, 2005:14)

Employers can ascertain the specific type of segment needed for their specific environment and may therefore attract and retain the related skills and characteristics of the particular segment. Employees need to be aware in which category they fall as it may determine how marketable they are in a specific work industry.

2.3.4.1. Self-empowered individuals

Erickson (2005:14) describes this segment of employees as individuals who view work as developing something of true and long-term value. Common characteristics of these workers include entrepreneurship, creativity, well-educated and self-empowered. They will often assume leadership and will most likely measure success in terms of remaining truthful to themselves. These workers will need to be stimulated, provided with a specific sense of purpose and have the opportunity for lifelong learning. Individuals that fall within this segment will often be either self-employed or in a management position.

2.3.4.2. Fair & Square Traditionalists

As Erickson (2005:14) explains, these individuals prefer a steady and rather predictable career path to success. They will often be termed highly reliable, loyal and good team players. They may often be less educated, but have a higher household income. Fair compensation and rewards will attract them. They will not be moved as much by the additional workplace benefits like an enjoyable work environment, stimulation or lifelong learning, but will seek job security and stability.

2.3.4.3. Accomplished contributors

For these individuals, work provides them with the ability to become a member of a successful team. They will therefore value teamwork and seek a work environment that is supportive and interesting. They want their work environment to be an exciting and enjoyful place, but will also expect employers to provide them with job security and stability. Erickson (2005:15) describes this group as reliable, thorough, capable and often the most experienced and skilled in their positions.

2.3.4.4. Maverick Morphers

Erickson (2005:15) explains that these individuals will expect work to be of a changing and adventurous nature. They will therefore not be puzzled by constant change, new things and different rules. They will be inspired by growth, variety and new opportunities. They will be the most likely segment with a strong preference for flexible work arrangements and schedules. Employers will find that they are the most difficult individuals to retain as they constantly seek various career options.

2.3.4.5. Stalled survivors

Ericskson (2005:15) notes that these individuals are often not yet satisfied with their work lives as they are still trying to balance their lives in all aspects. It will often be people who graduated recently, got married or pursue other interests than work. It is for this reason that they will seek employers who will lessen their stress levels and provide a fun and relaxed environment. They will therefore also seek flexible work arrangements and an opportunity to take control of their careers and lives.

2.3.4.6. Demanding disconnects

Erickson (2005:15) state these individuals often perceive work as a frustration and may therefore show the least commitment in the workplace. Although they also value job security and rewards, they will often be dissatisfied with their work conditions, arrangements and few opportunities. They will place a great deal of emphasis on compensation and benefit packages and will often be left unmoved by enjoyable, stimulating and meaningful work.

2.3.5. Changes in the workplace

Pink (2005:35) notes the expectations of both the organization and individual have changed. Heerwagen, Kelly and Kampschroer (2006) attribute these changes to increased pressures on organizations to increase their competitiveness, swiftness and customer focus. In short, organizations have been required to transform into a “lean enterprise”. The main principles of the “lean enterprise” are:

a) explaining the value of a product and the company in terms of customers’ expectations and views;
b) identifying and describing the internal activities and processes that are customer-orientated and create value for them;
c) removal of activities that do not add value; and
d) reduction in overhead costs.

As Pink (2005:35) explains, traditionally, the focus of the organization was on producing a product that is both reasonably priced and sufficiently functional. Currently, however, the focus has shifted to manufacturing a product that is meaningful, creative and unique.

The new “leaner organization” has a number of implications for organizational structures. O’Toole and Lawler (2005), as cited by Jerald, (2009:11-13) describe a number of changes that have occurred in the workplace.

As the authors explain, hierarchical relationships were historically of great importance and people were simply told what to do. However, restructuring due to costs have forced companies to decrease the number of layers in the company and consequently fewer managers exist. Heerwagen *et al.* (2006) elaborate explaining that the traditional hierarchical structures are lacking swift responses to changing market demands and new innovations. Instead, decentralised decision-making and cross-functional teams may address these requirements more efficiently, and as Harvey *et al*. *(*1997) explain organizations have removed the unnecessary layers of management and gave the remaining managers broader responsibilities.

The latter, as Powell (2001:33) argues, have led to jobs being replaced with projects where employees will be required to often work in teams and on a number of short-term projects. Heerwagen *et al*. (2006) agree and explain that teams have the advantage of making quicker decisions and continually develop new and more efficient processes.

Due to the flatter management structures within companies and the increased use of teams, employees' self-management activities have increased. The absence of managers has also increased the freedom and autonomy of workers. As Heerwagen *et al*. (2006) observe, managers' perceptions have changed and view themselves as social supporters and mentors. The flatter structures have furthermore led to a breakdown of boundaries between job roles, categories and management levels and emphasise an increase in knowledge and task sharing.

Owen and Bound (1999), however, caution that the self-management responsibility of workers does not go without its challenges, especially if it is in an outsourcing capacity. These individuals will be required to a) manage relationships influenced by different organizational cultures and market contexts; b) apply acquired knowledge across a variety of organizations with different processes and strategies; and c) take responsibility for their own development and seek feedback.

Harvey, Moon and Geall (1997) and Erickson (2005:12) identify flexible work arrangements as a key part of the 21st century workplace and explain that employees will be provided with flexibility in terms of their contractual arrangements, compensation and areas of responsibility. Some organizations have implemented fixed contract arrangements where the aim is to continuously employ new and creative individuals. These nonstandard work arrangements may lead to workers finding more flexible work arrangements, whether being part-time or self-employed in nature. People seeking work-life balance may find this prospect quite favourable.

Smith (1997:316) provides an interesting view on the flexibility of work arrangements and describes two types of flexibility, namely functional flexibility and numerical flexibility. Functional flexibility has human resource management strategies as a foundation. These strategies focus on increasing employee involvement, but more particularly focus on the core workers in an organization. Companies will strongly focus on providing them with the required training and using this accumulated knowledge. Numerical flexibility, on the other hand, will focus on the organization of work. The workforce will be downsized to a core business and will focus on increasing the workers critical to this organization. Employers will therefore focus on expanding and contracting the size of the workforce to cater for changes in demand of the external work environment.

This numerical flexibility has in turned led to outsourcing as companies now focus on functions critical to the core business of the organization. Outsourcing and contracting has come to play a vital role in the new world of work and Harvey, Moon and Geall (*1997)*

describe that these individuals may be needed as where the skills required are wide, but the quantity of work small.

All of the afore-mentioned factors have significantly influenced the degree of predictability and stability in organizations. As Heerwagen *et al*. (2006) has cautioned, organizations in the 21st century should expect continuous cycles of change of on-going reflection and reorganization of activities and processes, whether on a large or small scale. These periods of change may be followed by some periods of stability. Work is therefore no longer tied to a person's speciality, but by the specific task or problem a team has to resolve. The latter will emphasise the ability of employees to remain flexible. Harvey, Moon and Geall (1997) agree and emphasise that organizations and consequently employees will be required to remain flexible and open for change if they want to survive in the new work environment.

2.4. The 21st century workplace

Based on the work of others discussed in the previous sections, the following inferences may be made regarding the 21st century workplace:

a) project teams instead of job-specific departments

The trends in the external environment have forced organizations to rethink the manner in which the organization is organized and work is conducted. People will no longer be bound only to their job description and its related tasks, but may be forced to rethink their value in the organization and how they can contribute to the organization's overall objectives. The latter may imply that organizations will expect individuals to be involved in a number of projects and not a specific job. The latter may in turn force departments to function interdependently and be involved in the various projects. Participation in these teams may change the manner in which employees are compensated. It may happen in the 21st century workplace that workers will be compensated based on their team contribution and not merely for the job itself.

The changes in the design of work may lead to changes in the structure of organizations.

b) Less hierarchy, stability and predictability

The increased use of project-teams may lead to deterioration of the traditional hierarchical structures of the old workplace. The use of teams may rapidly increase in the 21st century workplace. However, the latter may also force organizations to seek talent and skills outside their own borders. Interorganizational collaboration may increase to ensure objectives and goals are met. Unfortunately these collaborations may cause some uncertainty for

employees as clear boundaries no longer exist. Employees may therefore be forced to deal with continuous changes in the workplace accompanied by less predictability and job security.

c) Employee development and training

Traditionally, training was only given if it was job-specific and needed to perform a specific job. However, to enable employees to cope with the changing workplace training may become more focused on the development of skills needed to function in the team and to contribute to the company's goals and objectives. Consequently, the skills developed may be much broader than those needed for the job. However, a potential downside may be that employees will move to organizations where this growth and development is possible and consequently they may become more selective about skills development. Individuals will seek careers where they have the opportunity to grow and develop themselves and where they are rewarded for good performance and the competencies they display. Organizations may therefore be forced to start focusing on becoming the employer of choice and assist individuals in their career development activities. In the context of this study students need to be aware of these changes in the workplace as it may impact how they will manage their careers.

This section addressed the changes in the workplace that will impact individuals and organizations. However, what is of even more importance is the impact these changes will have on the traditional psychological contract between individuals and organizations.

As Sullivan (1999:458) elaborates, the psychological contract between an individual and the company has changed significantly. Aselstine and Alletson (2006:4) agree explaining the changing circumstances in the world of work and the workplace has led to employees increasingly expecting greater transparency in their company and access to information. This principle also applies to reward and remuneration structures. Employees are more willing to take personal accountability and longer simply take the trust relationship for granted. However, as Heerwagen *et al*. (2006) explain, workers have become less loyal and committed to the organization as they focus more on their own development and learning.

2.4.1. The new psychological contract

Levinson, Price, Munden and Solley (1962:21) early on defined the psychological contract as "the mutual expectations of which the parties to the relationship may not themselves be dimly aware but which nonetheless govern their relationship to each other." Rousseau (1989) later on contended that expectations should be replaced with obligations and the focus should be

more on the individual in the contract. In simple terms the psychological contract "represents the employees' and employer's beliefs or perceptions regarding the terms of their employment relationship" (Robinson & Rousseau, 1994) in Cavanaugh and Noe (1999:323). This contract may include perceptions and expectations regarding the individual's performance, job security, training and career management.

Hiltrop (1996:36) devised two functional tasks of a psychological contract, namely:

a) to describe the types of outputs employers expects from their employees; and
b) to describe the type of rewards employees will receive as a result of their time and efforts invested in the company.

According to Atkinson (2002:15), psychological contracts can be described in two ways:

a) relational contracts focuses on long-term career development and extensive training that is company-specific; and
b) transactional contracts that involves short-term financial relationships and low emotional commitment by employees.

Coyle-Shapiro and Kessler (2000) focused on the psychological contract and the fulfilment or lack of it in their study. The authors contend that there are significant consequences related to the fulfilment derived from the psychological contract. Through their study the authors found similar results to that of Robinson and Rousseau (1994), Robinson and Morrison (1995) and Coyle-Shapiro and Kessler (1998). All these studies found that a significant relationship exist between the degree to which an individual will commit to an organization and the level of fulfilment of the psychological contract. In addition, it may impact the level of organizational support and employee performance. In their study Sturges, Conway, Guest and Liefhooghe (2005) also investigated the relationship between career management activities, the psychological contract and its outcomes. Their study confirmed the previous studies and the findings suggest the following:

- the fulfilment of the psychological contract significantly influenced organization commitment as well as overall employee performance, including absenteeism, and turnover;
- the psychological contract and the fulfilment thereof will influence the career management activities of the individual. Specifically, it may influence the degree to which the individual wishes to be viewed by the employer as a significant employee.

Cavanaugh and Noe (1999) focused on the influence of the psychological contract on the violations of obligations and the influence on job satisfaction and loyalty. Their findings

indicated that satisfaction may be significantly influenced by perceptions of fairness of the contract as well as the degree of agreement. Their results also confirmed the previous studies' findings regarding the influence of the psychological contract on organizational commitment (Cavanaugh & Noe, 1999:337-338).

To investigate the influence of the psychological contract on career management Atkinson (2002) conducted a study in a UK retail bank. The findings of the study suggest that employees want to manage their careers on their own but organizations should provide them with the tools and systems to do so. This will in turn imply that organizations should become more open and adaptable in the negotiation of the psychological contract.

In the context of this study De Vos and Stobbeleir (2009:289) conducted a study to investigate the career-related experiences of graduates' anticipatory psychological contracts. The findings of their study suggest that the pre-employment beliefs graduates have and the obligations they believe exist will significantly influence their psychological contracts. Furthermore, the authors found that graduates' career goals will significantly influence their approach to the employment relationship and their expectations and perceived obligations.

The aforementioned studies have highlighted that a change has occurred in the nature of psychological contracts. Based on the work of Hilltrop (1995) the 21st century psychological contract may have the following characteristics, namely a) a stronger focus on future employability rather than job security and loyalty towards the organization; b) a contract which is open for negotiations and flexible and no longer has a specific and fixed structure; c) considers the forces in the market, the skills needed to be effective and adds personal and organizational value; d) employees' responsibility for increased performance, development and innovation and the employer will provide equitable rewards for the value added by the individual; e) the individual is responsible for personal reskilling and career management.

The characteristics identified above highlight that employees are no longer loyal to organizations as they will be required to deal with continuous change, unpredictability and instability. Employees are no longer only doing a job, but will be expected to add value to the organization and ensure they have the skills needed to remain marketable and employable.

In the context of this study students need to take notice of the new psychological contract and how it may impact their career expectations. Their skills development activities at higher education institutions should focus on their flexibility, adaptability, tolerance for change and self-reliance. Employers will expect the new age graduates to be aware of the changes in the psychological contract and behave accordingly.

The change in the traditional psychological contract as well as the changes in organizational systems, processes and procedures has forced researchers to rethink the definition of a career model. Sullivan (1999:457) makes a correct observation by stating that the views of careers have changed quite immensely. In the traditional sense, a career was viewed as a concept that developed within one or two firms. Should an individual not move between organizations, their success would be measured in terms of the promotions and remuneration increases received? The following sections will describe the changing nature of careers.

2.4.2. The protean career

Moving away from the traditional career where all the focus is on the organization the protean career's main assumption is the centrality of the individual and not the organization. As per Hall (1996:8) individuals will need to continuously reinvent themselves as changes occur, whether in themselves or in the environment. Hall (1976:201) defines a protean career as:

> *A process wherein which the person, not the organization, is managing. It consists of all the person's varied experiences in education, training, work in several organizations, changes in field and more. The protean career is not what happens to the person in any organization…*

Hall and Mirvis (1995) compiled table 2.1 to describe the protean career characteristics:

Table 2.1: Key features of the protean career

Characteristics
1. Individuals, instead of organizations, have the responsibility to manage their careers
2. A career will consist of continuous learning experiences and activities which may lead to certain transitions and changes in identity. Chronological age is no longer of importance and the focus is more on the career maturity of the individual.
3. Development is: • Continuous learning • Self-directed • Relational, and • Found in work challenges
4. Development may not necessarily be achieved through reskilling, promotions or formal qualifications.
5. Success may be influenced by: • Learning how to do something rather than merely knowing • Remaining employable rather than having only job security • Replacing an organizational career with a protean career, and • Focusing more on the development of the entire self instead of only the self-defined through work

6. Companies will provide: • Stimulating and interesting projects • Evolving connections • Access to information and other resources needed for development
7. Ultimate objective: psychological success

Source: Hall (1996:9)

Within the protean career a person needs to manage their own career and ensures continuous learning takes place. The individual is required to learn from relationships and challenges, what attributes are needed for career success and ensure that they acquire these skills. If individuals want to succeed in the new world of work they will need to be able to learn new things and bring their whole self to work and not simply their work personalities. The advantage of the latter is that it may enhance the creativity levels of the organization and thereby improving the idea-generation process of the company.

A vital aspect of the protean career is the ability of the individual to engage in diversity learning activities aimed at improving a person's ability to interact with people from different diverse groups. In the context of this study this aspect is extremely relevant as students will have numerous opportunities to engage with diverse people during their stay at tertiary institutions and thereby enhancing their interpersonal skills.

Mirvis and Hall (1994:369-370) identified various advantages of the protean career orientation. Firstly, it reinvents thoughts about work in terms of time span as careers are described in terms of peaks and valleys and movement between various jobs. There is therefore less focus on the career development stages traditionally described in the literature.

Secondly, the protean career expands the so-called career space as it acknowledges the interdependence of work and personal lives and the role both concepts play in an individual's identity. The protean career therefore emphasises the importance of balancing work and personal life and the role of flexibility in accomplishing the latter.

Lastly, the protean career redefines the employer-employee relationship as the centrality of the individual in career management is highlighted. The individual is required to follow their own processes in career development and rely less on the organization's processes.

The latter has given rise to the development of the term "boundaryless" career which can be defined as "a sequence of job opportunities that go beyond the boundaries of a single employment setting" (DeFilliippi & Arthur, 1996:116) as opposed to the traditional career where an individual was expected to work at one or two firms at most and achieve lateral and hierarchical success and advancement.

2.4.3. The boundaryless career

The concept of boundaryless careers has been researched for quite some time although it has been termed differently. Some of the earlier work on boundaryless careers was presented by Handy (1989) who described the boundaryless organization as consisting of three groups. These three groups are the core staff, contractors and contingent labour force or the part-time workers of an organization. The author contend that these three groups of workers will enable a company to know their environment, strengths and weakness and be in a better position to respond as it will not be influenced by a lot of overhead and bureaucracy. Furthermore, this structure will enable an organization to have a self-design function in the organization with fewer job descriptions, a greater variety of skills and more self-contained units.

Sullivan (1999:458) suggests that the boundaryless career will have the following characteristics, namely a) an employment relationship that focuses on individuals remaining employable and flexible; b) individuals may work at multiple firms throughout their career where they will have the opportunity to engage in work that has personal meaning; c) a strong focus on the development of transferrable skills and training occurs on the job; and d) career management is the responsibility of the individual where milestones are described in terms of learning achieved.

Arthur and Rousseau (1996:34-37) provide a more comprehensive description of the boundaryless career and suggest the following implications it may have for individuals in the work environment:

a) Self and market knowledge

In the new world of work individuals will need to have the required self- as well as market knowledge to succeed. Self-knowledge in this context arises from the specific self-assessment activities a person engages in. These activities may be related directly to specific career interests, assessing skills and competencies and the relevance thereof in the new workplace, and determining what aspects of the self is crucial for career success. In the new world of work self-knowledge needs to be much more distinctive with the aim of obtaining specific and relevant information.

In addition to self-knowledge, market knowledge is extremely important as it will enable one to identify the specific opportunities in the marketplace that will be of best service to one's career aspirations. Furthermore, knowledge of the market opportunities will enable an individual to identify those alternatives where one should also be able to utilise one's talents.

In the context of this study it is vital for graduates to know their abilities, skills and talents and where in the marketplace opportunities exist for them to display these talents. During their stay at tertiary institutions opportunities should be used where they can engage in personal development activities which will also enable them to assess themselves in relation to the work environment.

b) Leverage of one's competencies

The key concept of this characteristic is the ability to utilise one's current skills to learn a new skill. Arthur and Rousseau (1996:35), however, also add that it may require an individual to develop new, complementary skills. Mirvis and Hall (1994:368) agree and add that a key characteristic of the boundaryless career will be reskilling. If an individual wants to engage in a boundaryless career they will need to be able to identify and react to opportunities in the future. For students wishing to enter the boundaryless career world they will need to use the projects at tertiary institutions as a learning platform for developing this skill. It will require them to determine and describe the skills needed to for success in a specific project. The latter will therefore require students to remain open to learning and developing oneself to remain competitive in the quest for work.

c) Extended collaborations

In essence the aforementioned characteristic involves the level of engagement in social networks as well as participation in volunteer activities aimed at enhancing the idea generation process of the company. To enhance their employability and benefit more from their tertiary experience undergraduates will be required to engage in volunteering activities or experience where they will learn new ways of thinking as this will in turn enable them to bring new ideas to the table of potential employers (Arthur & Rousseau, 1996:35-36).

The three aspects discussed above will in turn imply that an individual's career will no longer be simply described in terms of their department, manager or even company. The individual will take the central position in career management but will also be required to show respect for others' careers. However, in terms of the psychological contract Mirvis and Hall (1994:374) contend that the boundaryless career will utilise both a relational and a transactional contract which place responsibility on both the individual and the employer.

Arthur, Khapova and Wilderom (2005:181), however, cautions individuals in the boundaryless career environment a single employer will not necessarily provide lifelong employment. In addition, Mirvis and Hall (1994:368) state that career advancement will no longer be upward but lateral. This will imply that people should alter their career expectations

and expected progress. Furthermore, organizations have changed it shapes to a flatter one with less hierarchical structures as this will enable them to remain adaptable to change.

Arthur and Rousseau (1996:36) contend that the most important characteristic required from workers in the boundaryless career is resiliency. Individuals will need to be flexible, open to change, have tolerance for uncertainty and find internal security. Unfortunately, Van Buren (2003:134) cautions that the boundaryless career may be harmful to workers whose skills can be replaced easily. Based on this there may be an increased ethical responsibility on employers to ensure employees develop the required skills to remain employable.

In summary both the protean and the boundaryless career will require the following characteristics:

a) ability to engage in self-management activities related to their career and the planning and growth thereof;
b) continuous learning approach where the individual realises the importance of continuously developing one's skills, abilities and competencies;
c) knowing oneself and how one's interests, values and motives may influence one's career choices – self-knowledge
d) knowledge about the market conditions, opportunities and threats that exist and when to react to it;
e) knowing how to balance work and personal life;
f) knowing how to utilise diverse networks for personal advantage; and
g) deriving personal meaning from work and not merely searching for objective measures of career success, for example promotions and increases;

2.5. 21st century skills for the workplace

EnGauge (NCREL & Metiri Group, 2003) compiled a thorough report on what they believe are the key skills for the 21st century workplace.

2.5.1. Digital-age literacy

a) Basic literacy

This refers to the ability to display both written and numerical literacy.

b) scientific literacy

A person should have an overall knowledge and understanding of the basic theories and procedures related to science.

c) Economic literacy

Basic economic concepts like personal finance and the impact of economic issues on individuals and companies should be understood by individuals.

d) Technological literacy

In the 21st century workplace an individual should understand technology and identify the various ways it can be utilised for goal accomplishment.

e) Visual literacy

The ability to understand and use images and video created by traditional or new media and successfully visualise ideas and concepts.

f) Information literacy

An individual should be able to find, critically evaluate and utilise information for specific tasks.

g) Cultural literacy

As globalisation has significantly influenced the 21st century workplace individuals should display sensitivity towards different cultures and its related issues, acknowledge diversity and interact successfully with different cultural groups.

h) Global awareness

As people may be required to interact with individuals everywhere in the world they should be able to understand the interconnectedness between nations, groups and economies and their relationship with one another.

In addition, Owen and Bound (1999) note that workers engaged in non-traditional work arrangements are often required to work with a variety of organizational structures and cultures. One of the most important characteristic of these workers is the ability to deal with changing environments successfully. In turn, this requires individuals to possess strategic competence.

In addition to the above-mentioned skill sets, Owen and Bound (1999) identified those workers responsible for managing their own work should have the ability to actively seek feedback and take responsibility for their own development. In summary, the authors list the following characteristics and skills needed of externalised contingent workers:

a) Manage numerous relationships and creating trust;
b) Understand contracts
c) Excellent interpersonal skills;
d) Identify and define customer needs and expectations;
e) Identify methods and tools for enhancing knowledge and skills;
f) Utilise various strategies to obtain information, understand systems and people;
g) Critically reflect and use a range of tools to gain feedback and improve performance.

For students at tertiary institutions the focus should be on remaining flexible and displaying the willingness to change and consider different options. These aspects may be developed in areas such as teamwork where working hours, consensus, and interpersonal relations become important. Defillippi and Arthur (1994:307) and Jones and Defillippi and Arthur (1996:91) identified six categories of competencies that need to be developed to achieve success in the boundaryless career

a) knowing why is specifically related to self-knowledge which has also been emphasised by Hall (1998). To achieve success in protean careers individuals will need to know themselves, in particular their motives, values and reasons for career preferences. Self-knowledge is closely related to career identity and the concept of a career calling proposed by Hall and Chandler (2005) where individuals pursue a career they perceive to be their passion and of personal meaning. An aspect of critical importance is that the individual needs to be satisfied with their work-self relationship and the balance thereof. Kuijpers and Scheerens (2006) also found that career success was strongly related to the ability to realise one's own career goals and engage in career planning activities.
b) knowing when, as proposed by the authors, describe the pacing and time of an individual's career within their specific field. Individuals within the boundaryless career will need to know the time period allocated for a specific position, the opportunities available and the swift utilisation of opportunities. The concept of knowing when will be of specific reference to this competency as it will indicate to individuals what skills they need to develop.
c) knowing what and where, according to Bridgstock (2007:72) refer to knowledge about one's specific industry. Individuals need to be able to identify the strengths, weaknesses, opportunities and threats that exist and how it may impact their career success. Knowing what is specifically related to knowledge of the policies, rules and processes that guide the specific industry whereas knowing where is related to the opportunities that exist for advancement in terms of area, tasks and roles.

These competencies will be of specific significance to graduates wishing to enter the labour market. They will need to develop all four competencies should they wish to achieve career success. These competencies may also significantly influence their career satisfaction.

2.5.2. Inventive thinking

The EnGauge report (NCREL & Metiri Group, 2003:35) places emphasis on the importance of developing the following essential life skills:

a) Adaptability and managing complexity

Individuals who wish to remain successful in the 21st century workplace need to realise that change is inevitable and need to find ways of dealing with change. The latter may in turn lead to a change in one's behaviour to accommodate the new environment (Gow & McDonald, 2000:378)

b) Self-direction

Individuals should be able to function on their own and take responsibility for goal-setting, time management and lifelong learning (Owen, 2001:122).

c) Risk taking

A critical skill needed for the new world of work is the willingness to address challenging issues, discuss it with peers, listen with feedback and taking responsibility for actions.

d) High-order thinking and reasoning

Individuals in the new work environment will be forced to reconsider their level of thinking and reasoning and should display the ability to apply common sense and acquired knowledge which will in turn lead to effective problem-solving and sound decision-making (Owen, 2001:1; McQuaid & Lindsay, 2005:209).

Heerwagen *et al.* (2006:2) use a different term to describe the change in employee competence, namely cognitive competence. They continue stating that workers should increase their knowledge areas, including analytical thinking, decision-making and sound judgment. Furthermore, workers should be able to apply their thinking to different organizational processes and activities and no longer only to their related field.

2.5.3. Effective communication

The Pedagogy for Employability Group (2006:4) emphasises that individuals need to be able to communicate effectively with other individuals and groups and may include the following skills:

a) being part of a team and ensuring cooperative interaction takes place between members to achieve the team's goals and objectives;
b) displaying the required interpersonal skills needed to achieve results and include managing one's behaviour and emotions which may in turn increase the group's overall functioning (Pool & Sewell, 2007:283); and
c) taking responsibility for enforcing moral and ethical guidelines relevant to the team and the technology used.

As part of their six competencies needed for career success, Jones and DeFillippi (1996:97) describe the 'knowing whom' competency which involves the ability to create social capital through the creation of strategic relationships, whether personal or professional. Similar to the concept of extended collaboration discussed earlier, diversity and scope of networks will become of importance as individuals need to work on various projects to meet new people. These people may later on become critical factors in a person's career success. This was confirmed by Kuijpers and Scheerens' (2006) study who found that networking may significantly improve objective and subjective career success.

2.5.4. High productivity

As per the EnGauge report (NCREL & Metiri Group, 2003:59) 21st century workers are expected to master the competencies listed below to achieve success:

a) organizational and time management skills;
b) making effective use of current and new technology to facilitate teamwork, solve problems and complete tasks; and
c) being able to produce a product that is of excellent quality, will serve a specific purpose and be the result of a student's ability to use real-world tools to address real-world problems.

The EnGauge report (NCREL & Metiri Group, 2003) has emphasised the need for individuals to develop all aspects of themselves and not merely their 'work' self. To survive in the new world of work individuals will need to able to display the discipline-specific knowledge and skills and using these skills to produce meaningful results in a company. In addition,

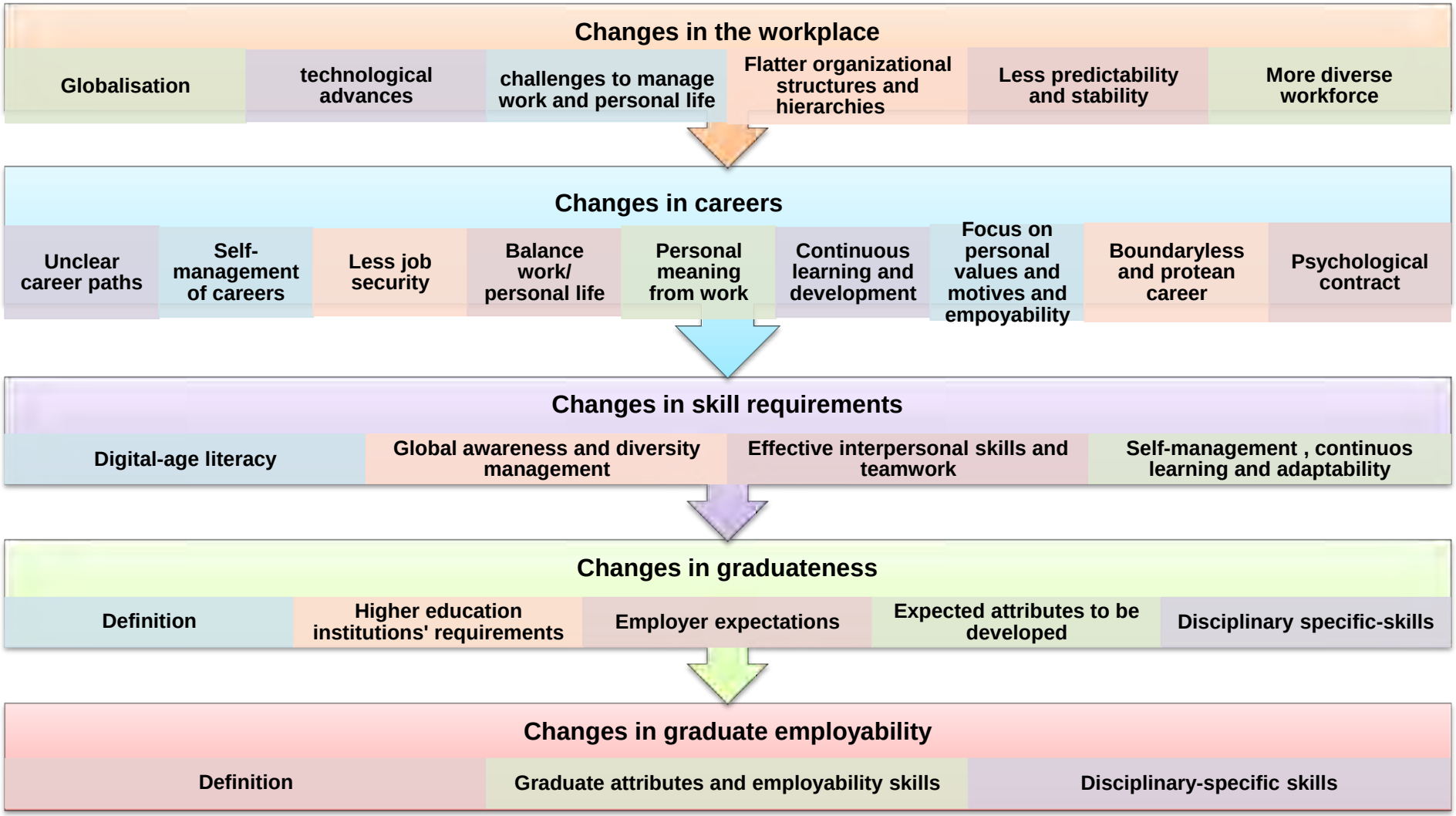
individuals will be expected to develop the so-called softer skills aimed at facilitating continuous growth and development. The latter may in turn influence an individual's ability to make a meaningful contribution to their workplace and society and may therefore influence their employability. In the context of this study students need to be informed about the specific skills they will need to survive in the 21st century workplace and should consequently focus on developing these skills whilst being at a university. These changes in skills requirements may have a significant impact on the careers of graduates.

2.6. Integration of literature review

Karoly and Panis (2004), Pink (2005) and Jerald (2009) have highlighted the significant changes in the world that have influenced the world of work. Automation has started to replace people with machines and have forced people to develop new skills in order to remain employable. Technological advances in general have led to new ways of expanding people's lives and improving overall health. In addition, these improvements in technology have forced people to engage in research and development activities aimed at improving processes and applications. People may therefore be forced to develop a different set of skills to facilitate these activities.

The advances in technology have led to one of the most important changes in the 21st century workplace, namely globalisation. Technology has enabled organizations to become flatter and interact across national and international borders. The latter has enabled individuals to achieve a greater work/life balance and in turn increase productivity (Erickson, 2005:10). However, globalisation has also influenced the availability of talent and skills. People are now not only competing with local talent, but with any person anywhere who has the required skills and qualifications.

Figure 2.2: Integration of the changes in the workplace, impact on careers, skills requirements, graduateness and employability



Consequently, people are forced to rethink their talents and skills and how it may influence their employment prospects. Unfortunately, globalisation has also brought about issues of job displacement, insecurity and instability and should an organization not be able to find talent locally they will simply search for it elsewhere (Karoly & Panis, 2004:129)

Due to the aforementioned factors there has also been a change in the composition of the workforce. As Erickson (2005:10) notes, the workforce has become chronologically older and have more females. Since the workforce has become more diverse people will be expected to interact with diverse people more effectively and handle different generations successfully. Erickson (2005:14) concluded that the new organization will consist of different groups of people who will have different expectations from their organization and the related activities.

Heerwagen *et al*. (2006), Harvey *et al*. (1997) and Jerald (2009) concluded that the new workplace will be flatter, has less hierarchies and more flexible work arrangements. These changes will lead to greater instabilities and less predictability and consequently organizations may rethink the skills and competencies they required and the people they need to be successful.

The changes occurring in the workplace have significantly influenced careers in the 21st century. More specifically, the traditional career has been replaced with the protean career where the a) individuals needs to manage their own career, b) involves a wide range of experiences, skills and learning and incorporating one's values and interests, c) where development remains a continuous process that incorporates challenging assignments, developing relationships, enhancing employability and balancing work and personal life; and d) the ultimate goal of a career is psychological success where the focus is on the development of the whole person and not only the 'work' person. In the protean career the development of oneself remains the individual's responsibility and the individual should be able to learn from experiences and relationships and use it constructively in the workplace (Hall & Mirvis, 1995:9).

The boundaryless career has also implied that individuals should be able to know themselves and the market if they wish to be successful. Arthur and Rousseau (1996:34-37) state that people should be able to utilise current skills to learn new ones where this process is facilitated by the appropriate use of current collaborations. The 'knowing-competencies' proposed by DeFillippi and Arthur (1994:307) will become particularly important if individuals wish to succeed.

Unfortunately, the instability and unpredictability of the world of work has influenced the psychological contract between individuals and organizations. The traditional contract valued

skills and loyalty where individuals want a stable and secure career. Currently, however individuals will seek lifelong development with a strong focus on future employability and enhanced quality of life. In addition, Anderson and Schalk (1998:642) highlight the need for individuals to become entrepreneurial, innovative and able to cope with change. Individuals should realise that they are responsible for their careers, their reskilling and improved performance.

The changes in the workplace, careers and psychological contract have impacted the skills demand of employers. The report compiled by EnGauge (NCREL & Metiri Group, 2003) have emphasised that individuals will need to display information, economic and technological literacy. In addition, they will need to be able to display sensitivity towards different cultures and interact successfully with these different groups. Employers will expect people to interact with individuals anywhere in the world and understand and appreciate the interconnectedness between nations, groups and economies.

Harvey *et al*.'s (1997) study found that these expectations will influence the degree to which employers seek individuals with a degree. Lees (2002:12) confirmed the latter and argue that employers will also seek graduates for their ability to display the skills needed to be successful in the workplace. Consequently, they may expect higher education institutions to develop these key skills and rethink the quality of the individuals they provide to employers (Marock, 2008:10). The latter gave rise to the concept of graduateness which describes the attributes a graduate is expected to acquire while being at a higher education institution.

2.7. Chapter summary

The purpose of this chapter was to identify and describe trends in the external environment and how it may transform the workplace. Based on the literature available it appeared as though the 21st century workplace will be characterised by rapid technological advances, globalisation, new organizational processes and structures and more diverse workforces.

These characteristics will not only influence the manner in which organizations operate but also the career management of individuals. This chapter served to describe the changing nature of careers and the impact thereof on individuals. Lastly, the chapter focused on the specific skills needed if individuals wish to be successful in the 21st century workplace. This chapter will serve as the basis for conceptualising graduateness and employability and will be the subject of Chapter 3.

The discussion in this chapter therefore provided the impetus for conceptualising employability and considering the attributes that individuals need in order to be employable. This is the subject of Chapter 3.

CHAPTER 3: GRADUATENESS AND GRADUATE EMPLOYABILITY

Keywords: Discipline-specific skills; Graduate attributes; graduateness; graduate employability; generic skills; psychological career resources

3.1. Introduction

The discussions around key skills required by employers have also influenced the role of higher education in developing these skills and attributes. As Harvey, Moon and Geall (1997) note employers believe that graduates should be able to display these skills and competencies as it has been incorporated in their tertiary studies. The latter, however, gave rise to the type of person a higher education institution should provide. Graduateness has become the new focus and aims to describe the level of knowledge, understanding and skills a person should acquire and develop as a result of their participation at a higher education institution (Glover *et al*., 2002).

Unfortunately, the concept of graduateness remains somewhat unclear and is often confused with a graduate's employability. Consequently, it is necessary to conceptualise both concepts to determine whether the two terms differ at all. In addition, both a graduate's employability and graduateness may be influenced by certain background factors, traits and dispositions. The latter has made the psychological career resources model of Coetzee (2007) especially relevant as the model proposes that a person has certain underlying career-related meta-cognitions which may influence their career behaviour. If the latter is true one may need to investigate whether these meta-cognitions may influence the skills and attributes a graduate believe they need to develop if they want to obtain and secure employment.

Based on the latter, the chapter will focus on graduateness and the expectations of students, employers and universities regarding the development of these skills and the graduate's position in the labour market. Since the concept of graduateness is often confused with graduate employability the latter will also need to be conceptualised. Based on these conceptualisations the researcher may be able to clarify the similarities and differences between the two constructs. The psychological career resources model proposed by Coetzee (2008) will also be addressed and the researcher will attempt to provide a theoretical perspective of the relationship between this model and graduateness.

3.2. Changing nature of graduate careers

The study of Harvey *et al*. (1997) on the changes in graduate careers gave specific attention to the influence of the new world of work. The authors argue that the shifts in the nature of

work and restructuring have created a new set of graduate opportunities previously not available. With specific reference to the need for flexible organizations the authors are of the opinion that graduates may be provided with job opportunities that will fall outside the traditional list of graduate jobs. This may be partly due to the fact that employers seek individuals who are able to cope with these non-traditional jobs their work. Purcell, Elias and Wilton (2004:6) also argue that graduates have gained access to a variety of different careers previously not regarded as an area requiring higher education skills. As previously explained, these changes have been mostly attributed to the rapid technological changes, economic restructuring and an increased demand for highly skilled employees.

The study furthermore indicated that a degree gave individuals access to different and growing careers and not simply a job. The latter was confirmed by Hogarth, Winterbotham, Hasluck, Carter, Daniel, Green and Morrison (2007) who found that employers now seek to employ graduates in non-traditional positions as they believe in graduates' capabilities to enhance the quality of these jobs and the ability to provide the company with financial benefits.

However, the changing workplace trends identified in previous chapters will also impact the nature of graduate careers. The Association of Graduate Recruiters (1995) compiled the following table to illustrate the shift in graduates' careers:

Table 3.1: Nature of graduate careers

Past	**Present**
Ladders and escalators	Bridges
Career clarity	Fog
Employer	Customer
Job	Adding value
Functional identity	Project team role
Career	Portfolio
Progression	Personal growth
Rising income and security	Maintaining employability
Education and training	Lifelong learning

Source: The Association of Graduate Recruiters (1995)

From table 3.1 it is evident that graduate careers have shifted and graduates will be required to continuously develop the skills needed to add value in any organization whilst also remaining marketable and employable. The latter should, however, be accomplished through effective participation in teams and with a strong focus on customer satisfaction.

Interestingly, Sargent and Domberger (2007:546) observe that the protean career may be of specific relevance to the new generation of graduates as they emphasised the need for personal development and self-directed career management activities. However, Harvey *et*

al. (1997) caution that graduates should not expect as clear career paths that which existed in the past and that the promotion ladder may be less visible. In addition to the latter promotion may become the result of performance evaluation and not necessarily seniority or loyalty.

In King's (2003) study regarding British graduates the most important career requirement of the graduates were job and skill variety which are key components of the protean career. This was confirmed by the observations of Purcell and Elias (2004:5) who found that graduates are engaging in a greater variety of occupations. Harvey *et al*. (1997) make a specific observation in this regard and advise graduates to be willing to move between various departments rather than staying in the specific area of expertise. In addition the authors are of the opinion that graduates will also be required to handle significant workloads and will be expected to take responsibility for the completion thereof.

However, the changes in the workplace will bring about significant changes for higher education and graduates. As Ratneswary and Rasiah (2009:5) highlight, higher education institutions have shifted their focus from educating elite individuals to education a mass number of individuals. This has in turn impacted employers in the sense that they now need to decide how to differentiate between the various graduates and what they have to offer.

These changes in skills requirements have also influenced the expectations employers have of students entering the workplace. Traditionally, higher education tended to place high value on scientific or proportional knowledge and not necessarily on professional skills and competencies. The focus may be more on the technical aspects of a program and not the practical side (Davies, Csete & Poon, 1999). However, as Purcell *et al.* (2004) noted in their study, there is also a difference between the skills required from traditional graduate jobs and modern graduate jobs. They found that employers have traditionally expected individuals from traditional graduate careers to possess a high degree of technical knowledge and expertise whereas the graduates from more modern jobs will be required to possess managerial and strategic skills.

Davies *et al*. (1999:191) elaborate that the practical knowledge, which is mostly the requirement of employers, can mostly be learned only through experience and in practice. It is this separation between theory and practice which causes a tension between universities and employers. Thomas (2003) confirms the statement and highlights that there have been growing debates between employers and universities about what constitute a graduate and the related skills.

3.3. Graduateness

Researchers have compiled numerous studies to explain the concept of graduateness (HEQC, 1995; Bell, 1996; Glover *et al*., 2002; Kizito, 2004; Chetty, 2010). What is evident from these studies is that graduateness remains a concept yet to be fully defined. Although the studies have great similarities, the concept will remain complex and may change as the needs and perceptions of students, higher education institutions and employers change.

This section will aim to conceptualise graduateness and the role of higher education in developing the skills, attributes and characteristics applicable.

3.3.1. Definition of graduateness

In 1995, the Higher Education Quality Council of the United Kingdom conducted their first study to clarify the concept of graduateness which they termed, the Graduate Standards Programme. The aim of the program was to describe the academic standards set of first degrees in the United Kingdom as well as the different methods by which it may be measured (HEQC, 1996).

The program indicated that upon completion of a degree student should be expected to have achieved in three areas, namely a) field-specific, b) shared and c) generic.

a) Field-specific achievement

The HEQC describes a field-specific achievement as the accumulation of technical and other knowledge related to their field of study. The council elaborated that the term field of study is used to explain a student's main focus of study, which in turn may consist of various subjects which is relevant to the specific occupation.

b) Shared achievement

This concept refers to the accumulation of a range of general attributes that may be found in graduates from a cluster of similar or related degrees. This generality may be attributed to a common approach, subject matter or intended destination of graduates.

c) Generic achievement

According to the HEQC a graduate will be considered to achieve in a generic field when he or she possesses a number of general attributes which may be found across various degrees.

Through their project, the GSP aimed to define graduates by focusing on the following aspects:

- identification of shared attributes other than technical knowledge and skill, a graduate should possess upon completion of a degree;
- whether these graduates can be found in all study programs or families of degrees and the scope thereof; and
- the extent to which generic attributes can be used to define threshold standards for all degrees or families of degrees.

The Higher Education Council (1996), as cited by Mullen (2008:3) provided a formal definition of graduateness:

> *An idea that graduates should be expected to possess certain general qualities as a consequence of their experience of higher education.*

The council furthermore divided graduateness into three areas (Mullen, 2008:4):

a) "cognitive which refers to a graduate's knowledge and understanding; analysis; synthesis/creativity and evaluation";
b) "transferrable skills, which include psycho-motor; self-appraisal – reflection on practice; planning and management; problem-solving; communication and presentation skills and interactive and group skills"; and
c) "operational context, with specific reference to responsibility and ethical understanding".

The Library Council, as cited by Glover *et al*. (2002:295) defines graduateness as

> *A set of transferrable skills including planning; gathering, selecting, appraising, organizing and recording information; communicating and realising results, and evaluating achievements.*

Graduateness, in this context, implies the achievement of predetermined standards. An interesting discussion on the concept of graduateness is provided by Hussain (2007:2) who explains that graduateness should focus on three areas, namely a) the background and

characteristics of students entering higher education, b) the education process, with reference to teaching and learning; and c) the characteristics and qualities of graduates.

a) The background factors affecting the student

Hussain (2007:5) is of the opinion that a number of factors in a student's background may affect their studies at a university. Higher Education institutions may be able to exercise control over some of these factors, whilst the other factors remain under the control of the student. According to the author the following factors need to be considered:

- the student's intellect;
- the age, culture, disability, ethnicity, gender and geographic socio-economic position of the potential student (Prokou, 2008:389); and
- the motivation for entering higher education.

Apart from these background factors the role of higher education in developing the graduate plays a vital role.

b) The process of education

Hussain (2007:5) argues that the skills acquired by graduates and in effect their graduate employability depend on the education received, previous experience, the selected university (Snowden, 2011), the modality of study (Prokou, 2008:389) and the process followed. Snowden (2011) agrees and explains that universities have a three-tiered purpose:

- providing skilled individuals to ensure a sustainable economy;
- sharing new ideas, knowledge and research with society; and
- continuously raise the level of training of citizens

Often universities determine subject content on the basis of the need in the market or industry. Although the benchmarking between higher education institutions are recommended the subject-knowledge and understanding acquired may depend on where the studies were conducted and the education process followed at the particular institution.

Glover *et al*. (2002:301) and Weligamage and Siengthai (2003) add to Hussain, explaining the influence the new work requirements have on education. One of the findings of their study indicates a shift from the traditional, rather strict format to a more flexible approach where the responsibility of learning is transferred to students. Prokrou (2008:389) agrees with the preceding authors and add that employers have clear expectations of higher education and emphasise their role in enhancing their students' employability through the development of the required skills and attributes.

c) The characteristics and qualities of the graduate

Upon graduation one would expect a student to possess a certain level of understanding and knowledge of the field of study. Hussain (2007:6) continue highlighting the expectations the employers have of graduates, for example, ability to display professionalism and respect for ethical standards, ability to continuously learn and develop and engage in meaningful reflection and evaluation activities. The latter is also emphasised by Lees (2002:8) and elaborate that reflective thinking involves the "capacity to develop critical consideration of one's own world-view and the relationship to the world view of others." The author furthermore encourages higher education institutions to provide students with opportunities to engage in reflective thinking activities. This may in turn be conducted through activities where students are asked to describe their experiences of a project involving teamwork, what they have learned from the project and how they will approach future projects.

These studies came to the conclusion that graduateness was seen as a means to enhance their employability. Hussain (2007:15) found some conflicting results as the author found that students lacked to fully understand the skills assumed to be developed during their studies as they often only identified a small number of skills they believe they would develop during their university experience. There is therefore a need to educate graduates on the qualities, attributes and skills they will develop during their time at a higher education institution.

However, Hussain (2007:6) warns that being awarded a degree will not necessarily secure employment. Graduateness should also focus on whether a graduate has the capacity to utilise the newly acquired knowledge and skills, as well as the ability to make a meaningful and successful contribution in the workplace. Hussain therefore acknowledges the role of the employer and the related expectations and perceptions in achieving graduateness. Prokou (2008:389) agrees emphasising that the employer's role in transforming a graduate's employability status to one of employment. Lees (2002:12) adds that employers are increasingly seeking students for their graduate attributes and not necessarily their degree. As Harvey *et al*. (1997) emphasise, employers seek graduates who can adapt to changing organizational cultures, utilise their skills to adapt to these changes and engage in meaningful reflection and self-evaluation activities.

Chetty (2010) critiques the previous definitions for its failure to recognise the complexity and breadth of the concept. The author is of the opinion that to fully understand the concept the focus should be on the various dimensions it consists of, namely:

- the description of graduateness in terms of the attributes a graduate is expected to acquire while studying at a university; and
- the relationship graduateness has with employability and how the world of work and higher education interacts.

Yorke and Knight's (2004) conceptualisation of employability shows a strong resemblance with graduates. The author describes three subsets of employability, namely:

a) the ability of the graduate to obtain employment;
b) the result of a graduate being developed by his or her experience at a higher education institution;
c) the ownership of applicable achievements and therefore potential.

As it is evident from these descriptions employability may be closely related to graduateness. In another definition, Yorke and Knight (2004:3) define employability as:

> *A set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.*

Similar to the concept of graduateness this definition suggests that graduates, based on the fact that they have a degree, will be in a better position to make a difference in their community, whether it is the workplace, social or economic community.

The following sections will focus on a discussion of what constitutes graduate attributes.

3.3.2. Graduate attributes

Kizito (2004:5) believes that graduate attributes, which are often referred to as key, generic or transferrable skills, form an integral part of a student's graduateness. According to Bowden *et al*. (2000), graduate attributes are defined as follows:

"Graduate attributes are the qualities, skills and understandings a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university course. They are qualities that also prepare graduates as agents of social good in an unknown future."

This latter part of this definition is confirmed by Treleaven and Voola (2008:160) who are of the opinion that generic skills may become even more important than subject-knowledge

where employability is concerned. The focus of graduateness may therefore imply the specific set of attributes a graduate may acquire due to their experiences at higher education institutions. The Graduate Standards Programme listed the following graduate attributes or outcomes:

a) "a grounding in the content and methods of a discipline";
b) "an engagement with teaching and learning that is research-informed in order that the students may become research-aware";
c) "the development of self-motivating study habits and skills";
d) "the experience of an academically coherent programme of study";
e) "the development of a critical and analytical approach to the theories and concepts and the assumptions on which they are based";
f) "an understanding of the temporariness and flexible character of a specific field of study's contribution to knowledge and understanding";
g) "where appropriate – the skills necessary for professional practice"; and
h) "the development of transferrable intellectual and practical skills".

Although extensive, the list of outcomes above gives little consideration to personal development and social purpose. It does not clarify what is meant by, amongst others, transferrable skills and discipline knowledge. In the USA the focus has been somewhat different. Bowen (1977) provided some of the early work on graduateness and listed the following more practical and simpler list of graduate outcomes, namely:

a) cognitive learning which includes the ability to display verbal reasoning, creativity, tolerance for intellectual challenges and continuous learning;
b) development of aspects related to emotional intelligence, morality and overall personal well-being which is facilitated by self-awareness activities; and
c) the ability to translate theory to practice, which includes the afore-mentioned attributes as well as, adaptability, leadership, social responsibility, talent management and the improvement in the overall community.

Chetty (2010:3) critiques researchers for failing to identify commonalities as well as deficiencies in these lists and highlight the importance of compiling an integrated list of graduate attributes. The author does however acknowledge and value the integrated and accepted definition of graduate attributes by Bowden *et al.* (2000) whom defines it as "the qualities, skills and understandings a university community agrees its students would desirably develop during their time at the institution, and consequently shape the contribution they are able to make to their profession and as a citizen. Chetty (2010:3-4) identifies the following qualities:

a) attributes consisting of the ability to contribute to the well-being of a society, which will require the individual to be involved in self-governing practices, fairness and human rights initiatives, and sustainability; and
b) attributes that will enable an individual to obtain and secure employment.

The latter category of attributes is often referred to as key, generic or transferrable skills and have been addressed previously.

Chetty's viewpoints show strong resemblance to the work of Allen and Van der Velden (2005:14) who list the following as expected graduate attributes:

a) Professional expertise

The authors contend that graduates should display the ability to use their acquired knowledge and skills in diagnosing and solving complex problems related to their area of expertise and act assertively in unpredictable circumstances.

b) Functional flexibility

This attribute refers to the graduate's ability to engage in continuous learning activities which will enable them to cope with changing work environments, organizations and job tasks. In addition, graduates should be able to change their work environment to utilise their newly acquired skills and competencies.

c) Innovation and knowledge management

Graduates should display the necessary curiosity and creativity which will enable them to engage in activities where they will be required to generate ideas and implement them. It is expected of graduates to identify new opportunities, apply information creatively and implement ideas innovatively and with the support of others.

d) Mobilisation of human resources

This attribute can be described as the ability of graduates to utilise their own and others' skills efficiently. According to the authors a graduate should display the ability to work independently, but also to be effective where teamwork is required. In the context of teamwork the graduate should be able to cooperate with others, display leadership, motivate members and take action to improve the quality of work delivered.

e) International orientation

This may be one of the most important attributes in the context of the new world of work where globalisation is quite significant. The authors contend that graduates should be knowledgeable about other cultures, the strengths and weaknesses of their own national context and how it may influence interactions. Teichler (2000:90) confirms the importance of this attribute and adds that higher education should focus on developing both the civic values and intellectual competencies to enhance development.

However, Hager and Holland (2006) argue that talented graduates should display a mix of knowledge, abilities and characteristics to be successful and not merely some of these attributes.

In more recent research the Association of Graduate Recruiters (1995) describe the following four categories as essential graduate attributes:

a) Self-reliant skills

These skills can be described as those skills that will enable graduates to actively manage their careers, take responsibility for personal development and engage in continuous learning activities. Self-reliant skills will include the following subsets of skills:

- self-awareness regarding one's interest, attributes, strengths and weaknesses and identifying opportunities for improvement and feedback;
- self-promotion consisting of the ability to identify employer needs and displaying oneself in a positive manner to potential 'customers';
- develop action plans specifically for career management, implementing these plans and incorporating monitoring and evaluation opportunities;
- ability to cope with uncertainty and adapting career goals accordingly;
- willingness to remain committed to lifelong learning, engage in reflective activities related to learning and the ability to learn from others;
- ability to transfer current skills to new situations; and

b) Connected skills

Closely related to the previous authors, descriptors' connected skills refers to the specific skills that will enable the graduate to work as a team, including leadership, networking, management and overall organizational skills.

c) Specialist skills

Specifically related to the context of disciplinary/subject knowledge the authors argue that it will be beneficial for graduates to be knowledgeable in one specific area as employers still seek graduates for their technical expertise in a related field as well.

d) Generalist skills

Related to the context of generic skills the authors are of the opinion that successful graduates should have the general skills required in the world of work, including problem-solving, financial literacy, IT literacy and communication skill.

What is of even more importance is the fact that graduateness and graduate attributes may not secure employment, but the ability of students to learn from experiences at higher education may enhance their employability.

3.3.3. Student perceptions and employers' expectations

3.3.3.1. Student perceptions

Chetty (2010:8) emphasises that any definition of graduateness should also focus on student perceptions. This is confirmed by Tomlinson's (2007) study who asked graduates questions pertaining to graduateness and employability. The main findings of the research included:

a) awareness of students' own responsibility to manage their careers (Snowden, 2011);
b) the influence of personal attitudes and characteristics on career paths;
c) the existence of a competitive labour market where they compete with graduates who possess similar skills and attributes; and
d) the need for graduates to develop their credentials and present it in the most favourable light.

Glover *et al*. (2002) engaged in a similar study to investigate students' views of their graduateness. The authors found that the students highly value the importance of the degree under study, but also realised the role of the university experience in the development of certain capabilities. These experiences included the importance of commitment through completion of a degree, the dedication to a specific program, the improvement of personal skills related to the completion of the degree and believing that one will complete the degree successful and secure a job, in short pertaining to self-confidence.

Tomlinson (2007) concluded students' perceptions about their skills, employability and position in the labour market will significantly influence their understanding of employability

and therefore their graduateness. Furthermore, Glover, Law and Youngman (2002:300) are of the opinion that students wish to become skilled in a greater range of skills and competencies than those provided through their subject-knowledge. In support of this notion the study of Mason, Willams, Cranmer and Guile (2003) indicated that students valued other skills above their degree. This statement was confirmed by Pukelis and Pileicikiene (2010:126) whose study findings indicated students feel that universities are lacking in their efforts to develop generic skills. Lastly, the graduates indicated that they highly value generic skills in terms of their overall employability and that they needed to develop it if they want to remain competitive in the labour market.

3.3.3.2. Employers' expectations and the role of universities

Apart from student perceptions about employability and graduateness, Chetty (2010:7) emphasises the influence of employer needs and expectations. Harvey *et al.* (1997) and Harvey and Knight (1996) also highlight employer expectations and explain that employers employ graduates for the following reasons:

a) the level and amount of subject-knowledge and innovation;
b) the willingness to learn and the ability to learn quickly;
c) the ability to deal with change in a flexible manner; and
d) the generic skills they have acquired, including problem-solving, analytical thinking and logical analysis techniques.

In their article on the value of graduates and the reasons for employing them Hogarth *et al*. (2007) state that graduates have a greater ability to cope with change, they have better leadership potential, and they have the skills and abilities needed to generate valuable ideas and implement it successfully. These findings were also confirmed. Yorke and Harvey (2005:42) confirm these employers' expectations and highlight that employers value subject knowledge, but emphasise the acquisition of the so-called soft skills that fall outside their subject scope.

Employers often feel that graduates do not possess all the skills needed to successfully enter the workplace. As such, employers have made it clear what they expect of graduates and Thomas (2003:51) list the following expectations, namely:

a) movement from technical studies to the development of a wide-range of investigative and problem-solving abilities;
b) more workplace assignments and the development of practical competence; and

c) the ability to adapt to a workplace that constantly change and the flexibility needed to adapt to these changes.

Davies *et al*. (1999:92) also highlight the flexibility of employees and added that employers want individuals to learn quickly, work on multiple tasks and deal with uncertainty and rapid changes in the workplace. Davies *et al*. (1999:191) continue stating that employers expect graduates to be more likely to meet these demands than non-graduates. However, Snowden's (2011) study cautions that employers not only seek a graduate's technical knowledge, but also value the presence and level of employability skills, positive attitude, relevant work experience and the specific subject field.

With specific reference to the expectations of employers regarding the role of higher education, Yorke and Harvey (2005) identified the following four categories that employers wish to be address, namely a) abstraction or the ability to relate empirical data to theory; b) system thinking which involves seeing a part in the context of the broader picture; c) experimentation on both an intuitive and analytical level; and d) collaboration or the ability to communicate and work in teams effectively and developing the related skills.

Unfortunately, what employers expect and what they are provided with may not always be quite in sync. Researchers have attempted to identify where the gaps exist and how it can be rectified. In the Davies *et al*. (1999) study, they asked both graduates and employers to rate their satisfaction with the graduate compared to the skill or competency as well as the importance of the skill. Furthermore, both parties were asked to add any other skills or competencies they believe should be provided by universities and lastly whether graduates feel well-equipped for the workplace. The study found that the majority of employers and graduates highlighted the importance of a generic skills set. The study summarised three important categories of skills, namely a) general intellectual and analytical skills, b) particular specialist technical skills and c) practical hands-on training.

In South Africa, a similar study was undertaken by Griesel and Parker (2008). Their study highlighted the gap that currently exists between employer expectations and the outcomes of higher education. The gaps were especially visible in the skills task-directed management and application of knowledge. The study furthermore emphasised the need for graduates to familiarise themselves with employer expectations prior to entering the workplace and lastly, students' career literacy should be developed whilst at higher education level, whether it is soft skills, work ethic or personal attributes.

In a similar study undertaken by the Department of Policy Research Unit (Kizito, 2009:40) employers were asked to provide reasons for graduates being unemployable. The following were main reasons:

a) technical/subject knowledge, but failing to transfer in practical settings. The latter was also observed by Teichler (2000:88) and Griesel and Parker (2008) who emphasised that employers are increasingly expecting higher education institutions to equip students with the ability to transfer knowledge to real-life situations;
b) over- and undersupply of graduates leading to a lack in producing graduates from certain fields;
c) inability of graduates to fill positions at managerial level;
d) skilled individuals were headhunted by other companies;
e) dissatisfaction with the quality of graduates; and
f) lack of graduates with a degree, mostly graduates with diplomas or certificates were supplied.

From the study it appears as though there is a gap between what employers expect and what they were provided with by higher education institutions. Although employers require specific skills related to a job role in the organization, Raybould and Sheedy (2005) emphasise that employers have consensus that certain skills are transferable and may thus be used between various positions. This has significant implications for graduates wishing to enter a job outside their specific scope of knowledge. Harvey *et al*. (1997) and Harvey and Knight (1996), as cited by Hussain (2007:7) confirm these observations explaining that employers expect graduates to possess certain level of understanding and abilities related to their subject-field upon graduation.

Nevertheless, in many cases employers seek graduates who understand the key principles of a situation, rather than subject knowledge alone. Should graduates engage in all of the above activities one may expect an enhancement in their employability. Glover *et al*. (2002:303) explain that where graduateness is seen as “a description of a set of qualities that usually mark a person who has undertaken a degree course developed under the auspices of a nationally monitored assurance system”. Kizito (2004:6) adds that apart from the knowledge, skills and understanding that a graduate has acquired, graduateness should also imply that a graduate has the ability to function in a highly complex world. The latter may become the key role higher education will play in future.

Harvey *et al*. (1997) agree and argue that employers expect higher education to guide students in their quest for career satisfaction and what is needed to be successful in the workplace. The authors furthermore are of the opinion that career services at higher

education institutions will play an important role in education students about career options available.

The latter argument was confirmed by Maharasoa and Hay (2010). The authors conducted their study amongst South African students. Their study findings indicated that universities failed to establish meaningful links with employers and as a result students were not as familiar as they wish with the requirements of the world of work. The study's main recommendation was that higher education institutions should focus on forming stronger ties with employers aimed at enhancing their students' employability. The latter statement was confirmed by the findings of Mason, Williams and Cranmers' (2006) study and suggest that employer involvement will have a significant impact on the quality of graduate employability and employment.

However, as Yorke (2006:11) argues, the most realistic expectations students should have from higher education is that it will facilitate their understanding of the skills, attributes and competencies that will enhance their employability. Higher education will never be able to secure employment but they may enhance their awareness and the expectations of employers. Washer (2007:66) agrees and elaborates that graduates should be provided with those skills which will enable them to successfully present themselves to employers. In addition generic or key skills should be incorporated into the curriculum and should lead to more innovative teaching methods. Teichler (2000:85) suggests that higher education institutions should equip graduates with general competencies or attributes, promote the development of interpersonal skills, enhance entrepreneurial orientations emphasise flexibility.

Marock (2008:10) compiled the following list explaining what higher education should provide to students:

a) inclusion of employability skills in curricula goals;
b) ensuring that students have a clear understanding of these skills as well as their own skills and how they can contribute to the economic well-being of the country. Yorke and Knight (2004) and Harvey *et al.* (2005:44) add that students should be able to identify their achievements and how these achievements satisfy employers' needs. The latter statement was confirmed by Griesel and Parker's (2008) study who suggested that universities should enhance the career literacy levels of its students ranging from work ethic to personal initiative;
c) equipping students with the skills to present themselves to employers;
d) provide sufficient opportunities for self-reflection which can be utilised presently as well as in future;

e) ensure delivery of competent individuals who are ready for the next step in their career ;
f) ensure sufficient mock workplace experiences;
g) create opportunities for actual workplace experiences. Griesel and Parker (2008) also suggest that more opportunities should be created where students have the opportunity to engage in on-the-job learning activities;

In summary, employers are of the opinion that higher education should form stronger links with employers to ensure they remain competitive and provide graduates with the attributes, knowledge and skills needed to be successful in the labour market. However, Teichler (2000:87) emphasise that employers will still seek graduates who have an in-depth knowledge of their subject-field and are confident in their ability to display the required discipline-specific expertise. In addition, they will expect higher education to provide students who are able to enhance the practice-oriented aspects of technical knowledge as student will need to be able to tackle complex and real-life situations intellectually.

The discussions surrounding graduateness may lead to confusion as to how it differs from employability and if there are differences at all. The following sections will focus on conceptualising employability and more specifically graduate employability.

3.4. Graduate employability

The 21st century economy and workplace need workers who have the ability, attributes and skills to survive in any work situation and furthermore have the ability and will to adapt and remain flexible in a continuously changing organization. In turn, these requirements have increased the importance of the concept of employability and its implications for graduates in particular. This section will serve to conceptualise graduate employability.

Various studies have attempted to explain what is meant by graduate employability (Holmes, 2001; Yorke & Knight, 2004; Pool & Sewell, 2007). Universities and government acknowledge the term and realise that the focus have moved from simply equipping individuals with a degree but also enhancing in their position in the labour market. Unfortunately, what constitutes graduate employability has been quite diverse, as highlighted by Andrews and Higson (2008).

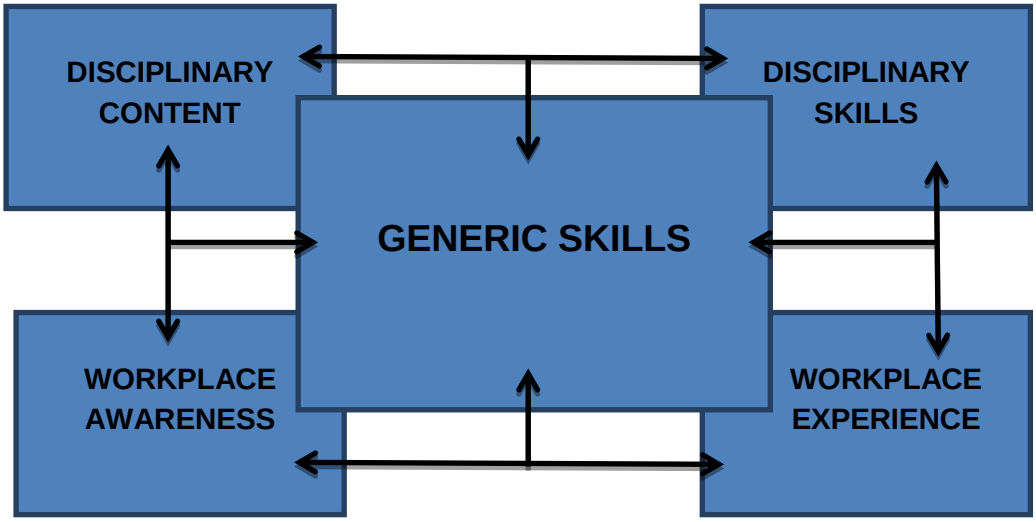
Pool and Sewell (2007:278) agree, explaining that the present view on employability may simply focus on whether or not a graduate has been employed. However, as the authors continue, the focus may need to shift to whether or not graduates utilize the skills and knowledge acquired through vocational studies, in a job to be considered “graduate-level”.

Yet, this notion opens up a whole new argument as there is differing views about that specific level.

3.4.1. Bennet, Dunne and Carré's model of graduate employability

Bennet, Dunne and Carré (1999:80) suggested the following graduate employability model:

Figure 3.1: Bennet, Dunne and Carré's model of graduate employability



Source: Bennet, Dunne and Carré (1999:80)

According to Bennet, Dunne and Carré (1999:79), these five elements are considered to be critical to course provision in higher education. Therefore it also focuses on the elements of graduateness. Central to the model is the concept of generic skills and its interrelationship with all the other elements. Within the context of this model generic skills can be divided into four categories, namely:

a) Management of oneself

These skills include time-management, lifelong learning, stress management, knowledge and skills transfer, and reflection. All of the activities should therefore aim at managing oneself in such a manner that it facilitates learning and knowledge management.

b) Management of others

Similar to the notion of mobilisation of human resources proposed by Pukelis and Pileicikiene (2010) the authors argue that graduates should have the skills to work in a team, show leadership, encourage learning and utilising the skills of the whole team. Students should learn how to use other people's skills to facilitate one's own development.

c) Management of information

As part of generic skills the authors propose that students should learn how to effectively manage information which includes the ability to use information technologies appropriately and innovatively and critically analyse information available.

d) Management of task

The last category of generic skills proposes that students should be able to conceptualise issues, engage in realistic goal-management activities related to the task, develop action plans and assess outcomes.

The four sets of generic skills categories are closely related to the self-reliant graduate concept proposed by the Association of Graduate Recruiters (2011). Higher education institutions are therefore expected to develop these generic skills in graduates as part of their education. Bennet *et al*. (1999:77) argue that these skills can be transferred between various disciplines and also the workplace. In the context of this study this is specifically relevant as graduates need to be aware of the generic skills they are expected to have developed during their stay at the higher education institution.

According to the model disciplinary knowledge and disciplinary skills are two different but interrelated skills. The authors explain that disciplinary knowledge is related to knowing *what* is required whereas the disciplinary skills refer to knowing *how* to implement the acquired knowledge. These skills are often described as the core skills that are expected from graduates as a result of their studies. The authors caution that the relationship between generic skills and core or disciplinary skills may be quite complex since some universities may view it generic skills as core skills. Therefore generic skills may either be taught as discipline-specific or more flexible skills (Bennet *et al*., 1999:81).

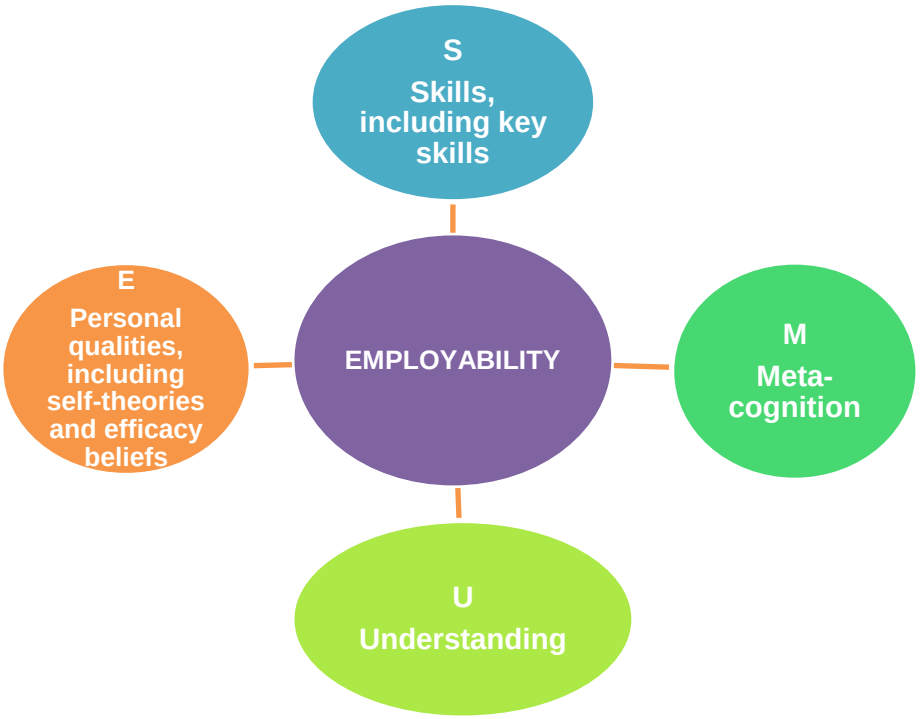
The two bottom elements, workplace awareness and experience, are seen as a result of the need to develop generic skills. Many higher education institutions are of the opinion that actual or simulated workplace experiences are the best method of developing generic skills. The latter argument is especially relevant since employers often expect graduates to engage in workplace experiences as these may improve the attributes they require. In addition it may also facilitate the development of transfer of knowledge as employers view students' ability to accomplish this as lacking (Griesel & Parker, 2008).

Lastly, the authors argue that the linkages displayed in the model between the various elements indicate the transferrable routes between the elements. However, the authors caution that this will only be accomplished if it is planned. This model shows strong resemblance to the graduateness definitions discussed earlier. This may lead one to think that the line between graduateness and employability are quite foggy.

3.4.2. USEM Employability Model

Yorke and Knight (2004) developed a popular graduate employability model and termed it the USEM model which is an acronym for four inter-related employability components, namely:

Figure 3.2: Yorke and Knight (2004) USEM Graduate Employability Model



Source: Pool and Sewell (2007:280)

a) understanding of the subject discipline and in the aspects relevant to one's performance in the organization;
b) skilful practices in context;
c) efficacy, referring to an individual's personal qualities which may influence their success in both work and social life;
d) metacognition, which includes reflection and self-regulation;

As with the previous model Yorke and Knight's (2004) the above model emphasises the ability of the individual to master their field of study, develop the skills required by employers and to identify, described and reflect on the qualities that may influence career success.

3.4.3. Pool and Sewell's CareerEDGE Model of Employability

Pool and Sewell (2007:280) identified that the models lacked one significant component, namely job satisfaction, emphasising that an individual should also be employed in a position where he or she not only uses their skill but does it in an environment and job that satisfy their occupational desires and expectations. Consequently, the authors formulated a new definition of employability defining it as "having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful".

Five essential components form the foundation of the model:

a) career (development and learning);
b) experience (work and life)
c) degree subject knowledge, understanding and skills;
d) generic skills;
e) emotional intelligence

This model suggests that if students have the ability to develop these five elements and have the opportunity for reflection and evaluation, they will have increased self-efficacy, self-confidence and self-esteem which are all deemed strongly related to employability.

Pool and Sewell (2007:281) included this element in their model of graduate employability. The main assumption of the model is that all elements are integrated and should an individual fail to develop one of the elements it may significantly decrease the graduate's chances of becoming employable.

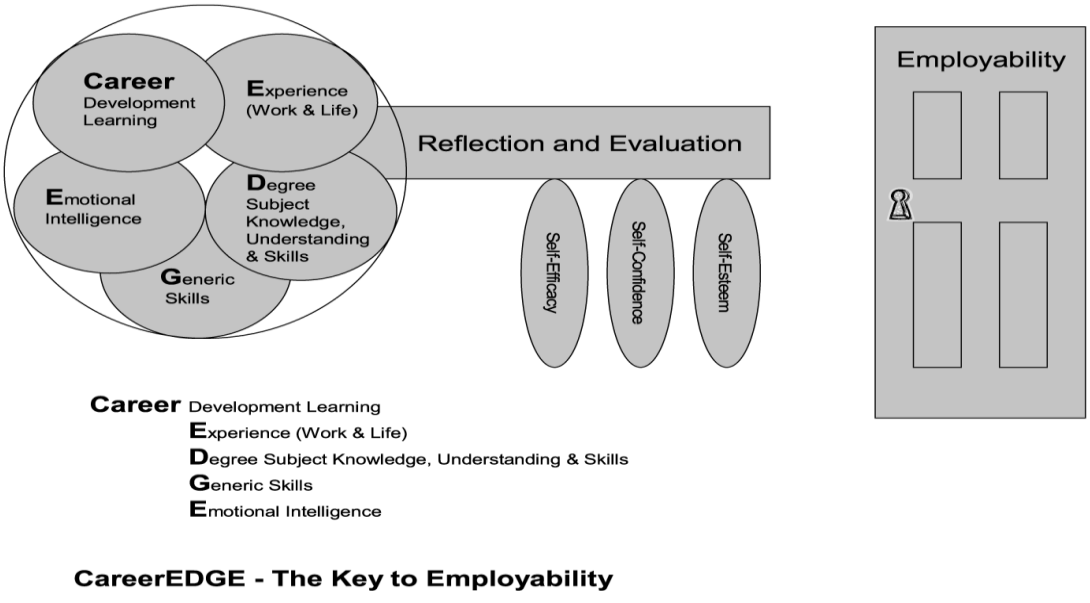
Pool and Sewell (2007:280) explain the design of the model is based on the contention that each of the components is essential and should one component be missing it will significantly decrease the graduates' employability. The authors furthermore emphasise that students should be provided with an opportunity to develop the five components on the lower tiers and in the process reflecting on their experiences of these five components. This in turn will lead to the development of the higher order tiers, namely self-efficacy, self-confidence and self-esteem.

Based on the above-mentioned model the authors wanted to provide students with a more practical model of employability which students will understand. Figure 3.3 was developed in response. This model explains the concept of employability in a practical manner and emphasises the components to be the 'key' to employability and may provide the graduate the opportunity to secure a job that will ensure job satisfaction and success as well. Each model component will be discussed in the following sections.

3.4.3.1. Degree subject knowledge, understanding and skills

Powell and Sewell (2007:281) emphasise that this component should be one of the central ones in the model. As Johnes (2006) emphasise the notion still exist that the better qualified an individual, the greater is the degree of employment opportunities. Employers often judge graduates on the successful completion of their degree and often this is their only measure. What the authors, however, highlight is subject-knowledge and the understanding thereof will not necessarily secure a graduate a job. One also needs to consider the specific generic skills required of by employers.

Figure 3.3: Pool and Sewell's CareerEDGE model of graduate employability



Source: Pool and Sewell (2007:281)

3.4.3.2. Generic skills

As Pool and Sewell (2007: 282) argue that the debates among the term generic skills and the various perceptions about it is never-ending. (Barrie, 2006). A number of research papers

have focused on describing the term, which is often also referred to as “key skills”, “core skills”, or “transferrable skills” (Association of Graduate Recruiters, 1995; Gow & McDonald, 2000; Owen, 2001; Washer, 2007; Australian Chamber of Commerce and Industry, 2002; Barrie, 2006). In essence, all of the above-mentioned skills, however it is described, serve as important factors for graduate employability.

Bennet *et al*. (1999:76) define generic skills as “… to represent the skills which can support study in any discipline, and which can potentially be transferred to a range of contexts in higher education or the workplace”. As Harvey, Moon and Geall’s (1997) study indicates, although employers value graduates’ technical and subject-specific knowledge, they also require a set of generic skills. Owen (2001:122) listed the following as the skills required by employers:

a) self-starting and ownership, which refers to the graduate’s ability to learn quickly and identifying their levels of responsibility within their team;
b) report-writing, including technical aspects of English and adapting to the audience, as employers feel that graduates should be able to write a report in such a manner that a manager can use it as a decision-making tool;
c) computer literacy, which includes information-processing and interpretation as employers expect graduates to be comfortable with IT as they grew up in that environment;
d) independent problem-solving where the graduate has the ability to identify the best solution to a problem prior to consulting the manager;
e) research skills and information sharing, where the graduates gather all the information but inform the manager of the key aspects of the information;
f) time and task management, including identification of the most suitable self- and time-management techniques; and
g) networking and building meaningful relationships, including respect for both educational achievement and level of experience.

Whilst Gow and McDonald (2000:378) identified similar generic attributes in their preceding study, they also listed the following additional skills needed by employers:

a) cross-cultural competence, which can be described as the ability to understand international and local issues and events, knowledge of the legal, economic and political systems used by other countries and sensitive to intercultural interaction;
b) entrepreneurial ability, including an understanding of foreign and domestic markets, financial management, and marketing of oneself and one’s ideas; and

c) lifelong learning, which is viewed as essential since graduates will be required to continuously adapt to a changing work environment, manage multiple tasks and display self-directed career management skills.

The studies mentioned in this section were also addressed in the conceptualisation of graduateness earlier. Consequently, students and higher education needs to realise the importance of these skills as employers will expect graduates to possess these skills as a result of their exposure to a higher education institution.

3.4.3.3. Emotional intelligence

Mayer, as cited by Pool and Sewell (2007:283) defines emotional intelligence as "… the capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought and to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth." Pool and Sewell (2007:283) is of the opinion that a graduate needs to also develop their emotional intelligence if they wish to enhance their employability.

Goleman (1998) describe five domains of emotional intelligence, namely:

- awareness of one's emotions;
- ability to manage emotions;
- motivating oneself;
- identifying and appreciating the emotions of other; and
- dealing with these emotions to handle relationships.

Yorke and Knight (2004:22) consider it one of the key personal attributes leading to employability and describe it as the ability to be "sensitive to others emotions and the effect it may have." Goleman (1998:2) caution individuals stating that employers are not looking only at one's level of knowledge and experience, but also focusing on how well a person handle oneself or others. The author further elaborates that emotional intelligence is something that may be learned and therefore a person may gain some form of training during higher education schooling.

The notion of emotional literacy is also related to Bennet, Dunne and Carré's (1999) notion of self-management and may form part of the generic skills sets proposed earlier. Students are expected to show the ability to use emotions of oneself and others effectively in the workplace if they wish to succeed.

3.4.3.4. Career development learning

Career development learning has also been described as “career education” or “career management” (Watts, 2006:9) and in essence it means that graduates need to be aware of where they are heading in their career and what they want to achieve. Career education should contain the following elements:

a) Self-awareness

Watts (2006:10) describes this outcome as the ability to identify the knowledge gained from a degree, the personal skills one have and how these can be developed. The aim of self-awareness activities is to reflect on one’s academic work, strengths, weaknesses and overall personal profile.

b) Opportunity awareness

This refers to an awareness of current work opportunities and its requirements. A graduate needs to be aware of the current employment trends, with specific reference to graduates and one’s field of expertise, the related requirements and the career options available.

c) Decision-learning where decision-making skills are developed

One of the most important tasks in decision-learning is to relate one’s self-awareness activities with the opportunities available. Of even more importance is how personal priorities may impact future career activities. Graduates should formulate career development action plans that will incorporate all of the above-mentioned activities to ensure sustained employment and satisfaction.

d) Transition learning, which includes searching jobs and developing self-presentation skills

Similar to the arguments of the Association of Graduate Recruiters (1995), Watts (2006:11) highlights that graduates should be able to identify potential barriers to preferred and appropriate job opportunities and how it can be overcome. The attitudes and activities needed to achieve personal career goals should be identified and clearly described.

3.4.3.5. Work and life experience

Work experience is something that has been valued by employers for quite some time. Yorke and Harvey (2005:51) and Harvey *et al.* (2005:52) confirm this in their study explaining that any form of work experience, whether being placed for a year or part-time employment was

viewed as valuable by employers. Pool and Sewell (2007:285) cite The Pedagogy for Employability Group (2006) where it states that students who participated in work placements may have better prospects of securing a job than those without it. Bennet *et al*. (1999:81) confirm this, explaining that employers value experience and believe that students will be better able to apply their knowledge and experience.

Harvey *et al*. (1997) emphasise the link between higher education and employers explaining the benefit of the employer providing students with practical experience. The authors elaborate that work placements prepare students for the workplace and make them aware of current work practices. Work placement should enable students to transform academic theory to workplace practice and gain more confidence in applying these theories. Harvey *et al*. (1997) conclude the importance of workplace experience explaining that students offered work placements may improve their time management and organization skills, gain real insight into the world of work and learn the value and importance of teamwork. Lees (2002:10) agree and add that teamwork at higher education level will enable students to learn the value thereof, identify lessons learned and enhancing their overall teamwork skills. Employers view these students as having more mature outlooks, more comfortable with themselves and have greater business awareness.

3.4.3.6. Reflection and evaluation

Although subject-knowledge and understanding, as well as the development of skills are important, Pool and Sewell (2007:285) emphasise that students should engage in reflection and evaluation activities of the aforementioned aspects. The authors continue, explaining that failing to do so a student will not be fully able to determine where they situate themselves in terms of their career and where they can improve. The Higher Education Academy argues that their Personal Development Planning (PDP) and employability are closely related. Jackson (2001) PDP intends to help students:

- “understand how they are learning and relate their learning to a wider context”
- “improve their general skills for study and career management”
- “articulate personal goals and evaluate progress toward their achievement”; and
- “encourage a positive attitude to learning throughout life”

If students are aware of their own strengths and weaknesses they may be able to identify opportunities for improvement. In addition, they may also be more prepared for job searching activities and transfer their theoretical knowledge into practice. Through the use of Personal Development Planning students should be more able to identify their own learning and

development opportunities, how this relate to their career plans and what can be done to achieve these plans.

3.4.3.7. Self-efficacy/self-confidence/self-esteem

Bandura (1995:2), in Pool and Sewell (2007:285) defines self-efficacy as:

> *The beliefs in one's capabilities to organize and execute the course of action required to manage prospective situations. Efficacy beliefs influence how people think, feel, motivate themselves and acts.*

The following sources of efficacy beliefs relate to employability:

a) Mastery experiences

According to Bandura (1995), this type of experience occurs when a person has the opportunity to engage in task completion on their own. In the education context it may imply students designing and publishing a newspaper, managing a small company, or applying for a position. These experiences may lead to the highest level of self-esteem and efficacy as students feel they are solely responsible for their success.

b) Vicarious experiences provided by social models

Bandura (1995) explain that these experiences arise when students witness other people's success and interact with them directly. The more the students can relate to these individuals the better the understanding may be. Utilising groups of former graduates will be the most effective as students relate better to people who understand their feelings and experiences.

c) Social persuasion

When a person is convinced of their ability to successfully complete a specific task, social persuasion occurred. The individual will have confidence in their abilities and will remain motivated. The role of universities and their academic staff become vital in this context as the students' motivation levels may be influenced by their feedback.

In essence, if a student has the ability to engage in all three areas of self-efficacy they may display more confidence to employers and may, therefore, be more successful in their employment initiatives. Lees (2002:4) adds that students with self-efficacy will engage in meaningful goal-setting activities and will gain satisfaction from achieving these goals. Furthermore, self-belief will also enable students to reflect on mistakes made and translate this reflection to forthcoming projects. However, all of these experiences will depend on the

willingness of the student to engage in these activities, the level of engagement and the amount of reflection on experiences gained.

Pool and Sewell's (2007) model has highlighted the significant influence the individual and their emotions, orientations and experiences may have on their employability. To merely look at the knowledge, understanding and skills of the individual will lead to a static view of their employability as it fails to consider their emotions, perceptions and need for job satisfaction. Employability should place the individual in the centre of the continuum and should encourage them to engage in pro-active career behaviours. In the latter is where the difference might lie between graduateness and employability. Whereas graduateness focuses on the knowledge, skills and abilities a student should have acquired as a result of their involvement at a higher education institution employability also takes into account the role of self-evaluation, reflection and behaviours which may influence the career management of the graduate. Coetzee and Schreuder (2009:117) acknowledge the presence of the aforementioned factors and encourage greater attention to the behaviour and characteristics that may influence and even predict a person's employability.

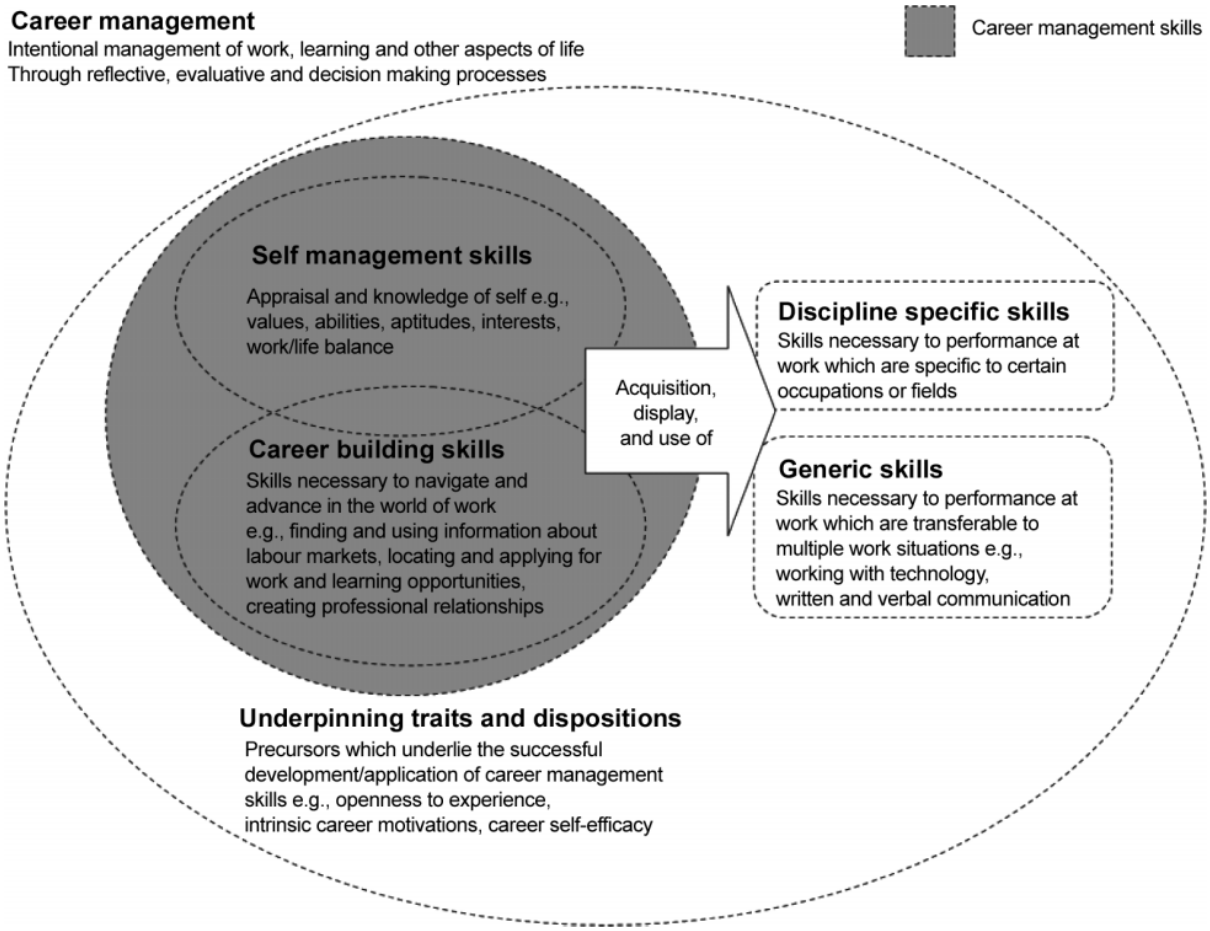
3.4.4. Bridgstock's (2009) conceptual model of graduate attributes for employability

Bridgstock (2009:35) recommends an employability model which incorporates both the skills needed to enhance a graduate's employability as well as the critical importance of career management. The elements of the model are discussed in the following sections.

a) Career management

According to Bridgstock (2009:35-36), career management entails a continuous process whereby an individual reflects, evaluates and makes decisions using their ability to manage themselves and their careers which are in turn the result of specific traits and dispositions. The aforementioned activities will assist the individual to efficiently obtain, display and utilise transferrable and subject-specific skills in the work-environment. The activities related to managing one's career will include realistic, personal and meaningful goal setting, continuous engagement in learning opportunities and strategic decision-making, identifying and describing the work/life balance and recognising the relationship between social, economic and work environments. However, in the immediate environment this process also entails finding and keeping a specific job.

Figure 3.4: Bridgstock's Conceptual Model of Graduate Attributes



Source: Bridgstock (2009:35)

b) Employability skills

Employability skills consist of three skills sets, namely generic skills, discipline-specific skills and career management skills. These skills are directly related to finding and securing employment.

- Generic skills

Generic skills refer to the transferrable skills or employability skills discussed comprehensively in the literature available. Numerous studies have been undertaken to determine employer's requirements of graduates, but the author notes that only a few studies have attempted to determine whether these generic skills, if adequately developed, will enhance the graduate's employability. This may be partly due to the fact that researchers acknowledge the importance of generic skills, but also the disagreements regarding the effective measurement of these skills and the effects of the graduate and the labour market conditions on their employability (Bridgstock, 2009:37).

- Discipline-specific skills

Bridgstock (2009:37) defines discipline-specific skills as the skills university curricula are required to address and are related to a specific occupation and its related requirements. These skills are therefore a result of exposure to and training on a specific subject area. It is expected of a graduate to possess these skills after completion of the related subject-specific study.

c) Career building skills

Career building skills are those "skills relating to finding and using information about careers, labour markets and the world of work and then locating, securing and maintaining work, as well as exploiting career opportunities to gain advancement or other desired outcomes" (Bridgstock, 2009:37-38). The effective development of these skills will be influenced by the underlying qualities and outlooks the individual has and may include orientations related to new experiences, confidence in one's abilities, amicability and sociability (Bridgstock, 2009:37).

The skills related to career building include:

- familiarity with one's industry which involves identification of possible opportunities and threats which may influence their success. Individuals need to be aware of the 'rules of the game', with specific reference to the organization of their industry, the culture thereof, salary norms and unemployment rates;
- the ability to successfully locate and secure promotions based on geography, tasks and responsibilities;
- Identify the desired period in a specific position, the time frame for seeking a new job or training offer and a quick shift when the opportunity presents itself; and
- familiarity with the job search and recruitment process, interviewing techniques and effective techniques for presenting employers with one's skills and competencies.
- The ability to network and develop tactical personal and work relationships with individuals who may be the key to new job prospects and related resources.

d) Self-management skills

Self-management skills refer to a person's awareness and evaluation of themselves with specific reference to their interests, objectives, competencies and morals and are associated with the perceived similarity between the individual and the chosen career role. If individuals have a clear sense of their future career goals and directions and can provide realistic

evaluations of themselves they may believe more in their employability and perceived career success (Bridgstock, 2009:37).

Career building and self-management skills will significantly influence the extent, method, location and period in which the generic and subject-specific skills are developed, exhibited and utilised and may therefore significantly influence a graduate's employability.

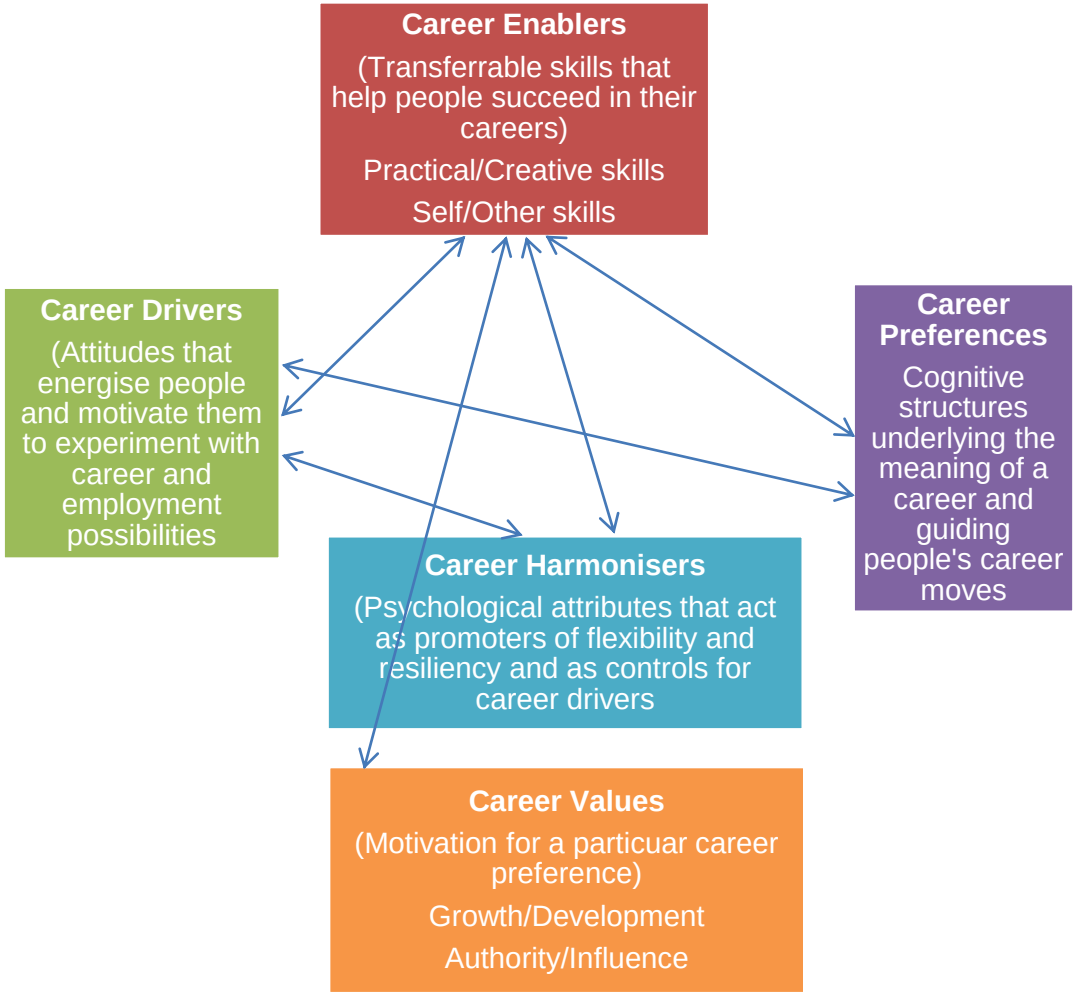
Bridgstock's model (2008) highlights the importance of linking graduate employability with lifelong career development. The model, like the previous employability models, acknowledges the importance of generic and discipline-specific skills, but also emphasise the role of the individual in their employability initiatives, with specific reference to their underlying behaviours, emotions and dispositions. This model also encourages individuals to engage in pro-active career behaviours and take responsibility for their careers. With specific reference to the new world of work the career building and self-management skills become essentials as individuals are required to be familiar with career-related opportunities and threats, the work environment and current labour conditions. It is also critical for them to determine the underlying beliefs and behaviours that may guide their skills development and influence their self-confidence in completing tasks. The model also urges higher education institutions to take greater cognisance of the demands of the world of work and assume greater responsibility for the development of graduates that will satisfy employers' needs.

Coetzee (2008:10) acknowledge the presence of the aforementioned factors and encourage greater attention to the behaviour and characteristics that may influence and even predict a person's career management and subsequently their employability. Coetzee (2008) refers to these behaviours and beliefs as a person's psychological career resources and the subsequent sections will focus on conceptualising psychological career resources.

3.4.5. Psychological Career Resources

In the new world of work everything is uncertain. Individuals are required to be adaptable, continue to learn and manage their careers accordingly. In turn, organizations are required to effectively manage talent and retain critical skills. In this context, the importance of career satisfaction, workplace happiness and wellness have been stressed. As Coetzee and Bergh (2008:3) observe the subjective work experience of a company's employees are increasingly influencing the morale of employees as well as their retention.

Figure 3.5: Psychological Career Resources Framework



Source: Coetzee, (2008:11)

3.4.5.1. Definition of psychological career resources

In the context of this study, the definition provided by Coetzee and Roythorne-Jacobs (2007) will be used where the term is defined as: “the set of career-related orientations, values, attitudes, abilities and attributes that lead to self-empowering career behaviour and promote general employability. Gunz and Heslin (2005), as cited by Coetzee and Bergh (2008:3) also include the link a person’s psychological career resources have with an individual’s “experiences of subjective or intrinsic career success.” In addition, Coetzee and Bergh (2008:3) also cite Sternberg (1999) in their conceptualisation who explains that these resources may also refer to “an individual’s inherent resources or meta-competencies which

enable them to adapt to changing career circumstances and to shape and select environments in order to attain success within a particular socio-cultural context."

To simply the term for individuals Coetzee (2007) developed a theoretical framework illustrating the definitions:

3.4.5.2. Career preferences and values

According to Coetzee and Schreuder (2009:2), a person's career preferences and values can be described as the specific ideas and perceptions an individual has about their career and the subsequent path it should follow. This in turn will influence career decisions and would also serve as a guidance tool. Therefore, these career values and preferences may refer to "the enduring cognitive or conceptual structures underlying their thinking about their careers and which define the meaning of a career to them" (Driver, 1982; Kim, 2005, as cited by Coetzee & Schreuder, 2009:2).

Kim (2004), in Kim (2005:50) compiled a table explaining the different descriptions of career orientations which may influence career decisions:

Based on the career orientations proposed by Driver and Derr, Coetzee (2008:2) describes four career preferences, namely:

a) Stability/expertise,

   This refers to individuals preferring an occupation that will offer them steadiness and predictability and where they are provided with opportunities to improve their skills and expertise in a preferred area. Derr (1986, cited by Kim, 2005:48) explains that these individuals prefer long-term job security. Consequently, they would be loyal employees and will relate career success to the level of recognition received from their employer. Derr (1986) elaborated that some individuals will prefer a job where they have the opportunity to develop skills related to a specific field and the focus may therefore be on improving competencies and abilities related to that specific field.

b) Managerial

   A managerial preference can be described as the belief by an individual that hierarchical advancements in a company accompanied by increased responsibilities, authority and influence indicate career success.

c) Variety/creativity

Variety/creativity preference describe the need for an individual to engage in various tasks and activities and consequently develop an array of skills, knowledge and creative approaches to tasks; and

d) Freedom/autonomy refers to situations where an individual can work in an environment that is free from any external interruptions. Derr (1986), as cited by Kim (2005:48) emphasise the need for these individuals to stay clear from any restrictions and will most likely prefer to be involved in product development.

As it is evident from the abovementioned an individuals' career preferences may significantly influence an individual's career decisions and may in turn influence what they value in a career and the related knowledge and skills they develop. Therefore, career values can be described as the drive behind career preferences. With regards to the difference between career preferences and career values, Brousseau (1990), as cited by Coetzee (2008:2) refers to career preferences as the guiding tools for career moves, whereas career values will serve as a driver behind a specific career preference. Chia (2003:101) highlights that each individual has driving forces and values that will guide their career choices. If individuals are aware of these qualities and beliefs it will provide them direction in career decisions and also serve as motivators. These career forces can therefore be described as the internal energy that determines what an individual desires in a career. These career drivers cannot be premeditated, but is a result of an individual's personality, skills and competencies, values and self-esteem. In the context of the new world of work Singh (2005:3) defines career drivers as "the short-term/long-term aspirations or preferences of the individual, which influence his/her decisions regarding his/her career." Singh (2005:4) highlights the influence of career drivers on the psychological contract and argues that this relationship is bi-directional in nature explaining that "changes in an individual's belief about organization's obligations may lead to changes in his/her career aspirations and expectations".

Singh (2005:4) divides career drivers into two categories, namely traditional and progressive. In a traditional sense, career drivers were strongly related to the traditional psychological contract where financial gains, hierarchical advancement and a secure future were important. However, in the context of the 21st century work environment these traditional career drivers are not the only motivator behind career decisions. The concepts related to boundaryless careers have influence the psychological contract significantly and have led to the more progressive career drivers which, although acknowledges the role of

traditional career drivers, are also more focused on lifelong employability, performance and personal growth.

Super (1973) did some of the earliest work on work values. According to the author, career values can be defined as "goals or objectives sought through engagement in work" (Dunning, 2010:17). These values are:

a) creativity: work which permits one to invent new things, design new products, or develop new ideas;
b) management: work which permits one to plan and lay out work for others;
c) achievement: work which gives one the feeling of accomplishment in doing a job well;
d) surroundings: work which is carried out under pleasant conditions - not too hot or too cold, noisy, dirty, etc;
e) supervisory relationships: work which is carried out under a supervisor who is fair and with whom one can g*et al*ong;
f) way of life: work that permits one to live the kind of life he/she chooses and to be the type of person he/she wishes to be;
g) security: work which provides one with the certainty of having a job even in hard times;
h) associates: work which brings one into contact with fellow workers whom you like;
i) aesthetic: work which permits one to make beautiful things and to contribute beauty to the world;
j) prestige: work which gives one standing on the eyes of others and evokes respect;
k) independence: work which permits one to work in his/her own way, as fast or slow as he/she wishes;
l) variety: work which provides an opportunity to do different types of tasks;
m) economic return: work which pays well and enables one to have the things he/she wants;.
n) altruism: work which enables one to contribute to the welfare of others; and
o) intellectual stimulation: work which provides opportunity for independent thinking and for learning how and why things work.

The author also acknowledges the influence of age, experience and gender on career values. Kirkpatrick-Johnson (2002), as cited by Dunning (2010:41) also added education as a factor influencing career values explaining that certain individuals may have been exposed to higher levels of education, which in turn will influence their skills development and subsequent job opportunities. The latter may then provide them with better opportunities for

achieving goals and objectives. Personality type, as argued by Briggs-Myers and Myers (1980), cited by Dunning (2010:44) may also significantly influence a person's work values.

Brown's (2002) values-based theory also focuses strongly on the influence of work values, cultural and life roles on career decisions. In this context work values are defined as "the values that individuals believe should be satisfied as a result of their participation in the work role" and include the following work values similar to those defined by Super (Brown, 2002:49):

- material success;
- altruism;
- conditions and associates;
- heuristic (experimental) – creative;
- achievement – prestige; and
- independence – variety

The author argues that these values are the primary variables that will guide an individual in their choices, success and will influence their overall job satisfaction. Consistent with the literature, Brown (2002) emphasise that individuals will seek occupations that will satisfy their career values and also highlight the critical role of individual self-assessments in career choices. Should the afore-mentioned activities be excluded from career management a mismatch may occur between work values and work and hence lower levels of job satisfaction and success may be reported. Judge and Bretz (1991:3) confirmed this by stating that individuals work values may influence their views of their work and their overall job satisfaction. These authors describe work values as "… outcomes or states" (Judge and Bretz, 1991:4). Based on this description career choices may be the subsequent result of a preference for an environment that will allow expression of specific values.

According to Coetzee's (2008) psychological career resources model two categories of career values exist, namely growth/development and authority/influence. These two categories serve as motivators for a particular career preference.

3.4.5.3. Career drivers

Career drivers are defined as:

> *the attitudes that energise people and motivate them towards experimenting with career and employment opportunities that are based on their viewpoints of the*

possible selves they could become or the possible working roles they could experience.

Coetzee (2008:10) adds that career drivers consist of an individual's awareness of their career purpose, career venturing and career directedness.

Career purpose can be described as "people's sense of having a career calling" (Coetzee, 2008:11). This career purpose is based on an individual's personal belief and confidence that they have the ability to achieve career objectives. London (1983:621) also describes this concept as career insight and defines it as "the extent to which the person has realistic perceptions of him or herself and relates these perceptions to career goals." According to Hall and Chandler (2005:160), a calling occur when "an individual experiences work as being more than a job or career". Consequently, their definition has four important implications:

- the sense of purpose needs to come from within a person;
- the calling will entail being of serve to oneself and the community;
- awareness of purpose is achieved through introspection, evaluation and reflection; and
- having a sense of purpose means that one is ratifying one's purpose for personal fulfilment.

In the context of students, Hunter, Dik and Banning (2010) conducted a study to determine how students describe a career calling. Their research found that most students viewed a career calling as inclusive of a guiding force and altruism and that having a sense of purpose implied following these forces, following their interests, using their talents and display relentless dedication and commitment. For the students having a sense of purpose extended beyond the work environment to personal relationships, significant activities and life in general.

The literature has also focused on the elements present in the concept career calling and identified the following dimensions:

Vocational identity status which can be defined as "the conscious awareness of oneself as a worker in terms of the importance of work and one's perception of occupational interests, abilities, goal, and values and the structure of meanings in which such self-perception is linked with career roles" (Hirschi, 2011:64). This concept is closely related to calling as it also entails seeking meaning from work and using one's abilities and interests to create meaningful work. Achieving one's career identity may therefore imply achieving one's career calling. This aspect is strongly related to Coetzee's (2008) notion of career purpose.

Career engagement is closely related to the previous discussion and furthermore holds the notion that individuals with a clear career calling may be more involved in activities related to their career development. These activities may entail exploration of the work environment, collecting required information and networking. This dimension entails that the individual's sense of purpose may have a strong influence on their motivation for managing their career in a self-directed manner. London (1983:621) uses the concept career identity to explain the afore-mentioned and states that individuals who obtain high scores on career identity will highly value career satisfaction above satisfaction in other areas of life.

Career confidence has been addressed previously and a number of studies found that having a career calling installs "…sense of self-confidence" (Goldman and Kernis, 2002; Duffy & Sedlacek, 2007)

Work values have achieved significant attention in section 3.4.5.2. earlier.

The end-result of Hirschi's own study (2010) found that a career calling comprises of continuous engagement in self-evaluation and exploration activities which may promote career confidence. Wrzesniewski, McCauley, Rozin and Schwarts (1997:31) also found that if individuals had a strong career calling, they also reported higher levels of job satisfaction and the purpose of work was to realize their potential and promote the society.

According to Coetzee (2008:11) career directedness refers to:

> *"an individual's sense of clarity about future career directions and goals as well as the clarity in terms of where and how to find support for achieving their career goals or finding new job opportunities".*

Within the context of the new world of work career directedness will have specific relevance to the protean career where the individual is at the centre of career management and is therefore also responsible for their own career paths (Enache, Sallan, Simo & Fernandez (2011:238). Greenhaus, Callanan and Kaplan (1995:3) emphasise that career goals are beneficial as it will enable individuals to have clear idea of their career future and may furthermore provide an individual with specific targets which in turn should lead a person to experience satisfaction of career-related needs. The authors elaborate that career goals can also serve as a feedback tool whereby the individual obtain information regarding their career progress and how it aligns with their career needs and expectations. Lastly, the authors caution that goal-setting should contain the following elements:

- it should be compatible with one's personal morals, beliefs, talents and interest;
- it should focus on both present and future satisfaction;

- it should consider both work and personal life; and
- flexibility regarding career planning

Since career directedness also entails planning one's career and identifying potential resources to achieve goals and objectives career planning becomes a central element to this concept.

Hall and Foster (1977) agree and highlight the importance of individual career planning, which can be defined as "the process of identifying what one wants from one's career, assessing one's strengths and weaknesses in relation to these goals, and deciding what steps need to be taken to realize these goals in the light of one's own strengths and weaknesses" (Orpen, 1994:29). The latter will be discussed in greater detail in coming sections.

London (1983:621) states that goal clarity is closely related to career insight and individuals should have the willingness to change goals to achieve success. Hall and Chandler's model (2005) of the dimensions of a career calling also incorporates goal setting. The authors take the notion that the results of setting goals and putting in the required effort to achieve it will lead to psychological success. The latter is used to describe a person's subjective views of success and will most likely be achieved when the individual sets meaningful and personal goals, engage in activities that will assist them in achieving those goals and then successfully accomplish the stated goals (Hall & Chandler, 2005:158). Consequently, career directedness can be strongly related to what Hall and Chandler describes as psychological success.

However, Heslin (2005:125) warns that people differ in their goal-setting activities and may have either performance goals where competency is important, or learning goals where the aim is to acquire new knowledge. These two types of goal orientation may have an influence on what an individual describe as career success. Furthermore, Heslin (2005:127) cautions that individuals may have different types of criteria they use during evaluation of their careers. The author suggests that the research into career success should focus on both measures of career success. An example of objective criteria may be described in financial terms whereas subjective criteria may be related to fulfilment of work. An important factor included in the author's model is the role of other people in the career success perceptions of an individual on both a subjective and objective level (Heslin, 2003:278). Lastly, and in specific relation to career directedness, the author argue that individuals may differ with regards to the type of goals they have and how they evaluate them. According to Dweck and Legget (1988), as cited by Heslin (2005:125) people may have either learning goals, with the aim of acquiring new knowledge, or performance goals which are strongly related to their

levels of competency. In addition, individuals who follow non-linear careers may have goals which focus on personal growth, variety, autonomy and creativity (Heslin, 2005:127).

One of the most distinct aspects of a protean career is the attainment of psychological success. Coetzee and Bergh (2009:23) found that individuals that scored high on career directedness also significantly predicted their life satisfaction, career/job satisfaction and overall happiness. Furthermore, Ferreira, Basson and Coetzee (2010:7) also found that individuals who had a clear perceptions of career goals and directions showed higher levels of commitment to an organization.

In the context of career goal-setting Zikic, Novicevic, Harvey and Breland (2006:636) offers an interesting perspective. The author focuses on career exploration where the latter is viewed as an essential component that will lead to career growth and development. Career exploration can be described as "gathering information about the self and various career options in the changed home and country environment, with a goal of fostering career prosperity, development and growth" (Zikic, Harvey & Breland, 2006:635). Taveira and Moreno (2003), as cited by Zikic *et al.* (2006: 635) emphasise that goal-oriented behaviour is at the centre of career exploration. The 'hope theory' as proposed by Snyder (2000) in Zikic *et al.* (2006:636) can be used to describe one process of possible achievement of career success.

a) goals which form the starting point for the mental process and must be viewed as meaningful and valuable to encourage any action;
b) pathways which can be described as the "ability to generate plausible alternatives to reach a goal" (Zikic *et al*., 2006:636). Once an individual has identified the career goals they want to achieve they develop various routes (pathways) they believe will lead to goal-attainment. This is vital to the attainment of goals as the individual needs to believe that each pathway may be successful in achieving stated goals. However, the individual will also identify possible barriers of each pathway and may need to reconsider the specific pathway and identify alternative routes that will lead to success.
c) agency thoughts can be defined as "the final, motivational component of hope construct that serves to motivate individuals along their pathways to their goals" (Zikic *et al*., 2006:637). In simple terms, agency thought can be described as the willpower to succeed.

The last dimension in Coetzee's (2007) psychological career resources model part of career drivers are career venturing which can be described as "an individual's willingness to take

risks in finding and experimenting with new career opportunities" (Coetzee & Schreuder, 2009:2)

The hope theory may provide valuable guidance in goal-setting activities. The psychological career resources model proposes that career drivers will assist an individual in engaging in proactive career behaviours and will require the individual to identify their career goals and the resources needed to achieve it. The 'hope theory' may assist an individual to also identify the pathways that may lead to goal accomplishment and furthermore encourage the individual to find the willpower to achieve these goals.

3.4.5.4. Career enablers

Coetzee (2008:10) defines a person's career enablers as

> "*those abilities that help them succeed in their careers. It refers to an individual's transferrable skills, including their self or other skills and practical or creative skills."*

According to Sternberg (1985), as cited by Coetzee (2008:12) practical intelligence refers to an individual's ability to "apply intelligence to real-world contexts." Creative, intelligence, on the other hand, can be described as the ability to "apply cognitive processes in challenging existing assumptions and concentrating on new ways of doing things." (Coetzee, 2008:12).

With reference to self/other skills Gardner (1983) proposes the concept of personal intelligence which consist of "interpersonal intelligence (or the ability to understand, honour, empathise and interact effectively with others) (Coetzee, 2008:12) and intrapersonal intelligence which refers to the skills of understanding one's own feelings and motivations and displaying self-control in personal interactions."

The career enablers and specifically the self/other intelligence is important as individuals are often required to function in social contexts. Through these interactions with other individuals people may become more aware of who they are and may learn to balance their expectations other people may have and their own feelings. Since careers are increasingly considered to be the responsibility of individuals the role of emotions become even more important in the context of career decision-making. Emmerling and Cherniss (2003) also highlight that emotions may play a significant role in the perception of risk associated with different career options, the self-exploration activities of the individual and the information processes utilised.

The aforementioned enablers have been discussed in great details in the employability literature on this study as well as the graduate attributes required by employers. This model

therefore also emphasise the transferrable skills needed to enhance one's employability. Graduates need to be aware of the level of their practical/creative and self/other skills as this may significantly influence their employability.

3.4.5.5. Career harmonisers

According to Coetzee and Schreuder (2009:2), career harmonisers can be defined as "the psychological attributes which act as promoters of flexibility and resilience." A person's career harmonisers will also serve as controllers of an individual's career drivers and will ensure that people do not over-commit themselves to certain situations.

According to Coetzee (2008:12), emotional literacy and social connectivity are the central pieces of a person's career harmonisers. Emotional literacy can be defined as "the degree to which individuals are able to accept and express a range of affect, based on the premise that a range of emotional responses facilitates career adaptive behaviours in the career decision-making process." (Coetzee & Bergh, 2008:5). Goleman (1997), in Dulewicz and Higgs (2000:342), describe emotional literacy as emotional intelligence and defines it as follow:

- ability to identify, understand and manage one's own emotions;
- the ability to use self-motivation to complete tasks and improve performance and creativity; and
- sensing others' feelings and managing these feelings and interactions efficiently.

This definition correlates with Emmerling and Cherniss' (2003:154) viewpoint that emotions may significantly influence the consideration of career options, the degree to which risky career decisions are tolerated, the level of self-exploration an individual engages in and the overall information-processing process (Brown, George-Curran & Smith, 2003:380). Puffer (2011:144) agrees and elaborate that career indecisiveness may be significantly influenced by the tolerance for both pleasant and unpleasant emotions and observing one's own and others emotions. Brown, Georg-Curran and Smith (2003:389) confirm this through their study and highlight that emotion play a significant part in the development of careers and the related behaviours and outcomes of individuals. Goleman (1998) furthermore found that individuals who had an appropriate combination of IQ and EQ had a tendency to also be more successful in their selected career.

Of even more importance, and in the context of this study, the authors warn that individuals will need to display the ability to adapt their emotions to facilitate their career decision-process in order to cope with rapidly changing work environments and career paths. (Emmerling & Cherniss, 2003:163). The authors do, however, note that individuals who score

high on emotional intelligence will be in a better position to utilise the motivational features of emotions in that they will be able to focus on specific emotions in their career decision-making process that will facilitate adaptive behaviour. The latter is accomplished in situations where the individual weighs numerous affective components when making a decision (Emmerling & Cherniss, 2003:163).

With specific reference to the career decision-making of students the study of Puffer (2011:130) found that students who score high on emotional intelligence had a clearer picture of their career values, needs and interests. This study furthermore highlights the importance of including emotional intelligence measures in career counselling as it may also influence a person's career preferences.

The second pillar of the career harmonisers are social connectivity which is defined as an "individual's ability to connect with others, and establish and maintain mutually satisfying and supporting relationships." (Coetzee, 2008:12). In the context of career development Mayrhofer, Steyrer, Meyer, Strunk, Schiffinger and Irellatchitch (2005:42) highlight that sociability has positive effects on specific career outcomes, including hierarchical advancement, salary increases and early promotions. Creed, Fallon and Hood (2009:221) add that social support may be a valuable tool for obtaining career-related information and advice and that it will enhance an individual's adaptability. Furthermore, McArdle, Waters and Briscoe (2007:248) argue that social support will more likely feel valuable and be able to cope in stressful situations.

Seibert, Kramer and Liden (2001:223) emphasise the importance of social capital, resources and networks in career management. The authors highlight that social resources and more specifically social networks will enable people to obtain information, financial means, legitimacy and support with a social system. Furthermore, they emphasise the concept of social capital, which can be described as "the different network structures that facilitate (or impede) access to social resources and the nature of the social resources embedded in the network" (Seibert *et al*., 2001:221) and the influence thereof on career outcomes, including salary expectations, number of promotions and overall career satisfaction. They authors contend that network features, such as increased access to information and resources improved the aforementioned outcomes. Higgins (2001:598) also adds the influence social advice networks may have on career changes and findings suggest that the diversity of an individual's network may significantly influence the likelihood of the individual changing careers. Within the context of the world of work this aspect is specifically relevant as the individual may be forced to make frequent career changes which in turn may depend on the diverse and effective advice network the individual as available.

The latter will in turn require the individual to remain adaptable and willing to change behaviours to achieve career goals and consequently the concept behavioural adaptability as proposed by Coetzee (2008) comes into play.

Behavioural adaptability refers to "an individual's ability to recognise those traits that are significant for potential performance and to be able to make the required personal changes to meet their career related desires." (Ferreira *et al*., 2010:4). Rottinghaus, Day and Borgen (in Creed *et al*., 2009:220), adds the element of uncertainty to the definition explaining that adaptability involves the perceived ability of an individual to adjust their careers and career plans in the face of uncertainty. Both these definitions highlight the crucial interaction between an individual and their environment and managing the problems they are confronted with. Creed *et al.* (2009:221) conceptualise the term explaining it as being able to identify opportunities, plan for the future, make appropriate choices and managing all related factors that may influence the achievement of one's career goals. Furthermore Griffith and Hesketh (2003:65) define behavioural adaptability in terms of three dimensions:

a) proactive behaviour where a person initiates movements that positively influence changes;
b) reactive behaviour which involves changes to oneself to remain suitable for a specific environment; and
c) tolerant behaviour referring to the ability to function continuously in the face of these changes or in cases where the proactive or reactive behaviours are not suitable.

Through their study McArdle *et al*. (2007:248) found that individuals who are proactive and adaptive may remain more positive in the face of unemployment. This is especially relevant in the new world of work where individuals are required to function in an unstable work environment and therefore needs to remain open for change. The overall study of the authors found that an adaptable and proactive personality as well as social support had a significant influence on a person's employability. Within the context of this study this is specifically relevant as students engage in tertiary studies with the aim of obtaining employment. During their tertiary studies the findings of this study should be considered as possible contributors to enhanced employability. This conclusion has also been confirmed previously where flexibility and openness are listed as essential graduate attributes. Similar to the aforementioned results Griffith and Hesketh (2003:65) emphasise that the new world of work requires individuals to remain flexible and adaptable.

As career harmonisers also form part of an individual's proactive career behaviour attitudes Hall and Chandler (2005:164) argue that an individual who is highly adaptable would be able to proactively participate in goal-setting activities, initiate effort and achieve psychological

success. The authors furthermore highlight that self-confidence, or believing that one is capable to complete an assignment as per the required standards, will also enhance a person's adaptability (Hall & Chandler, 2005:164). Coetzee (2008:13) also added self-esteem to an individual's career harmonisers.

Self-evaluation may be significantly influenced by an individual's self-esteem and general self-efficacy as the study of Judge *et al.* (1997) found. The researchers furthermore found that a person's self-esteem may also significantly influence how they behave in different situations. General self-efficacy can be described as the relative stable belief people have in their ability to meet the demands of a variety of tasks. According to the authors self-esteem refers to the degree to which an individual either likes or dislikes themselves. Central to the concept of general self-efficacy is the judging activities a person engages in as it involves evaluating whether one has the ability to complete tasks. Self-esteem, on the other hand, is a more general feeling a person has about themselves (Chen, Gully & Eden (2003:377).

Chen *et al*. (2003:375) emphasise that self-evaluations have a significant impact on an individual's well-being, behaviour and performance in the work environment. The researchers' study specifically found that a person's sense of self-worth in the work environment will be influenced by their perceptions about their ability to perform a task. In their study, Kammeyer-Mueller and Judge (2007:217) also found that a person's self-worth may significantly influence their extrinsic career success-oriented outcomes. Furthermore the researchers confirmed the results of Chen *et al.* (2003) regarding the impact self-evaluations may have on an individual's motivation and performance levels.

A crucial practical application of these research findings is the finding that people with high general self-efficacy will most likely also be more motivated and determined in situations where they are required to overcome problems and handle setbacks. In the context of the new world of work, this is extremely important as people will need to display the ability to change behaviour, deal with problems and remain committed to succeeding in the task at hand.

Hall and Chandler (2005:164) agree and add that a person's self-confidence may significantly influence a person's effort to accomplish goals and achieve career success. They elaborate that a person's self-confidence may trigger the willingness to start the career cycle, pursue goals and take effort to achieve it. This self-confidence may also, as highlighted previously by Orpen (1994) may lead an individual to identify career opportunities where they are able to use their strengths and abilities as they believe in their ability to complete the tasks successfully. The study conducted by Abele and Spurk (2009:60) confirmed these results and found that occupational self-efficacy was moderately correlated

with the career advancement objectives of participants. Furthermore, their study focused on career satisfaction in the influence of self-efficacy on it. Their longitudinal study found that the graduates with high self-efficacy experienced more job satisfaction than graduates who reported lower self-efficacy.

Within the line of academic respondents Zimmerman (2000) conducted a literature review to determine whether self-efficacy may have an influence on a student's willingness to learn. The findings of the study indicated that students' self-efficacy beliefs will have a significant influence on the rate of performance and the energy invested. Furthermore, the past research indicate that a person's level of self-efficacy will provide them with the necessary motivation to utilise various self-regulatory processes, including goal-setting, monitoring and self-evaluation. The overall findings of the research suggest that a student's beliefs in their academic abilities will have a significant influence on their willingness to learn and the motivation to achieve. The latter is extremely important in the context of the work environment and what employers expect of graduates as employers seek individuals who are willing to learn on a continuous basis and believe in their ability to learn new skills, even if it falls outside their previous realm of experience.

In the context of graduateness and the quality of graduates delivered the concept of self-esteem is specifically important as a graduate's motivation to develop the required graduate attributes and therefore enhancing their graduateness will be influenced by the perceived ability to complete tasks successfully, achieve their career goals and experience career success.

3.5. Integration of the literature

3.5.1. Integrated model of graduateness

It is evident from the literature that there is still much speculation as to what constitutes graduateness and the elements it entails (Glover *et al.*, 2002). However, it possible to make certain inferences from the literature available:

a) graduateness may be influenced by the student's background and related factors

The underlying assumption in this statement is that students' graduateness is not merely influenced by their participation at a higher education institute but may also be influenced by factors prior to their entry into the higher education institution. These factors may include the type and quality of secondary education and the sociodemographic background of the individual.

b) graduateness is not a static concept but is ever-changing

This may be partly due to the fact that the world of work needs to change constantly and as a result the expectations from higher education institutions may also change. This in turn may lead to changes in what constitutes graduateness;

c) graduate attributes form an integral part of a student's graduateness

The literature on graduateness is clear that it should focus on the graduate attributes a student should possess in addition to their technical knowledge. Parker and Griesel (2009) has also highlighted that employers are no longer only satisfied with the technical knowledge students have, but also require them to possess the so-called generic or transferrable skills which will enable them to successfully move from a higher education institution into the workplace.

d) Graduateness is a three-way partnership between potential employers, students and higher education institutions

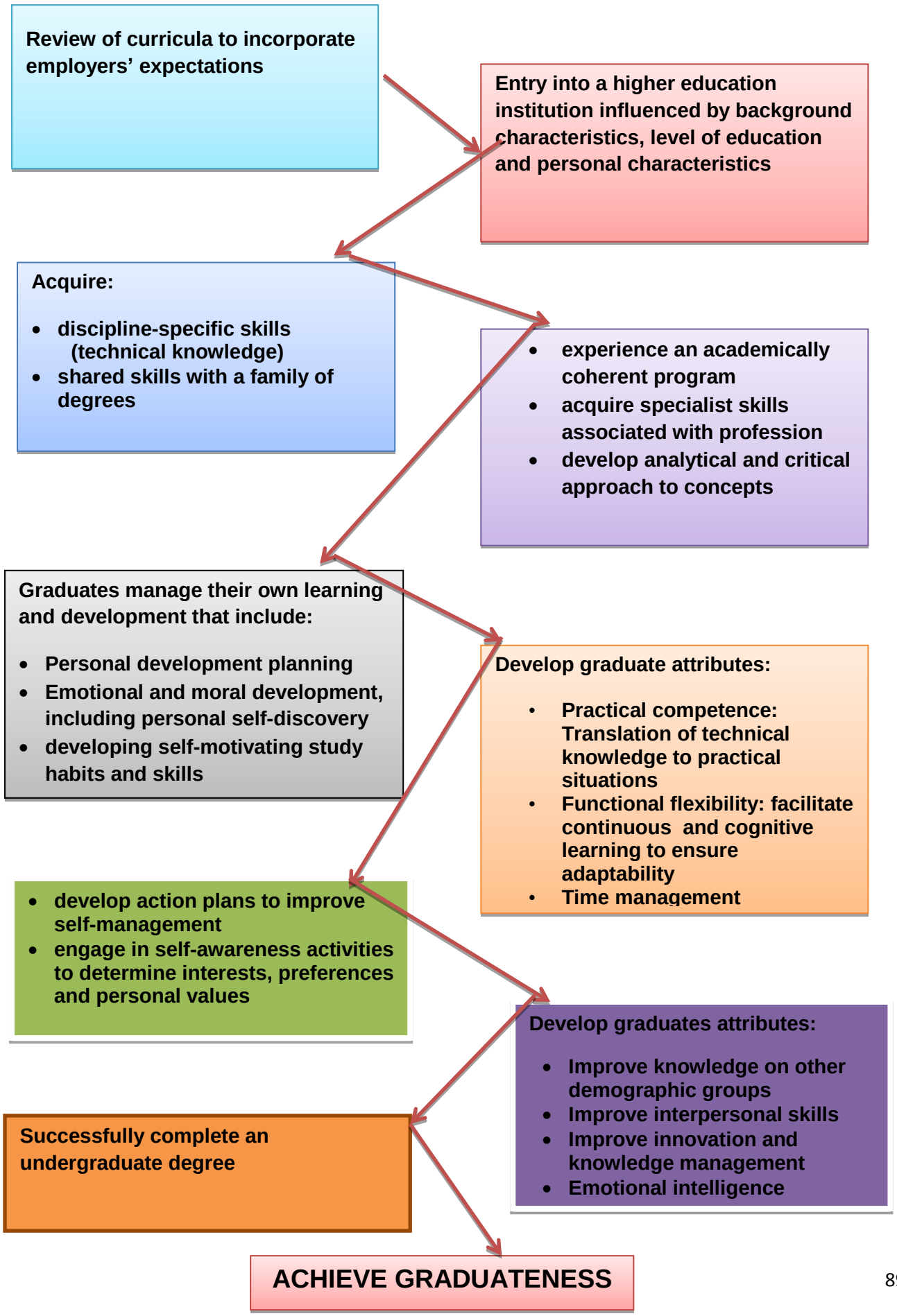
The notion no longer exist that universities have the sole responsibility for ensuring graduates are ready for the labour market. Students are also required to engage in meaningful self-management and personal development activities to enhance their graduateness. In addition, higher education institutions should tighten their connections with employers to ensure that they remain informed regarding the requirements of employers (Harvey *et al.*, 1997).

e) Graduatenes may be closely related to employability

Glover *et al.* (2002) made it quite clear that the difference between graduateness and employability remains unclear and further research needs to be conducted to further investigate and describe the differences between the two constructs.

As it is evident from figure 3.6 graduateness will occur due to an individual's exposure to and participation at a higher education institution. However, it will depend on the successful acquisition of disciplinary-specific skills as well as the graduate attributes listed and discussed in the literature review. Consequently, a student should also develop those skills identified by employers as critical for job performance and continuously evaluate themselves and identify changes to made and learning to be done. The model does not, however, make provision for a graduate to obtain and secure employment as the literature does not include employability in its graduateness discussions. In an attemtp to identify and explain the differences between graduateness and employabilityt the following sections will focus on employability and specifically graduate employability.

Figure 3.6: Integrated model of graduateness



3.5.2. Integrated model of graduate employability

Based on the models proposed by Bennet *et al.* (1999), Yorke and Knight (2004), Pool and Sewell (2007) and Bridgstock (2009) the following general inferences can be made regarding graduate employability:

a) Graduate employability will entail a strong focus on subject-knowledge and disciplinary skills.

As Harvey *et al*. (1997) emphasised in their study employers seek graduates for their degrees and assume that this will distinguish them from those individuals who did not undertake tertiary studies. Hussain's (2007) study findings indicated that employers mainly employ graduates for their level and amount of subject-knowledge they have acquired and the ability to use this subject-understanding to contribute to the workplace and display practical competence (Yorke & Harvey, 2005).

b) Graduate employability includes the successful acquisition and display of the so-called graduate attributes and generic skills employers seek

As Treleavan and Voola (2008:10) emphasise the generic skills required by employers may become even more important than the subject-knowledge of graduates. Pukelis and Pileicikien (2010:113) and Pool and Sewell (2007:282) agree and explain that employers often value graduates for their ability to display these generic skills as they have learned to do so through their studies at a higher education institution. Consequently, employers assume graduates have required these attributes and include, but are not limited to:

- Information and computer literacy;
- independent problem-solving and decision-making abilities;
- time and task management;
- cross-cultural competence and the related international orientation and interpersonal skills;
- sound interpersonal skills to be used in teamwork or to manage others;
- entrepreneurial orientation;
- openness and adaptability to change; and
- willingness to learn and improve oneself in all aspects related to work

c) Graduate employability models will incorporate the career- and self-management skills of the individual

Hillage and Pollard (1998), Fugate, Kinicki and Ashford (2004), Pool and Sewell (2007) as well as Bridgstock (2009) argue that any discussions around graduate employability should focus on the career-building and self-management skills of the individual as it may influence the extent and period during which the subject-knowledge and generic skills are developed and utilised. The authors propose the following activities to be included in a person's career- and self-management initiatives, namely:

- self-awareness regarding one's interests, preferences, strengths, weaknesses and competencies;
- awareness of opportunities, including opportunities in the labour market, related requirements, familiarity with the recruitment process, the ability to use networks which may lead to job opportunities;
- development of career action plans which include the improvement and incorporation of the afore-mentioned factors, meaningful goal-setting, a continuous learning orientation; and
- identification of potential barriers to employment and skills and attributes needed to overcome these obstacles.

The psychological career resources model proposed by Coetzee (2007) also highlight that people will certain career-related metacognitions which may influence behaviours related to their job seeking endeavours, with specific reference to career preferences and career values.

d) Graduate employability will include opportunities for reflection and evaluation activities

As noted by Yorke and Knight (2004) and Pool and Sewell (2007) graduates should be able to reflect on and evaluate their career development activities as they need to be able to situate themselves in terms of their careers and their potential position in the labour market. Consequently, graduates should engage in personal development activities where they will reflect on tasks completed, the lessons learned and improvements that can be made.

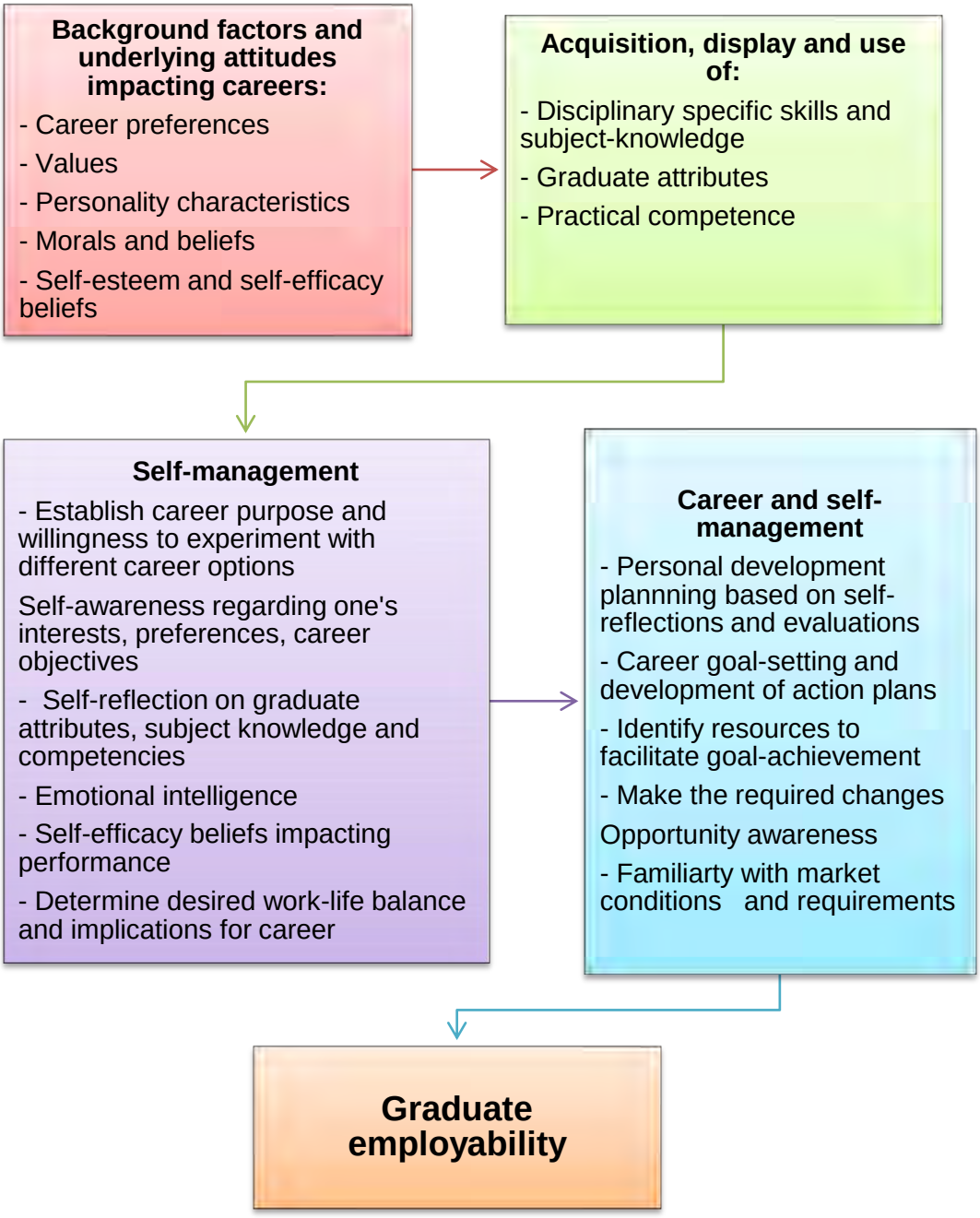
e) Self-esteem/self-efficacy and emotional intelligence will form a vital component of graduate employability

Identified by Yorke and Knight (2004), Pool and Sewell (2007), Coetzee (2007) and Bridgstock (2009) are the importance of self-efficacy and self-esteem in a graduate employability model. Graduates should believe in their ability to successfully use their abilities to take specific action aimed at managing situations and may influence how they feel and work. In addition, if students have higher levels of self-efficacy they may be able to engage in meaningful goal-setting activities and will enable them to learn from mistakes and willingness to learn from these experiences.

Pool and Sewell (2007) and Coetzee (2008) emphasise that graduates' ability to use their own and others' emotions constructively may influence their employability. McQuaid and Lindsay (2005) and Goleman (1998:2) agree and all the authors argue that graduates should display their ability to reason about emotions and use it efficiently as it may also influence their ability to reflect on experiences and the related emotions and how it may impact intellectual growth In addition, employers will expect graduates to be able to handle one's own and other people's emotions well. Emotional intelligence may therefore impact all other areas included in the graduate employability model.

Figure 3.7 serves as an integrated graduate employability model based on the work of Yorke and Knight (2004), Pool and Sewell (2007), Coetzee (2007) and Bridgstock (2009).

Figure 3.7: Integrated graduate employability model



3.5.3. Graduateness and employability

As Glover *et al.* (2002) note the differences between graduateness and employability remains a grey area and further research will need to be conducted to identify and describe these differences. Based on the literature review the following similarities have been found:

a) both concepts focus on the acquisition of discipline-specific skills, understanding and competencies. Graduateness and graduate employability may therefore both expect graduates to acquire skills related to their specific field of study;
b) graduateness and graduate employability both assume that a graduate will acquire and develop the so-called graduate attributes described in the literature;
c) both concepts will require individuals to engage in personal development activities aimed at managing their career.

Although these similarities exist the following differences have been identified:

a) graduateness is achieved within the academic context where the individual is expected to participate in activities related to a specific degree and is exposed to an academically-coherent program whereas graduate employability may be lifelong and may also be developed through vocational training and in the marketplace or employment context;
b) graduate employability may focus on how the individual, who have completed their tertiary studies, will enter the labour market and the skills and competencies needed to do so. Graduateness, on the other hand, may focus on merely describing the level of skills, knowledge and competencies a person should develop as a result of participating at a higher education institution. It may not address the specific attributes required to enter the workplace successfully.

In summary, graduateness will involve acquiring discipline-specific skills and competencies in the context of a tertiary institution and will involve developing those attributes identified by educators and employers that will facilitate the graduates' development and successful completion of a degree. The latter will in turn enable the individuals to make a meaningful contribution to society whilst also continuously developing them. However, the achievement of graduateness may be influenced by an individual's background, preferences and attitude towards knowledge.

Employability, on the other, hand may focus on the acquisition of specific skills that will enable the graduate to enter the workplace successfully. These skills may however change as the workplace change and may therefore not only be confined to the academic context,

but also be relevant beyond a graduate's time at a higher education institution. Consequently, these skills may need to be developed within a practical context where the individual has the opportunity to develop and display these skills in a work environment. However, a graduate may be expected to first achieve graduateness before he or she may become employable. Consequently, the inference may be made that before a student is employable they may first need to achieve graduateness and more specifically obtain a degree and develop the skills agreed upon by employers and higher education institutions. Therefore, there may be specific skills that a person will need to develop during their stay at a higher education institution that will facilitate the development of those skills needed to enter the workplace. Employability may therefore become an outcome of a person's graduateness.

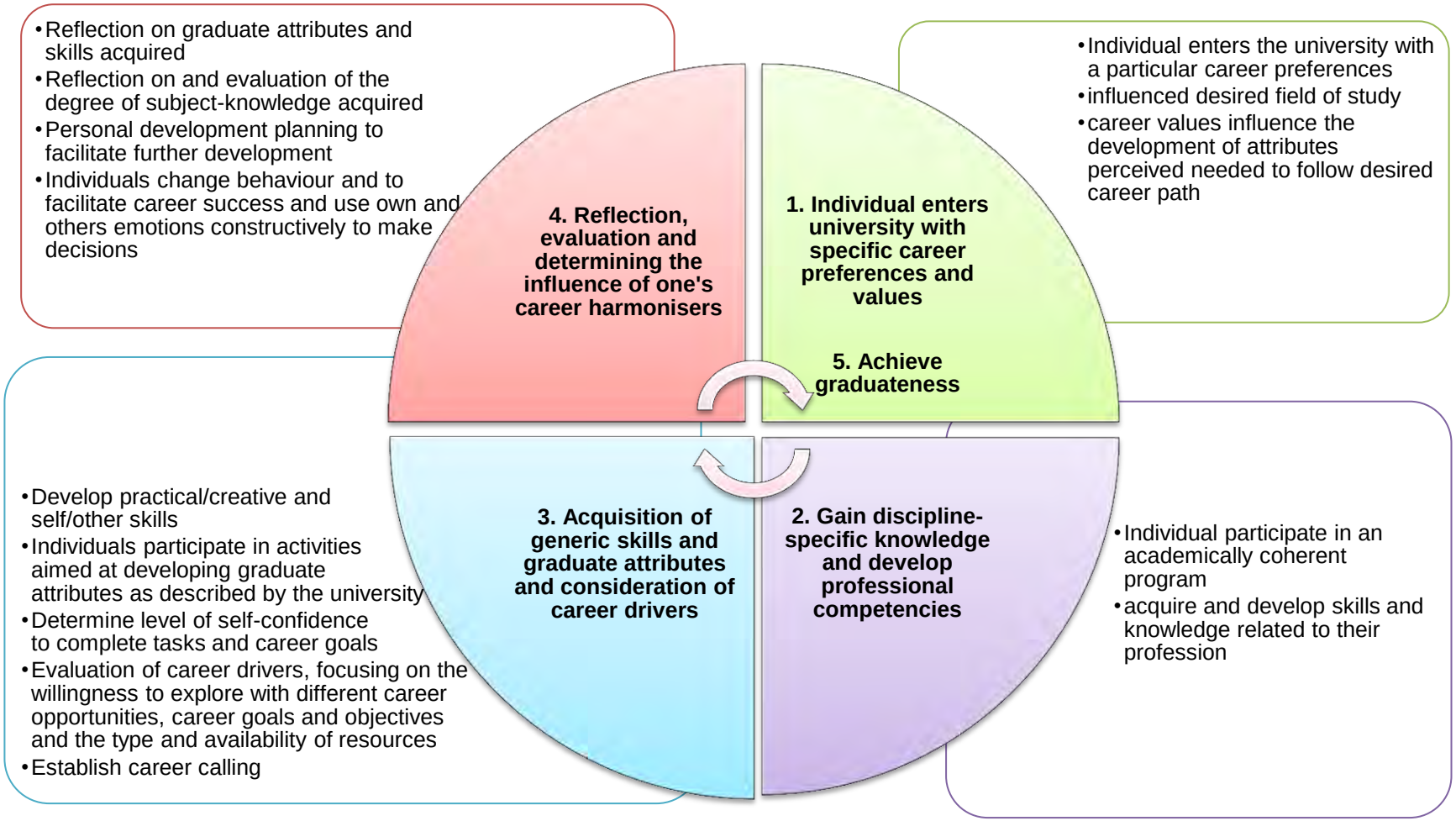
Graduateness may therefore be influenced by a person's background, preferences, motives and other factors. In this context of the psychological career resources model of Coetzee (2007) may become particular relevant as the model suggests that a person's proactive career behaviours may be influenced by certain career-related meta-cognitions and beliefs.

If it is therefore suggested that a person's meta-cognitions, beliefs and backgrounds may influence the development of a person's graduateness; their psychological career resources may become particularly significant.

Figure 3.8 has been compiled to illustrate the potential relationship between a person's psychological career resources and graduateness. Hussain (2007:5) emphasise the need to consider a student's background and the influence thereof on a student's studies. Similarly, Coetzee (2008) suggest that a person may have a specific career preference which may influence their preference for a particular field of study. In addition, one needs to consider the desired career path an individual wish to follow. The latter may significantly influence the skills a student desire to develop during their studies which they believe will enable them to follow the desired career path and related career preference.

Coetzee (2007) also makes provision for the development of those skills which may influence a person's success in a career, namely practical/creative and self/other skills. Discussions around graduateness also focus on the generic/transferrable/key skills an individual will need to develop during their time at a higher education institution which may enable them to become employable.

Figure 3.8: Proposed relationship between graduateness and psychological career resources



Based on figure 3.8 one may make the following inferences:

a) a person's preference to follow a specific career and the expected path their career should take may influence the perception he or she has about the specific skills needed to accomplish such a career;
b) these preferences may influence the specific field of study a person decides on and how much effort they put in to master their subject area;
c) a person's willingness to develop the specific skills required by employers may be influenced by their perceived abilities to complete tasks aimed at developing these skills and consequently self-esteem may influence a student's graduateness;
d) students may consider the personal meaning they will derive from work and may need to change their behaviour to accomplish the former which may in turn influence the skills they wish to develop if they want to achieve psychological success;
e) students may at some point be forced to consider their career goals and objectives and where they will find the resources to achieve these goals. If they develop new goals and objectives and identify different courses of actions or skills needed to achieve these objectives they may start to rethink their current skills development and subject area and consequently their graduateness;
f) if students start to reflect on their career goals and need to reconsider it they may be forced to use their emotions constructively to make career decisions and may need to use personal relationships to facilitate these changes which may impact the need to develop specific skills and competencies;

These inferences highlight the importance of a potential relationship between a student's psychological career resources and graduateness. It may be that students' tendency to develop certain skills and competencies may be dependent on their psychological career resources. This potential relationship may provide universities with a new approach to graduateness and the achievement thereof. In the context of this study it may imply that if universities wish to develop its student leaders it may need to first determine the group's psychological career resources and how it may impact their skills development activities. The focus of this study will therefore attempt to describe student leaders' psychological career resources and graduateness perceptions and whether a relationship exists between these two concepts.

3.6. Chapter summary

The main aim of the chapter was to conceptualise the concept of graduateness from a theoretical perspective. The focus was on defining the concept and the elements it consist of.

It was determined that graduateness is developed within a specific academic context and may be influenced by the perceptions of students, educators and employers. In addition, it was concluded that a graduate will not be expected to only possess a degree, but will also need to develop and acquire certain generic skills or graduate attributes as a result of their stay at a higher education institution.

The latter, however, shifted the focus to graduate employability and the elements it entertains. Various graduate employability models were discussed, including those proposed by Yorke and Knight (2004), Pool and Sewell (2007) and Bridgstock (2009). These models provided the basis for the discussion of the Psychological Career Resources model proposed by Coetzee (2007). These discussions emphasised the need to consider the underlying traits, beliefs and motives that may influence a person's graduateness.

CHAPTER 4: RESEARCH METHODOLOGY

4.1. Introduction

The purpose of this chapter is to describe the research methodology used in the study, including a description of the population and the sample. This chapter will also describe data collection instruments, the rationale for the use thereof, as well as their dimensions, validity, reliability and interpretation. Research hypotheses will be formulated regarding the relationship between graduateness and psychological career resources and will be tested with the use of both descriptive and inferential statistics. This chapter will serve to describe the statistical strategies utilized to investigate the potential relationship between psychological career resources and graduateness.

4.2. Description of inquiry strategy and broad research design

4.2.1. Description of the study's strategy of inquiry

The strategy of inquiry for the study is quantitative research, more specifically, descriptive, quantitative research. Since the purpose of this study is to describe student leaders' psychological career resources and graduateness and to determine whether a relationship exists between these two constructs, a quantitative research design will be appropriate as it focuses on the characteristics of the group in terms of the two constructs and exploring possible correlations among these two constructs (Leedy & Ormrod, 2005:179). To accomplish the latter statistical methods and analyses can be used to describe research findings and draw conclusions.

4.2.2. Survey research as a type of quantitative research

The main purpose of survey research, according to Maree (2007:155), is to collect information about a sample's values, demographics, views and attitudes and to determine and interpret what *is*. In addition, survey research will provide information regarding the status of the relevant phenomena, identify changes and make certain inferences. With specific reference to this study survey research can be used to obtain information about the group's psychological career resources and graduateness perceptions, in other words their specific opinions and attitudes related to these two constructs.

The most convenient manner in which to obtain this information will be through the use of a questionnaire. The respondents were asked to complete the two questionnaires related to psychological career resources and graduateness. When a researcher conducts a survey, he

or she will ask the volunteer respondents a range of questions. Statistical analyses will then be used to summarize the respondents' answers and also to draw conclusions on the answers given.

4.2.2.1. Advantages of survey research

The following can serve as advantages of conducting survey research (Maree, 2007:157):

- the method can be applied to a great number of people in a short space of time;
- it is relatively cheap and easy to do;
- questionnaires can be completed at a time convenient for the respondents; and
- it can be a useful method for discovering new insight.

In the context of this study survey research will be an advantage as respondents were allowed to complete the questionnaire in their own time which leads to a better response rate. The two questionnaires may also provide new information pertaining to student leaders' attitudes and opinions.

4.2.2.2. Disadvantages of survey research

Although this type of research contains quite a few benefits, it does have some disadvantages. Maree (2007:157) lists the following as possible disadvantages of survey research:

- conditions of questionnaire completion cannot be controlled;
- no one can assist with problems the respondent may experience;
- some of the questions may be viewed by the participant as less important or appropriate and consequently valuable information may be lost;
- a questionnaire may not be as effective in obtaining and explaining complex information;
- the participants may find it difficult to effectively answer the questions in their own words;
- the researcher will obtain information on what a person believes about a specific aspect and not necessarily what the actual state of matters is; and
- people may provide misleading information and present information in a misleading manner.

Unfortunately, information obtained through questionnaires may be pure perceptions and not necessarily the state of matters. The participants in the study may therefore over or underrepresent themselves or provide the researcher with misleading information pertaining to their psychological career resources and graduateness. To address these potential disadvantages the researcher explained the purpose of the study to the participants as well as the potential benefits of the study.

4.3. Determination and description of the sample

This section will explain the specific population to be studied and the consequent sample to be studied from that population. It will pay special attention to the methods through which the sample will be selected, the size of the sample and the justification thereof.

4.3.1. Population under study

The population of a study refers to the "complete set of cases or group members" (Saunders *et al.,* 2007:606). With regards to this specific study the population will be situated in a South African context with specific reference to student leaders at a higher education institution. These leaders include:

a) Student Representative Council (SRC) members of the university

The SRC members are the leaders of the university students and are also involved in a number of community work projects. These individuals may therefore be more aware of the requirements of the world of work and may have also been exposed to situations where they are required to utilise and display some of the skills discussed in the literature review.

b) Students in Free Enterprise (SIFE) members selected based on predetermined criteria

These students are selected based on their academic performance and recommendation from their departments where the personnel believe that they show leadership potential. SIFE is a worldwide enterprise and focus on the development of students and their leadership and overall potential. Their members have the opportunity to participate in various community projects with corporate companies. Through this they have the opportunity to be exposed to the work environment.

c) Mentors for 1st year students, on both an academic and emotional level;

The size of this population is rather small as the members are selected according to predetermined criteria and due to the fact that only a specific number of positions are available.

4.3.2. Sampling design

According to Saunders, Lewis and Thornhill (2007:610), a sample refers to the "subgroup or part of a larger population". A variety of sampling designs exist, but a purposive sampling design has been used for the design of the sample. According to Maree (2007:178), a purposive sampling design is used "in special situations where the sampling is done with a specific purpose in mind." In the context of this study the focus will be on student leaders and therefore only individuals who are representative of this group should participate. The focus was on determining the psychological career resources and graduateness perceptions of student leaders and not merely any student.

To obtain a sample for the study students belonging to the three leadership groups have been invited to participate in the study. The researcher addressed the students in one of their contact sessions whereby the purpose of the study was explained. Questionnaires were made available thereafter where individuals had the opportunity to complete the questionnaires if they wished to do so.

4.3.3. Size of the sample

A total of 115 questionnaires were distributed and 96 received. 94 questionnaires could be used for the study and therefore yielded a response rate of 82%. The 94 questionnaires represent student leaders at a university.

4.3.4. Biographical distribution of sample

4.3.4.1. Frequency distribution tables for biographical variables

The purpose of a frequency distribution will be used to categorize categorical data, including biographical. Tables 4.1 to 4.8 reports on the biographical profile the sample, namely cultural group, gender, age, field of study, level of qualification and employment status. It was decided to report on these categories as it may enable the researcher to make certain inferences from the data.

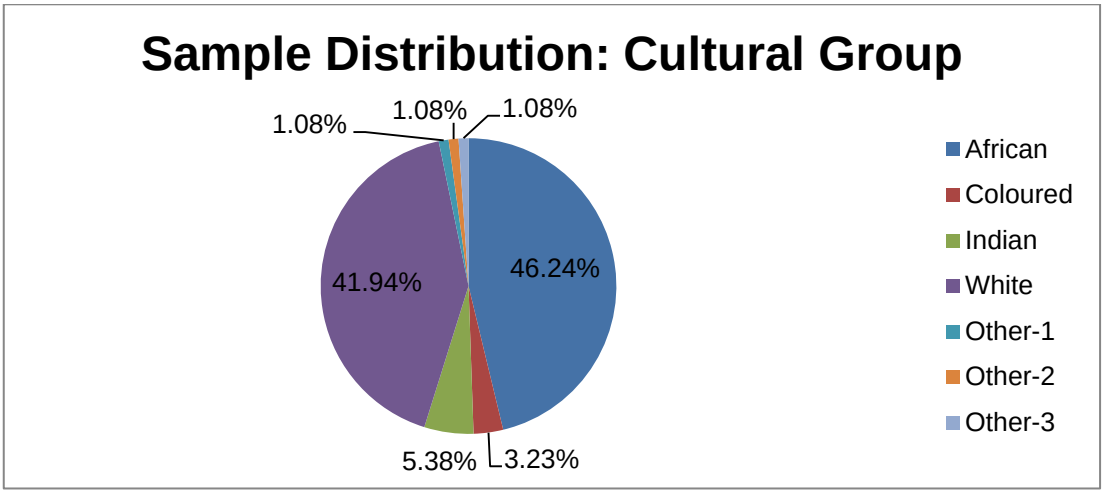
Table 4.1: Frequency distribution: Cultural group

CULTURAL GROUP				
		Frequency	**Percent**	**Cumulative Percent**
Valid	**African**	43	46.24	46.24
	Coloured	3	3.23	49.46
	Indian	5	5.38	54.84
	White	39	41.94	96.77

	Other – 1	1	1.08	97.85
	Other – 2	1	1.08	98.92
	Other – 3	1	1.08	100.00
Missing	**System**	1		
	Total	94		

According to table 3.1, the sample consisted of 46.24% African subjects, 3.23% Coloured subjects, 5.38% Indians subjects, and 41.94% white subjects. Figure 4.1 provides a graphical representation of the sample distribution by cultural group.

Figure 4.1: Sample distribution: Cultural group



Due to the small percentage of Indian, Coloured and subjects from another race it was decided to make provision for only two groups, namely white and non-white respondents. The non-white group included the Indian, Coloured and other race groups. These representations are displayed in table 4.2 and figure 4.2. The groups are almost evenly distributed and consequently the study findings may be applicable to both groups.

Table 4.2: Frequency distribution: Cultural group combined

CULTURAL GROUP COMBINED				
		Frequency	**Percent**	**Cumulative Percent**
Valid	**Non-white**	54	53.26	53.26
	White	39	46.74	100.00
Missing	**System**	1		
	Total	94		

Figure 4.2: Sample distribution: Cultural group combined

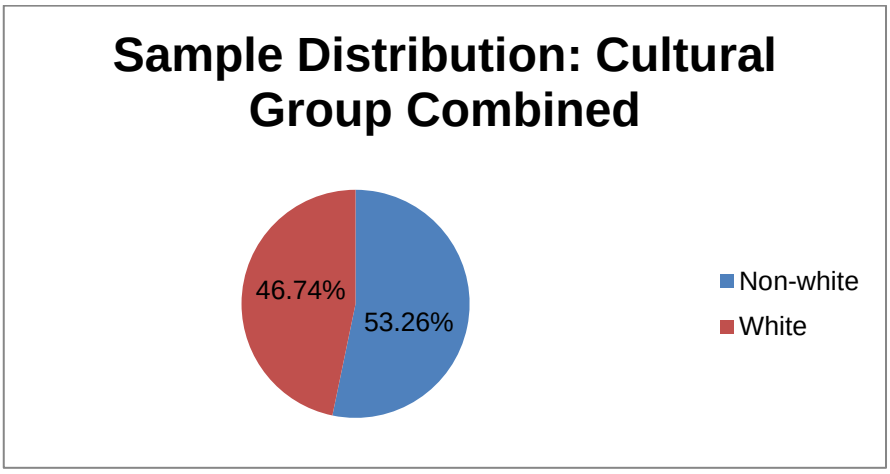


Table 4.3: Frequency distribution: Gender

GENDER				
		Frequency	**Percent**	**Cumulative Percent**
Valid	**Male**	34	36.17	36.17
	Female	60	63.83	100.00
	Total	94		

According to table 4.3 the sample consists of 36.17% male subjects and 63.83% female subjects. Figure 4.3 provides a graphical representation for the sample distribution by gender.

The sample predominantly consisted of female respondents which indicate that the findings of the study may only be applicable to this particular gender group.

Figure 4.3: Sample distribution: Gender

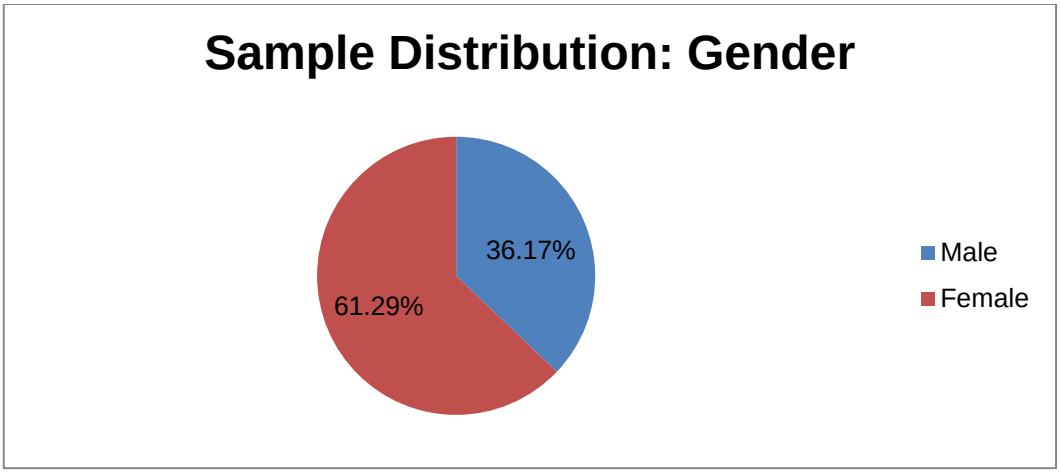


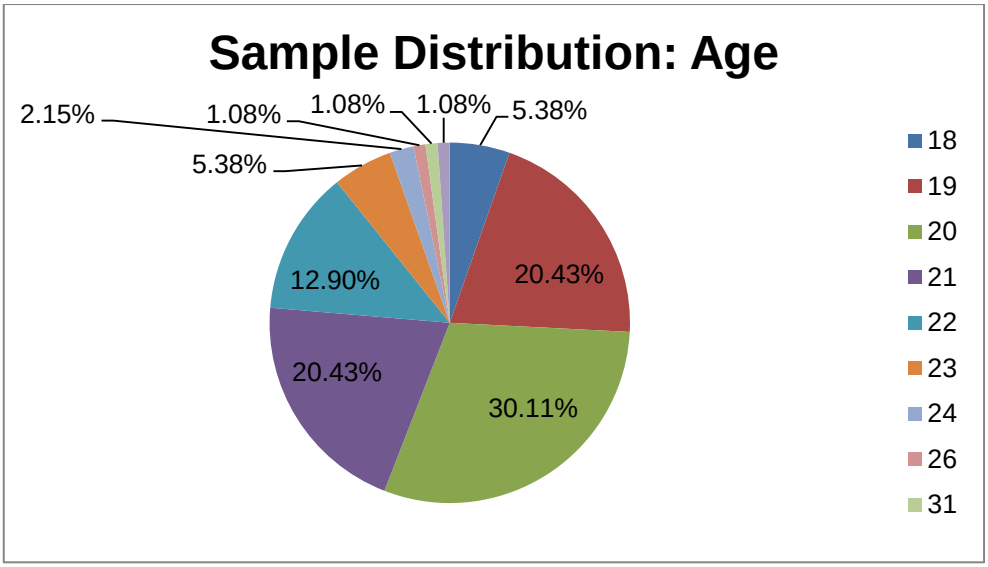
Table 4.4: Frequency distribution: Age

AGE				
		Frequency	**Percent**	**Cumulative percent**
Valid	**18**	5	5.32	5.32
	19	19	20.21	25.53
	20	30	31.91	57.45
	21	19	20.21	77.66
	22	12	12.77	90.43
	23	4	4.26	94.68
	24	1	1.06	95.74
	26	1	1.06	96.81
	31	2	2.13	98.94
	34	1	1.06	100.00
	Total			

Table 4.4 indicates that the sample consists of 5.32% subjects aged 18 years, 20.21% 19 years, 31.91% 20 years, 20.21% 21 years, 12.77% 22 years old and the remaining 9.57% between the ages of 23 and 34 years old.

A graphical representation of the sample distribution by age is displayed in figure 4.4.

Figure 4.4: Sample distribution: Age



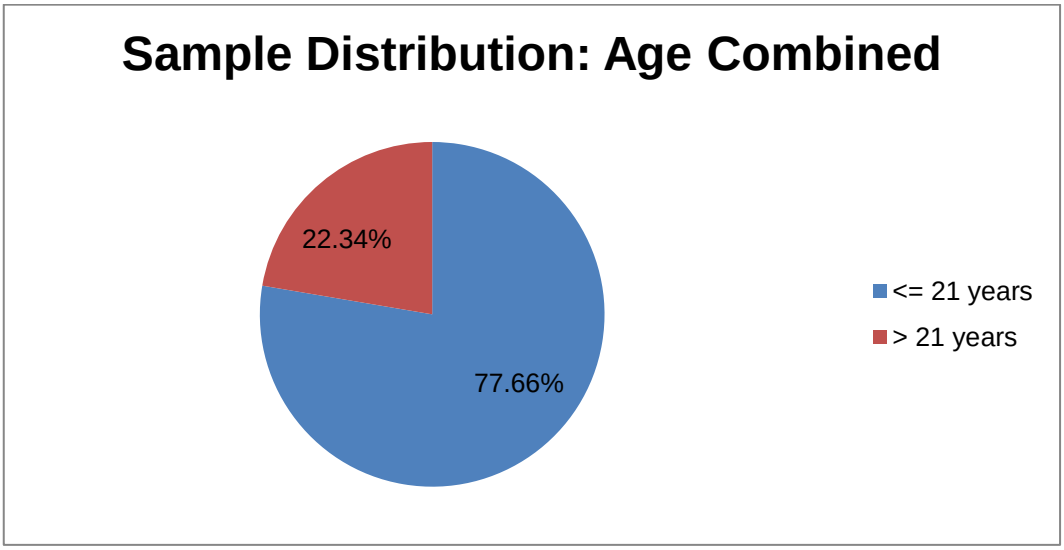
Due to the underrepresentation of some of the ages it was decided, for the purpose of the study, to divide the sample into two groups, namely those subjects equal to or under the age of 21 years and subjects older than 21 years.

Table 4.5: Frequency distribution: Age combined

AGE				
		Frequency	**Percent**	**Cumulative percent**
Valid	**<= 21 years**	73	77.66	77.66
	> 21 years	21	22.34	100
	Total	93	100	100

Figure 4.5 provides a graphical representation of the age groups combined.

Figure 4.5: Sample distribution by age combined



According to table 4.5 the sample comprises 77.66% subjects under or equal 21 years of age and 22.34% of subjects older than 21 years.

The sample consisted greatly of subjects under the age of 21 years. Since most students will complete their undergraduate studies within three years the results are not surprising. Some of the students in the remaining sample may either still be busy with a four-year degree programme or be a postgraduate student. The study may thus only be applicable to students who are 21 years or younger.

Table 4.6: Frequency distribution: Field of study

FIELD OF STUDY				
		Frequency	**Percent**	**Cumulative Percent**
Valid	**B.Eng/BSC**	24	26.09	26.09
	Vet/Med/Occupational Therapy	6	6.52	32.61
	BA/B.Mus/B.Ed	35	38.04	70.65

	B.P.Sc/B.Soc.Sc/BCom/LLB	27	29.35	100
	Total	93	100	

According to table 4.6, the sample consists of B.Eng/BSC subjects, 6.52% Veterinary/Medicine/Occupational Therapy subjects, 38.04% BA/B.Mus/B.Ed subjects and 29.35% subjects in B.Pol/BCom/LLB study fields.

For statistical purposes some degree families were grouped together. The sample mainly consisted of BA/B.Education or BMusic students, namely 38.04% which indicate that the study may apply to students in this particular field of study. However, students from BCom, LLB, Political Science and Health Science were also quite representative (29% and 26% respectively) which may make the study applicable to students from these fields of study.

A graphical representation of the sample distribution in terms of level of qualification is displayed in figure 4.6.

Figure 4.6: Sample distribution: Field of Study

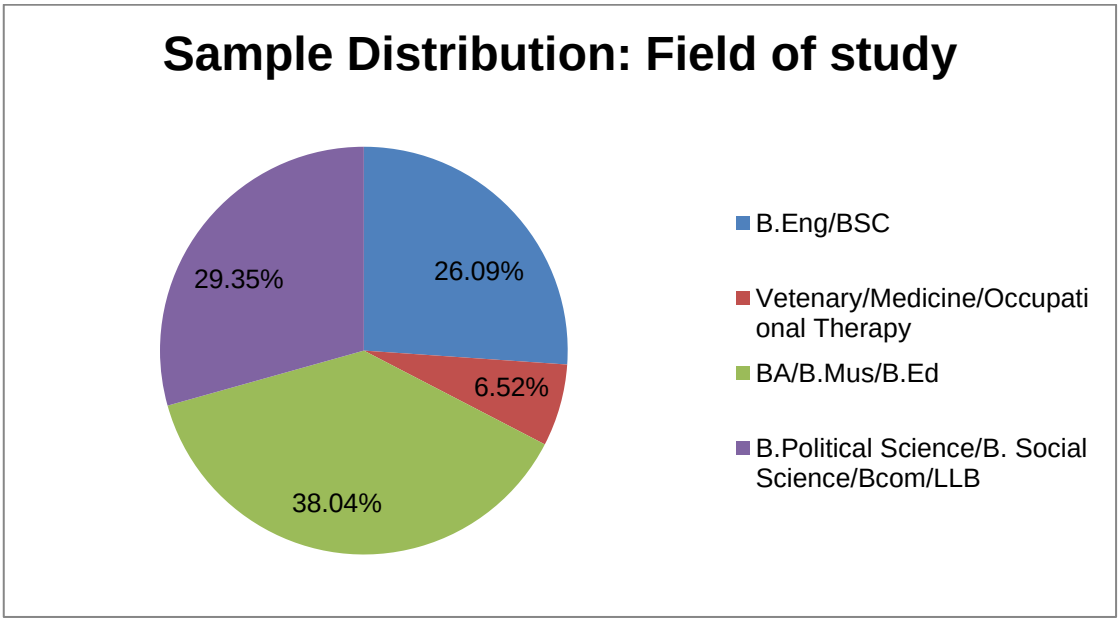


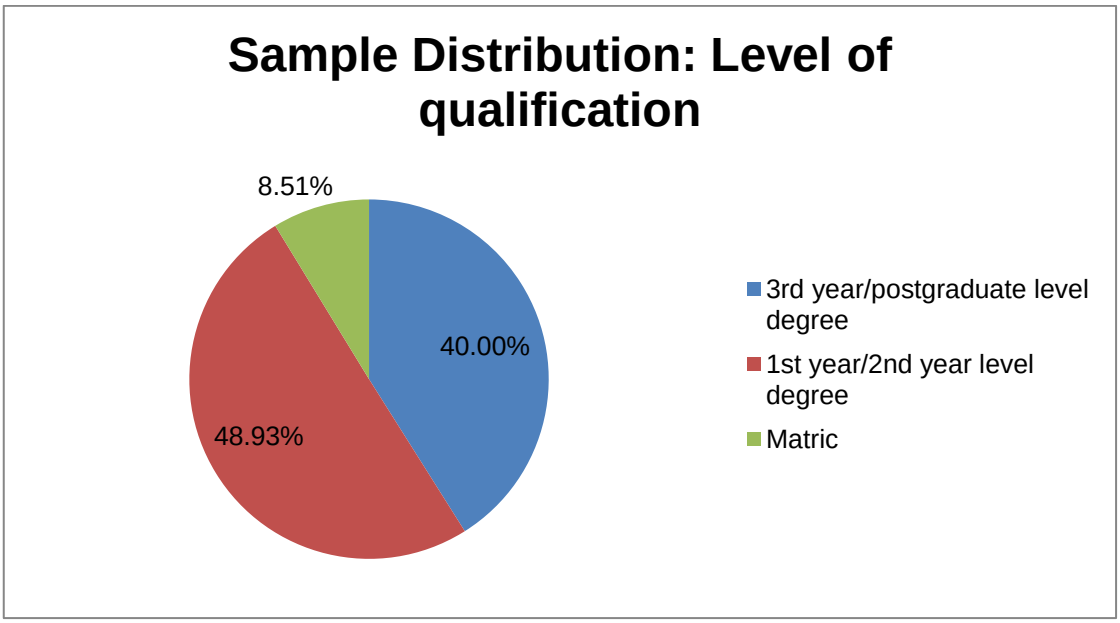
Table 4.7: Frequency distribution: Highest level of qualification

LEVEL OF QUALIFICATION				
		Frequency	**Percent**	**Cumulative Percent**
Valid	**3rd year/postgraduate**	40	40.00	42.55
	1st year/2nd year	46	48.93	91.49
	Matric	8	8.51	100
	Total	94	100	

The level of qualification for the purpose of this study was described as the level the participants have successfully completed. For example, if a student has successfully completed his first year of study he will be regarded as a 3rd year level student. A graphical representation of the sample is found in figure 4.7.

According to table 4.7, the sample comprises 40.00% subjects who have successfully completed their 3rd year of study or who are currently enrolled for a postgraduate degree, 48.93% who have completed their first or second year at the university, and 8.51% subjects with Matric as highest level of qualification.

Figure 4.7: Sample distribution: Level of qualification



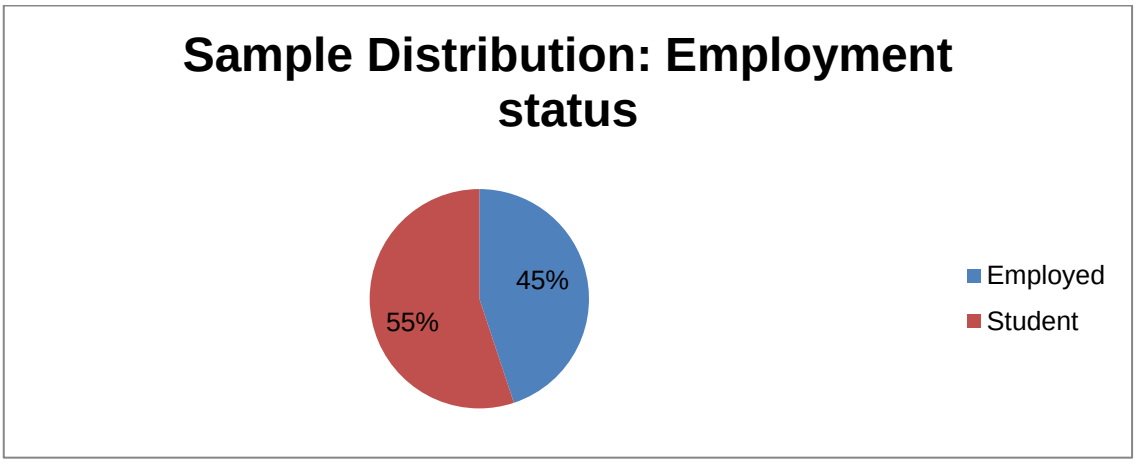
The sample consisted mainly of students who have completed either their first or second year. Some students may therefore be in their final year of undergraduate study and almost eligible for the labour market. The findings of the study may therefore be specifically applicable to individuals from this particular year group. In the context of this study these individuals may be of particular significance as they may need to enter the labour market in the next year or two and therefore need to be aware of the world of work and the requirements of the labour market.

Table 4.8: Frequency distribution: Employment status

EMPLOYMENT STATUS				
		Frequency	**Percent**	**Cumulative Percent**
Valid	**Employed**	42	44.68	44.68
	Student	52	55.32	100
	Total	94	100	

Figure 4.8 provides a graphical representation of the sample distribution by employment status.

Figure 4.8: Sample distribution: Employment status



The sample was quite evenly distributed in terms of the two groups namely students as only occupation and those subjects who are in some form of employment, whether being full-time part-time or self-employed. The latter group of individuals has therefore been exposed to some form of work or work environment. The results were almost evenly distributed indicating the applicability of the study findings to both groups.

4.4. Data collection

As described earlier in this section, questionnaires as a form of survey research were used to collect data. The questionnaires were self-administered and the questionnaires hand delivered and emailed to the group supervisor. The process for the data collection was as follow:

- a letter of invitation via email was sent to the student advisor and a presentation will be given to students;
- this was followed by a second email containing the actual questionnaires and an explanation of these questionnaires;
- questionnaires were hand-delivered to the student advisor for distribution to students;
- once this has been completed, another email was sent as a reminder of the due date of the questionnaires;
- the last email will serve as a feedback and thanking mechanism; and
- feedback in the form of a presentation and hand-outs will be given to participants with the option of individual feedback.

4.5. Measuring instruments

Two instruments were used to collect the data:

a) The Psychological Career Resources Inventory (PCRI), developed by Coetzee (2007) to identify and measure the psychological career resources; and
b) Graduateness Scale (GS), developed by Coetzee (2010) to measure the students' confidence to display skills and attributes constituting their graduateness.

These two instruments displayed the required relevance and applicability needed for the objectives of the study. The two instruments will be discussed in the subsequent sections.

4.5.1. The Psychological Career Resources Inventory (PCRI)

4.5.1.1. Rationale and purpose

This questionnaire was developed by Coetzee (2007). This questionnaire is a self-rated instrument and consists of 64 items containing five subscales. A six-point Likert-scale is used to ensure that no neutral answers can be given.

4.5.1.2. Dimensions of the PCRI

The questionnaire measures 15 constructs in total (Coetzee, 2007) of which each will be discussed.

1. **Career preference (17 items)**

This dimension measures a person's views about his or her career path which enables them to make specific career choices and serve as guidance for future career moves and decisions. Career preferences can be either of a managerial, variety/creativity, freedom/autonomy or stability/expertise nature.

2. **Career values (8 items)**

The career values construct measures the individual's motivation for having a particular career preference. The two groups of career values are growth/development and authority/influence.

3. **Career enablers (8 items)**

Career enablers measure a person's transferrable skills that will enable them to be successful in a chosen career. These enablers consist of practical, creative, self and other skills.

4. **Career drivers (10 items)**

This dimension measures a person's attitude that will motivate them to experiment with different career and employment possibilities. It also includes the individual's sense about his or her future career goals, as well as the location of resources needed to achieve these goals. Career drivers consist of career directedness, career venturing and career calling.

5. **Career harmonisers (21 items)**

This construct measures an individual's psychological attributes that will keep his or her career drivers in control, keep them flexible and prevents burnout. It includes four attributes, namely self-esteem, behavioural adaptability, emotional literacy and social connectivity. An individual's self-esteem, emotional literacy and social connectivity will promote their behavioural adaptability and increase the level of self-confidence to successfully complete the relevant task.

4.5.1.3. Interpretation

A six-point Likert-type scale is used for subject's responses to each of the PCRI items (Coetzee, 2007). The ratings are described as follows:
1 = never
2 = rarely
3 = sometimes
4 = often
5 = almost always
6 = always
To avoid any neutral answer Coetzee (2007) decided to use the six-point Likert scale. The psychological career resources model developed by Coetzee (2007) will serve as the basis for relating the supposed agreements of statements.

4.5.1.4. Administration

The PCRI is a self-rated questionnaire which can be administered individually or in groups. There is no time limit on the questionnaire; however, most individuals take approximately 15

to 20 minutes to complete the questionnaire. The items of the various constructs were given in the form of statements and accompanied by the rating scales for rating the statements. Clear instructions were given at the beginning of the questionnaire. Supervision is not necessary as the questionnaire is self-explanatory.

4.5.1.5. Reliability and Validity of the PCRI

Coetzee (2008:13) states that an Exploratory Factor Analysis revealed that the instrument satisfied the "psychometric criteria of both convergent and discriminant validity." The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett test of sphericity confirmed the reliability results (Coetzee, 2008). The KMO measures fall between 0.79 and 0.92 which are regarded as great results (Field, 2005:640). The Cronbach-Alpha is between 0.71 and 0.88. This statistics are displayed in table 4.9.

Table 4.9: Cronbach's Alpha - PCRI

PCRI scale	**Cronbach's Alpha**
Career Preferences	**Value**
Stability / Expertise	0.73
Managerial	0.75
Variety / Creativity	0.70
Freedom / Autonomy	0.62
Career Values	
Growth / Development	0.74
Authority / Influence	0.61
Career Enablers	
Practical / Creative skills	0.68
Self / Other skills	0.63
Career Drivers	
Career purpose	0.66
Career directedness	0.63
Career venturing	0.70
Career Harmonisers	
Self-esteem	0.77
Behavioural Adaptability	0.73
Emotional literacy	0.70
Social Connectivity	0.67

Source: Coetzee (2008:13)

4.5.1.6. Motivation for choice

One of the aims of this study was to determine the psychological career resources of student leaders. The PCRI developed in a South African context is relevant as it measures the construct psychological career resources. The PCRI would also enable the researcher to investigate the relationship and trends between variables and was thus relevant for this study.

4.5.2. Graduateness Scale (GS)

4.5.2.1. Rationale and purpose

According to Coetzee (2010), the purpose of the GS is to assess eight facets of an individual's graduateness skills and attributes. The instrument is viewed as a self-rating measure and consists of multiple factors and 64 items in total.

4.5.2.2. Dimensions of the Graduateness Scale

The GS consists of 64 items and measures eight dimensions of graduateness, namely 1) interactive skills, 2) problem-solving skills, 3) life-long learning orientation, 4) enterprising skills, 5) skills in presenting and applying information, 6) goal-directed behaviour, 7) ethical and responsible behaviour; and analytical thinking. Herewith a detailed description of each of the eight subscales.

1. **Interactive skills (16 items)**

The aim of this dimension is to measure the confidence a student has in the ability to use language and technology effectively, as well as the ability to interact with people from diverse cultures, backgrounds and authority levels. It includes factors like communication skills, influencing skills and networking skills.

2. **Problem solving and decision making skills (8 items)**

This dimension is the view of the student regarding their ability to producing creative solutions to problems and taking a proactive approach to problem-solving and decision-making.

3. **Continuous learning orientation (7 items)**

This dimension measures the student's openness toward and engagement in continuous learning throughout their lives and careers.

4. **Enterprising skills (9 items)**

This dimension measures the student's confidence in their ability to take a pro-active approach and apply critical reasoning when partaking in economic activities.

5. **Presenting and applying information (5 items)**

This construct measures the individual's ability to communicate information in such a manner that it may lead to creative problem-solving that will be of personal or other benefit.

6. **Goal-directed behaviour (10 items)**

This dimension measures the individual's confidence to engage in proactive activities aimed at achieving goals and meeting deadlines.

7. **Ethical and responsible behaviour (5 items)**

The purpose of this dimension is to measure the willingness of the individual to take responsibility for decisions related to the moral and ethical guidelines of the community, workplace or profession.

8. **Analytical thinking skills (4 items)**

This dimension measures the skilfulness of the individual in employing logical and critical reasoning for the purpose of explaining data and making inferences from those data.

4.5.2.3. Interpretation

In the GS respondents are presented with a series of statements related to each of the eight dimensions. They are expected to rate their answers using a six-point Likert type scale. The higher the ratings the more true the statement is for the respondent. The ratings are defined as follow:

1 = never
2 = rarely
3 = sometimes
4 = often
5 = almost always

6 = always

4.5.2.4. Administration

The GS is a self-rated questionnaire which can be administered individually or in groups and takes approximately 15 to 20 minutes to answer, although there is no time limit (Coetzee & Esterhuizen, 2010:2). The items of the various constructs were given in the form of statements and accompanied by the rating scales for rating the statements. Clear instructions were given at the beginning of the questionnaire. Supervision is not necessary as the questionnaire is self-explanatory.

4.5.2.5. Reliability and validity of the GS

Table 4.10: Cronbach's Alpha - GS

Graduateness Scale	Cronbach's Alpha
Interactive skills	0.92
Problem-solving	0.86
Continuous learning orientation	0.87
Enterprising skills	0.86
Presenting and applying information	0.78
Goal directed behaviour	0.87
Ethical / Responsible behaviour	0.75
Analytic thinking	0.85

Source: Coetzee (2010)

4.5.2.6. Motivation for choice

The GS was developed after an extensive literature review was conducted to determine the requirements of employers. The aim is to measure students' confidence in their ability to demonstrate the skills and attributes that are associated with their graduateness. Multiple regression analyses revealed that the SGS has predictive validity in terms of students' self-perceived employability, optimism about future career prospects, and job satisfaction (Coetzee & Esterhuizen, 2010:3).

One of the aims of this study was to determine the graduateness of current student leaders. Since the GS measures students' confidence related to their graduateness it will provide these students with valuable information regarding their proposed strengths and weaknesses

and what can be done to improve it. The psychometric properties of the SGS also make the questionnaire a valid and reliable measure of the skills required by employers and whether graduates possess these skills.

In summary, the inclusion of the GS will provide student leaders and employers with valuable information regarding construct of graduateness and how graduates and potential employees rate their graduates and in essence their employability skills.

4.6. Reliability and validity of the study

Robson (2002), in Saunders, Lewis and Thornhill, (2007), describes the following four threats to reliability:

a) Subject or participant error

When a questionnaire is distributed to a person during different points of time it may consequently produce different results. A consideration that is particularly related here is the fact that the research study deals with people with real feelings and real experiences. Reliability may be threatened due to a person experiencing different emotions at different times in his/her life.

It may happen that a student has just received negative feedback about an assignment which may influence his or her view about a specific skill. This might then influence the way the individual answers a specific question.

b) Measurement bias

A main aspect that can cause measurement bias is when there is a change in the method through which data is collected. This can be eliminated by ensuring that the same person collects the data and the same process is followed in data collection, for example, using only postal questionnaires. In the context of this study the researcher will be responsible for the collection of questionnaires and questionnaires will only be collected by hand and not through email or post,

Furthermore, the reliability of the study has been addressed in the following ways:

a) the access the researcher has to literature sources and current and past mainstream ideas and concepts increase the reliability of the literature review;
b) a truly representative sample was selected; and
c) only data collection instruments' whose reliability have been confirmed have been used.

Saunders, Lewis and Thornhill (2007) describe validity as being concerned with "whether the findings are really about what they appear to be about." Robson (2002) cautions that certain factors may threaten a study's validity. In the context of this study the possibility always exists that some participants may choose to quit the study. This can be minimised by making participants aware of the possible benefits to be gained through participation.

In addition, other events may have happened prior to the study that may have an influence on the process. It can, for example, happen that the specific individual is currently part of a family where retrenchments were conducted and this may influence the manner in which they view themselves in the labour market.

The validity of the study was addressed in the following manners:

a) only suitable and standardised data collection instruments were used
b) the researcher attempted to choose a representative sample and to minimise potential reactive affects;
c) students were allowed the opportunity to complete the questionnaires on a day and time that suited them which reduced potential interferences; and
d) the literature review will utilise current resources and will be structured in an methodical and coherent manner.

4.7. Data analysis

This section will provide information about the main approaches that will be used to analyse the data that was collected.

4.7.1. Recordkeeping and storage of data

The data collected from the participants were collected electronically and were automatically saved to a file on the computer for which a password is required. The responses of the participants were captured using the SAS system. (Statistical Analysis Software, Version 9.3). Regular backups of data were made to ensure that data-loss does not occur.

4.7.2. Preparation of data for analysis

The questionnaires received were firstly scanned to determine which of the questionnaires are incomplete or contain any errors and these questionnaires were then eliminated. The data were entered into a processor and transformed. A table was used to organize the data. The data to be analysed will firstly be organized in terms of the two questionnaires. It will then be divided into two main categories, namely the two questionnaires. Within these two

categories the respondents will be divided into the categories or clusters explained in the sampling section of this proposal. The respondents will be further organized in terms of all demographic variables. All of the above-mentioned will be conducted by a statistician.

4.7.3. Unit of analysis

For the purpose of this study the individuals participating in the study are the units of analysis. More specifically, their psychological career resources and graduateness perceptions were the research focus.

4.7.4. Descriptive statistics

The purpose of descriptive statistics, as described by Leedy and Ormrod (2005:30), is to provide information in general of the data obtained. In the context of this study the Cronbach alpha coefficients, means, and standard deviations and will be reported. The biographical data will be displayed through frequencies. As per Maree (2007:184) a frequency distribution can be described as a tool for summarising a specific variable in numerical terms. The means and standard deviations of both the PCRI and Graduateness scales will be documented.

4.7.4.1. Cronbach alpha coeffient

According to Maree (2007:216) the Cronbach alpha coefficient is used to determine the internal reliability of the data collection instrument. Inter-item correlations are used to calculate the Cronbach alpha and if the items are strongly correlated their internal consistency will also be high and close to one. Maree (2007:216) furthermore states that Cronbach alpha coefficients of 0.60 and higher are acceptable.

4.7.4.2. Means and standard deviations

According to Maree (2007:187), a mean can be described as the “arithmetic average of all the data values”. The mean scores of groups on each of the questionnaires will be calculated to determine the most true and dominant psychological career resources and the level of confidence the group has to display the graduateness attributes. The standard deviation, on the other hand can be described as “the extent of spread of data values around the mean for a variable containing quantifiable data” (Saunders *et al*., 2007:612).

4.7.4.3. Level of significance

The level of significance refers to "the maximum likelihood with which a researcher would be willing to risk the rejection of the null hypothesis, when in fact it should have been accepted (Tredoux & Durheim, 2003). A significance level of 0.05 or 0.01 will be viewed as the accepted norm in practice. If, for example, a significance level of 0.05 is used, the researcher has a 95% level of confidence that the right decision has been made to accept or reject the null hypothesis.

4.7.4.4. Correlation statistics

To enable the researcher to investigate the relationship between the variables in the study, correlational statistics should be used to determine whether the hypothesis should be accepted or rejected. To calculate this information Pearson's product moment correlation coefficient will be used as it provides a description of the direction and strength of a relationship between two variables (Saunders *et al.*, 2007:606). This statistical technique will be utilized to establish whether or not a relationship exists between the variables of the two data collection instruments.

To determine whether the relationships between two are variables have practical significance effect sizes can be utilised. Maree (2007:210) emphasises that it is important to calculate whether a finding that is significant also has practical significance. The latter is determined through the calculation of the effect size which is a "standardised, scale-free measure of the magnitude of the difference or correlation being tested.

According to Saunders *et al*. (2007:451), the correlation coefficient can be interpreted as follow:

- r≤-1: Negative relationship, as the one variable increases the other one will decrease;
- r=0: Variables are perfectly independent; and
- r≥1: positive correlation exists between the two variables.

Saunders *et al.* (2007:451) caution that a correlation coefficient cannot predict a cause-effect relationship. With regards to the Pearson product moment correlation coefficient the absolute values (r) specifies the effect size. Cohen (1988:25) provides the following guidelines for interpretation of the effect size:

Small effect: /ρ/ = 0.20
Medium effect: /ρ/ = 0.30

Large effect: /ρ/ = 0.50

For the purpose of this study, it was decided to use a cut-off point of 0.30≤r≥0.50 (medium to large effect). In terms of statistical significance the probability was set at 0.05 and therefore a 95% level of confidence.

4.7.4.5. Analysis of variance (ANOVA)

According to Maree (2007:229), this technique is utilised in studies where "there are more than two independent groups that need to be compared on a single quantitative measure or score." In simple terms, the ANOVA test looks at whether any differences exist between the mean scores of different groups. ANOVA's will be used to test for differences between the sociodemographic groups. The ANOVA will apply the F-test to identify differences that are significant. The level of significance was set at ρ≤0.05. Where differences exists the Tukey's T-test for pairwise comparison Least Square Means test will be used as post-hoc tests depending on the sociodemographic group.

The various sub dimensions of the PCRI was set as independent variables, namely:

- career preference
- career values
- career enablers
- career drivers
- career harmonisers

Furthermore, the dimensions of the GS were set as the dependent variables for each of the ANOVA's, namely:

- Interactive skills
- Problem-solving skills
- Continuous learning orientation
- Enterprising skills
- Presenting and applying information
- Goal-directed behaviour
- Ethical/responsible behaviour
- Analytic thinking skills

4.7.4.6. Multiple regression analysis

To investigate the relationship between the PCRI and GS dimensions further a stepwise multiple regression analysis will be conducted with the PCRI variables set as independent variables and the GS variables as dependent variables. According to Maree (2007:242), multiple regression analysis can be calculated where more than one independent variable is used to predict a single dependent variable. The aim of multiple regression analysis is to provide information on which of the PCRI variables provide the best explanation of the proportion of the total variance in the scores of the dependent variables (GS). The adjusted R^2 was used for interpretation of the results since there were numerous independent variables.

4.8. Formulation of statistical hypothesis

Hypothesis testing serves as a method for making inferences from the sample and relating it to the population. The process will commence with the researcher having specific ideas regarding the properties of some the variables of the study (Maree, 2007:203). Hypotheses that are often tested include:

- hypotheses about single population means;
- hypotheses about the differences between two or more population means;
- hypotheses about single population proportions;
- hypotheses about the difference between two or more population proportions; and
- hypotheses about the relationship between two variables.

To translate the researcher's beliefs into statistical terms, two hypotheses are formulated (Maree, 2007:203):

- a *null hypothesis,* described as H0 and states that no difference or relationship exist between the variables; and
- *alternative hypothesis* or H1 stating that significant differences exist between the variables tested.

For the purpose of this study hypothesis testing will be conducted for testing of the relationship between the two variables.

- *The relationship between psychological career resources and graduateness*

H01: There is no relationship between psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

H1: There is a relationship between psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

H02: There are no significant differences between gender, age, field of study and employment status regarding their psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

H2: There are significant differences between gender, age, field of study and employment status regarding their psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness.

The aforementioned research hypotheses were tested through an analysis of the relationship between the psychological career resources dimensions and graduateness dimensions.

4.9. Chapter summary

The purpose of this chapter was to describe the empirical investigation process. Furthermore, it described the population, how the sample was determined and addressed the sample distribution in terms of the sociodemographic variables. The measuring instrument, data collection procedure and data analysis process were also described. The formulation of the research hypotheses served as a conclusion of the chapter. Chapter 5 will report, interpret and integrate the results of the empirical study.

CHAPTER 5: RESULTS OF THE EMPIRICAL STUDY

5.1. Introduction

The purpose of this chapter is to provide a discussion of the statistical results and integrate the findings with the literature review. The chapter will report on the descriptive statistics and inferential statistics.

5.2. Descriptive statistics

The purpose of descriptive statistics, as described by Leedy and Ormrod (2005:30), is to provide information in general of the data obtained. In the context of this study the means, standard deviations and Cronbach alpha coefficients will be reported. The means and standard deviations of both the PCRI and GS will be documented. According to Leedy and Ormrod (2005:93), internal consistency reliability can be described as the "extent to which to all the items within a single instrument yield similar results."

5.2.1. Item reliability and Cronbach's alpha coefficients (PCRI and GS)

Table 5.1: Cronbach's alpha coefficients (PCRI and GS) (N = 94)

Measuring instrument subscales	Cronbach's alpha coefficients Total sample (N = 94)
Career Preference	
Stability/Expertise	0.59
Managerial	0.75
Variety/Creativity	0.85
Freedom/Autonomy	0.75
Career Values	
Growth/Development	0.83
Authority/Influence	0.74
Career enablers	
Practical/Creative skills	0.73
Self/Other skills	0.71
Career Drivers	
Career Purpose	0.79
Career Directedness	0.66
Career Venturing	0.76
Career Harmonisers	
Self-esteem	0.84
Behavioural Adaptability	0.79
Emotional Literacy	0.82
Social Connectivity	0.87
Graduateness Scale	
Interactive skills	0.88

Problem Solving	0.79
Continuous learning Orientation	0.79
Enterprise skills	0.73
Presenting and applying information	0.61
Goal-directed Behaviour	0.77
Ethical/responsible Behaviour	0.67
Analytical Thinking	0.80

The Cronbach alphas for the PCRI ranged between 0.59 and 0.87. Previous research conducted by Coetzee (2008) found similar results of between 0.61 and 0.88. The Cronbach alphas for the GS ranged between 0.61 and 0.88. Since the main purpose of this study was to investigate the relationships between the two measuring instruments and identify broad trends the questionnaires are psychometrically acceptable (Coetzee, 2008). According to Maree (2007:216), reliability coefficients of 0.60 and higher are regarded as acceptable.

5.2.2. Means and standard deviations

The purpose of this section is to provide descriptive information on each of the subscales of the measuring instruments. To calculate the mean scores of each dimension the mean of the individual items comprising the dimension was calculated.

5.2.2.1. Psychological Career Resources Inventory (PCRI)

The PCRI utilises a six-point Likert-type scale whereby participants are requested to express their answers on a six-point Likert-type scale, where number 1 and 6 are the extreme choices. Point 6 on the scale indicates that individuals always agree with the particular situation or question. Table 5.2 provides a representation of the means and standard deviations of each of the PCRI subscales. The respondents' most dominant career preference were stability/expertise (mean = 5.25; SD = 0.58). This was followed by variety/creativity (mean = 4.93; SD = 0.92). Freedom/autonomy (mean = 4.37; SD = 1) was indicated as the least preferred career preference. The respondents indicated growth/development (mean = 5.56; SD = 0.61) as the most important career value which is in line with the career preference dimensions. With regards to the career enabler dimension the respondents ranked Self/Other skills (mean = 5.03; SD = 0.65) as the most important enabler. On the career drivers subscale the dominant variable was career purpose (mean = 5.24; SD = 0.90). On the career harmonisers dimension self-esteem (mean = 4.92; SD = 0.86) and behavioural adaptability (mean = 4.91; SD = 0.77) were indicated as the dominant variables. These results were in line with the study undertaken by Coetzee (2008) and Coetzee and Esterhuizen (2010) which focused on unemployed African graduates.

Table 5.2: PCRI: Means and standard deviations (N = 94)

Measuring instrument subscales PCRI	Mean	Standard Deviation	Minimum	Maximum
Career Preference				
Stability/Expertise	5.24	0.58	2.80	6.00
Managerial	4.45	0.9	2.00	6.00
Variety/Creativity	4.92	0.91	2.75	6.00
Freedom/Autonomy	4.37	1.00	1.50	6.00
Career Values				
Growth/development	5.56	0.61	4.00	6.00
Authority/Influence	4.72	0.91	2.00	6.00
Career enablers				
Practical/Creative	4.70	0.79	2.00	6.00
Self/other	5.03	0.65	2.80	6.00
Career drivers				
Career Purpose	5.24	0.90	1.00	6.00
Career Directedness	4.80	0.73	2.50	6.00
Career Venturing	4.23	1.08	1.00	6.00
Career harmonisers				
Self-esteem	4.92	0.86	2.40	6.00
Behavioural Adaptability	4.91	0.77	2.67	6.00
Emotional Literacy	4.50	0.97	2.00	6.00
Social Connectivity	4.86	0.83	2.00	6.00

5.2.2.2. Interpretation of mean scores of PCRI (N = 94)

The aforementioned scores indicate that the respondents will most likely prefer a career where they can develop and utilise their skills and expertise. This seems to be in line with their career value, namely growth and development which they view as important in their career development paths. Since the Freedom/autonomy career was least preferred it may indicate that individuals may wish to grow within a specific company and utilise their skills to the advantage of the company. They may therefore wish to engage in a career path where they will have the opportunity to develop and share their expertise within their organization.

In the context of the literature review this finding is quite interesting as the literature indicated a shift in the psychological contract where loyalty towards one organization is no longer as important. However, the need for growth and development is in agreement as new entrees into the world of work will be required to remain open for learning and motivated to improve and develop themselves to remain employable.

5.2.2.3. Graduateness Scale

The Graduateness Scale (GS) asks participants to express their answers on a six-point Likert-type scale whereby 1 and 6 are the extreme choices. The highest scale option 6 indicates that the respondent always agrees with the specific scale. Table 5.3 provides the means and standard deviations of the individual items comprising the dimension.

Table 5.3: Graduateness Scale: Means and standard deviations

Measuring subscale GS	Means	Standard Deviation	Minimum	Maximum
Interactive skills	4.78	0.54	3.56	5.94
Problem solving	4.57	0.60	3.38	5.88
Continuous learning Orientation	4.60	0.67	2.86	5.86
Enterprise skills	4.28	0.58	2.89	5.89
Presenting and applying information	4.59	0.65	3.40	6.00
Goal-directed behaviour	4.45	0.63	3.22	6.00
Ethical/responsible behaviour	4.97	0.59	3.00	6.00
Analytical thinking	4.45	0.83	2.25	6.00

5.2.2.4. Interpretation of mean scores of GS

The participants rated themselves high in terms of ethical/responsible behaviour (mean = 4.97; SD = 0.59), interactive skills (4.78; SD = 0.54), continuous learning orientation (mean = 4.60; SD = 0.67) and presenting and applying information (mean = 4.59; SD = 0.65). This may indicate that they are willing to take responsibility for the safekeeping of their profession's and workplace ethical/responsible rules and guidelines. In addition, they are willing to be accountable for decisions taken. As it is evident from the literature review higher education institutions are expected to develop specific employability skills and incorporate it into their degree programmes. For this reason students may increasingly engage in activities aimed at developing interactive skills and information literacy. Furthermore, as highlighted previously the participants may realise that they will need to continuously improve themselves if they wish to remain successful in the competitive labour market. Their score on continuous learning orientation may therefore serve as an indicator of their willingness to deal with ever-changing situations and ensuring they have the skills needed to cope with these changes.

However, the participants' lowest score was on the enterprise skills dimension (mean = 4.28; SD = 0.58) although it was still quite high. These results may indicate that graduates may feel uncertain in their ability to engage in activities aimed at achieving goals in a timely and effective manner. They may therefore feel that they still need some guidance regarding goal-setting and its related activities. The lower score on enterprising skill may be explained by the fact that a large portion of the sample is only students and not employed in a position where they have the ability to practise these skills. In general, however, the scores were all above-average and the participants will more likely than not feel confident that they possess the specific skills required by employers. However, since the majority of the sample is either in their second or last year of study one may expect that these mean scores were higher as they need to enter the labour market soon.

5.3. Correlational statistics

To calculate the relationship between the variables Pearson product moment correlations were calculated. The purpose of these correlation calculations is to enable the researcher to determine the direction and strength of the relationship between the different variables (Maree, 2007:234). This was done on a total level as well as between the various dimensions of the two measuring instruments. A 95% confidence interval level ($p \leq 0.05$) was determined for statistical significance and practical significance at $r \geq 0.30 \geq 0.50$ (medium to large effect). The total mean scores for the PCRI and GS were used to calculate the correlation coefficient for the PCRI and GS dimensions.

5.3.1 Relationship between PCRI variables and interactive skills

Table 5.4 presents the correlations between the PCRI and GS subscales. As per table 4.10 the interactive skills variable is related significantly and positively to the following career preferences: stability/expertise ($r = 0.28$; $p \leq 0.05$; medium practical effect size and variety/creativity ($r = 0.35$; $p \leq 0.001$; medium practical effect size). There was no significant relationship between interactive skills and the freedom/autonomy and managerial career preferences.

The results may indicate that individuals who prefer a stable or creative career appear to value their interactive skills. It may in turn imply that individuals who wish to engage in careers offering creative tasks or job security will view the development of interactive skills as important for career planning and development. Individuals may believe that interactive skills are important for achieving their desired career.

The results furthermore indicated a significant positive relationship with the career value growth/development (r = 0.31; p≤0.001; small practical effect size). This may indicate that if individuals value growth and development they may also have confidence in their interactive skills. Interactive skills may be needed to communicate effectively with other cultures and this in turn may lead to growth and development in personal relationships.

Interactive skills were significantly and positively related to both career enablers, namely practical/creative skills (r = 0.44; p≤0.001; medium practical effect size) and self/other skills (r = 0.49; p≤0.001; medium practical effect size). Since career enablers are seen as the transferrable skills needed for a career it will be expected that these enablers are strongly related to interactive skills. Participants may therefore feel that if they are able to translate technical concepts to real-world applications they may also have the interactive skills required by employers to accomplish the former.

Interactive skills related significantly positive with two career drivers, namely a) career directedness (r = 0.48; p≤0.001; medium practical effect size) and b) career venturing (r = 0.39; p≤0.001; medium practical effect size).

These study findings may suggest that if individuals feel that they are able to fulfil their career goals and take risks to achieve these goals, they may feel confident that they have the interactive skills needed to achieve these goals. Therefore, they may be able to use language and technology skills effectively to communicate these goals and engage with relevant people to achieve these goals.

With regards to career harmonisers the interactive skills scale showed significant positive relationships with self-esteem (r = 0.55; p≤0.001; large practical effect size), behavioural adaptability (r = 0.36; p≤0.001; medium practical effect size), emotional literacy (r = 0.54; p≤0.001, medium practical effect size) and social connectivity (r = 0.56; p≤0.001, large practical effect size).

Interactive skills are strongly related to career harmonisers. This may in turn indicate that if the individuals feel confident in their interactive skills it is likely that they may also have confidence in their ability to express and utilise their emotions, connect with people and maintain satisfying relationships. In addition, they may believe that they have the ability to make changes needed for career success and in effect feel worthy and effective in comparison with other people.

Table 5.4: Pearson product moment correlation coefficients

PCRI Scale		Interactive skills	Problem-Solving	Continuous learning Orientation	Enterprising	Presenting and Applying Information	Goal-Directed Behaviour	Ethical/responsible Behaviour	Analytical Thinking
Career Preference									
Stability/Expertise	R	0.28	0.20+	0.26+	0.21+	0.25+	0.27+	0.21+	0.02
	Sig	0.01**	0.06	0.01**	0.04*	0.02*	0.01**	0.05*	0.82
Managerial	R	0.19+	0.15	0.02	0.19	0.12	-0.02	0.06	0.26+
	Sig	0.06	0.14	0.86	0.07	0.25	0.88	0.59	0.01*
Variety/Creativity	R	0.35++	0.41++	0.26+	0.21	0.37++	0.28+	0.24++	0.34++
	Sig	0.00***	<0.0001***	0.01**	0.05*	0.00***	0.01**	0.02*	0.00***
Freedom/Autonomy	R	0.06	0.05	-0.02	-0.07	0.03	-0.11	-0.06	0.09
	Sig	0.59	0.61	0.83	0.53	0.74	0.31	0.56	0.38
Career Values									
Growth/Development	R	0.32+	0.21+	0.29+	0.10	0.32+	0.25	0.29++	0.12
	Sig	0.00***	0.04*	0.01**	0.34	0.00***	0.01**	0.00***	0.27
Authority/Influence	R	0.13	0.10	-0.05	0.07	0.05	-0.08	0.10	0.24+
	Sig	0.20	0.32	0.62	0.48	0.64	0.40	0.36	0.02*
Career Enablers									
Practical/Creative Skills	R	0.44++	0.51+++	0.44++	0.29+	0.49++	0.41++	0.38++	0.46++
	Sig	<0.0001***	<0.0001***	<0.0001***	0.02*	<0.0001***	<0.0001***	0.00***	<0.0001***
Self/Other Skills	R	0.49+++	0.42++	0.31++	0.32++	0.51+++	0.38++	0.46++	0.31++
	Sig	<0.0001***	<0.0001***	<0.0001***	0.00***	<0.0001***	<0.00***	<0.0001***	0.00***
Career Drivers									
Career Purpose	R	0.14	-0.06	0.13	0.01	0.14	0.11	0.36++	-0.14
	Sig	0.18	0.95	0.21	0.90	0.18	0.28	0.00***	0.19
Career Directedness	R	0.48++	0.42++	0.49++	0.37++	0.35++	0.44++	0.43++	0.15
	Sig	<0.0001***	<0.0001***	<0.0001***	0.00***	0.00***	<0.0001***	<0.0001***	0.17
Career Venturing	R	0.39++	0.35+	0.32++	0.28+	0.29+	0.25+	0.27+	0.14
	Sig	0.00***	0.00***	0.00***	0.01**	0.00***	0.02**	0.01**	0.17
Career									

Harmonisers									
Self-Esteem	R	0.45++	0.44++	0.42++	0.25+	0.49++	0.42++	0.54+++	0.13
	Sig	<0.0001***	<0.0001***	<0.0001***	0.01**	<0.0001***	<0.0001***	<0.0001***	0.20
Behavioural Adaptability	R	0.54+++	0.46++	0.47++	0.25+	0.46++	0.46++	0.50+++	0.19
	Sig	0.00***	<0.00***	<0.00***	0.30	<0.0001***	<0.00***	<0.00***	0.24
Emotional Literacy	R	0.36++	0.36++	0.31+	0.26+	0.41++	0.36++	0.55+++	0.10
	Sig	<0.0001***	0.00***	<0.0001***	0.01**	<0.0001***	0.00***	<0.0001***	0.35
Social Connectivity	R	0.56+++	0.48++	0.49++	0.25+	0.53+++	0.47++	0.58+++	0.16
	Sig	<0.0001***	<0.0001***	<0.0001***	0.01**	<0.0001***	<0.0001***	<0.0001***	0.12

***p≤0.001 **p≤0.01 *p≤0.05

+++ r≥0.50 (large practical effect size) ++ r≥0.30 (medium practical effect size) + r≤0.29 (small practical effect size)

5.3.2 PCRI variables and problem-solving

Problem-solving were significantly and positively related to the career preferences variety/creativity (r = 0.41; p≤0.001; medium practical effect size). This finding may suggest that if individuals prefer a career with variety/creativity they may feel confident in their ability to produce effective solutions to problems. Since a career preference focused on variety or creativity involves constant new things it may indicate constant new problems and therefore they may believe that they have the ability to solve these problems. When an individual is regarded as an expert it may indicate they are proactive problem solvers and therefore value their problem-solving abilities.

The growth/development career value was only related in a significant and positive way to problem-solving (r = 0.21; p≤0.05; small practical effect size). It appears that individuals may feel that they need to have the required problem-solving abilities and decision-making skills to ensure that they grow in their careers.

Both practical/creative skills (r = 0.51; p≤0.001, large practical effect size) and self/other skills (r = 0.42; p≤0.001; medium practical effect size) correlated with problem-solving. Individuals who feel confident in their problem-solving skills may also believe that they have the ability to identify and implement career options in a creative manner. It is suggested that if they feel confident in their problem-solving abilities they may also feel confident in their ability to apply their knowledge and skills to real-world problems and challenge existing assumptions.

Problem-solving showed a significant and positive relationship with the following career drivers: a) career directedness (r = 0.40; p≤0.001; medium practical effect size) and b) career venturing (r = 0.35; p≤0.001; medium practical effect size). This finding may suggest that if individuals have a clear idea about their future career goals and the resources needed to achieve it they may also feel confident in their ability to make decisions and solve problems. This confidence in their problem-solving abilities may also lead to them being willing to take risks and experiment with new career options.

All of the career harmonisers showed a significant positive relationship with problem-solving: a) self-esteem (r = 0.46; p≤0.001, medium practical effect size), b) behavioural adaptability (r = 0.36; p≤0.001; medium practical effect size), c) emotional literacy (r = 0.35; p≤0.001; medium practical effect size), d) social connectivity (r = 0.48; p≤0.001; medium practical effect size).

If individuals feel confident in their ability to find proactive solutions to problems they may also feel that they have the necessary skills to adapt to changing situations, use their emotions creatively and effectively and connect better with other individuals.

5.3.3 PCRI variables and continuous learning orientation

Continuous learning orientation were significantly and positively related to the career preferences stability/expertise ($r = 0.26$; $p \leq 0.01$, small practical effect size) and variety/creativity ($r = 0.26$; $p \leq 0.01$; small practical effect size). It appears that individuals who prefer a career that either involves valued experience or constant variety and change of tasks may also be more open to acquiring additional and new knowledge, skills and abilities. This may be due to the fact that individuals prefer careers that force them to keep their knowledge and skills up to date or constantly learn new skills.

The growth/development career value was only related in a significant and positive way to the continuous learning orientation variable ($r = 0.21$; $p \leq 0.05$; small practical effect size). This finding may suggest that if individuals feel confident in their willingness to learn and acquire new skills and abilities they may also value a career path where there is opportunity for growth and development.

Both practical/creative skills ($r = 0.44$; $p \leq 0.001$, medium practical effect size) and self/other skills ($r = 0.31$; $p \leq 0.001$; medium practical effect size) indicated a significant positive relationship with the continuous learning orientation. It appears that if individuals value their practical/creative intelligence they may also be open to learn more and acquire new knowledge and thereby improving themselves. This may be due to the fact that they realise the importance of having different career options and implementing them in various ways. To be able to do so they need to learn the related skills and knowledge. A continuous learning orientation may also increase where individuals realise the importance of social intelligence and the ability to understand one's own and others feelings and interact with them effectively. This is however an ever-changing process and individuals need to remain willing to constantly learn new things of people and their emotions.

Continuous learning orientation showed a significant and positive relationship with both career directedness ($r = 0.49$; $p \leq 0.001$; medium practical effect size) and career venturing ($r = 0.32$; $p \leq 0.001$; medium practical effect size). It is suggested that if individuals know and understand their future career directions and goals and where to locate the required resources or find new career opportunities they may also be willing to learn and acquire new skills and remain open for learning to ensure career goals and objectives are achieved. They

may continuously strive to learn where to find resources and how to use time available to the best of their availability to ensure their goals are met. Individuals may also feel that if they are willing to take risks in their careers they will believe in their ability to engage in continuous learning activities.

All of the career harmonisers showed a significant positive relationship with continuous learning orientation: a) self-esteem ($r = 0.42$; $p \leq 0.001$, medium practical effect size), b) behavioural adaptability ($r = 0.47$; $p \leq 0.001$; medium practical effect size), c) emotional literacy ($r = 0.31$; $p \leq 0.01$; medium practical effect size), d) social connectivity ($r = 0.46$; $p \leq 0.001$; medium practical effect size).

This finding may suggest that individuals who feel confident in their continuous learning orientation may also believe in their ability to utilise the qualities needed for future performance and making the necessary changes to achieve goals. They may likely believe that they will be able to learn continuously and therefore ensure they have the qualities needed for career success. They may also feel confident to learn how to accept and express one's own and others' emotions and how it relates to decision-making. Individuals may likely realise that dealing with people is a continuous process and that one should be able and willing to acquire the skills needed to engage in this process. All of the aforementioned involves learning about people and how to handle situations and that in turn will require individuals to remain willing to learn the skills and attitudes needed for achieving the aforementioned skills.

5.3.4 PCRI variables and enterprising skills

As per table 5.4 the enterprising skills variable is related significantly and positively to stability/expertise ($r = 0.21$; $p \leq 0.05$; small practical effect size) and variety/creativity ($r = 0.21$; $p \leq 0.001$; medium practical effect size). These findings may suggest that if individuals prefer a career that offers stability or expertise they may also feel confident in their ability to be venturesome and proactive when engaging in economic activities they may. It may be specifically relevant to expertise as they may feel confident in their own expertise and skills to start-up a new business. Whereas individuals prefer a career that offers job security it may therefore imply that they need to remain knowledgeable regarding economic activities and how it may impact their job. No significant relationship exists between enterprising skills and any of the career values.

Enterprising skills were significantly and positively related to both career enablers, namely practical/creative skills ($r = 0.29$; $p \leq 0.01$; small practical effect size) and self/other skills ($r =$

0.32; p≤0.01; small practical effect size). Where individuals feel confident in their enterprising skills they may also believe in their practical/creative intelligence as well as their self/other intelligence. They may believe that they have the required skills to apply their knowledge to real-world problems and engage in careers that are different and creative. They may also believe that they understand themselves and others enough to make sound economic decisions.

Enterprising skills related significantly positive with only one career driver: career directedness (r = 0.32; p≤0.001; small practical effect size) and career venturing (r = 0.28; p≤0.001; small practical effect size). If an individual has clear career-related goals and directions and are willing to take risks in their careers they may also likely feel confident in their enterprising skills and the ability to take initiative in their economic activities.

With regards to career harmonisers the enterprising skills scale showed significant positive relationships with self-esteem (r = 0.25; p≤0.01; small practical effect size), behavioural adaptability (r = 0.25; p≤0.01; small practical effect size) and social connectivity (r = 0.26; p≤0.01, small practical effect size). These correlations may suggest that individuals' levels of confidence in their enterprising skills may influence their ability to adapt to changing situations and connect with other individuals. This may be due to the fact that individuals believe that the latter skills are needed if they want to be successful in the business environment and achieve related objectives.

5.3.5 PCRI variables and presenting and applying information

Presenting and applying information were significantly and positively related to the career preferences stability/expertise (r = 0.25; p≤0.05, small practical effect size) and variety/creativity (r = 0.37; p≤0.001; medium practical effect size).

These findings suggest that individuals who prefer a career where they will use their experience in a stable and secure job are likely to also feel confident in their ability to share information with people that will be of either personal or work-related benefit. Individuals may feel that in order to display career expertise one needs to be able to communicate effectively and present information in a logical and effective manner. In a career that offers variety and working on multiple tasks and therefore acquiring a number of skills they may feel confident in their ability to communicate information, facts and opinions that may offer solutions. Individuals may feel that if they have the ability to apply acquired information in a sufficient and logical manner they may also have the ability to work on numerous tasks as they can apply information in various contexts.

Only the growth/development career value was related in a significant and positive way to presenting and applying information (r = 0.32; p≤0.001; medium practical effect size). Where individuals value growth and development as part of their career paths they may also value their ability to communicate facts and ideas that may lead to new approaches to solving a problem and therefore may contribute to their own and other people's wellbeing. The individuals may feel that they need this ability to ensure development of themselves in their career endeavours.

Both practical/creative skills (r = 0.49; p≤0.001, medium practical effect size) and self/other skills (r = 0.51; p≤0.001; large practical effect size) related significantly and positively to presenting and applying information. This finding suggests those individuals who are confident in their ability to present information and use it creatively to solve problems and furthermore convince other individuals of the feasibility of their solutions, may also believe in their ability to identify various career options and the creative and efficient ways in which it can be followed. Furthermore, it is suggested that if the individuals believe in their ability to present and apply information they may also believe that they have the required social intelligence to communicate with people and form meaningful relationships with them. They may believe that they will be able to better control and represent their own feelings and interactions.

Presenting and applying information showed a significant and positive relationship with two career drivers: career directedness (r = 0.35; p≤0.001; medium practical effect size) and career venturing (r = 0.29; p≤0.01; small practical effect size). It appears as though individuals who have clear future career goals, know where to find the resources needed to achieve these goals and are willing to take risks and experiment with various career opportunities may also show confidence in their ability to present and apply information. They may believe that this ability is necessary to ensure goals are achieved as they may be required to present information needed to secure resources, communicate career goals and apply acquired knowledge that will contribute to the achievement of objectives.

All of the career harmonisers showed a significant positive relationship with presenting and applying information: a) self-esteem (r = 0.49; p≤0.001, medium practical effect size), b) behavioural adaptability (r = 0.46; p≤0.001; medium practical effect size), c) emotional literacy (r = 0.41; p≤0.01; medium practical effect size), d) social connectivity (r = 0.41; p≤0.001; medium practical effect size).

It is therefore suggested that if the individuals are confident in their ability to communicate and convince people of their solutions in a clear and concise manner they may also believe in their ability to express their own and react on other people's emotions and prioritising it

when decisions need to be made, adapt their behaviour to suit situations or particular career opportunities and connect with people in a meaningful and significant way.

5.3.6. PCRI variables and goal-directed behaviour

Goal-directed behaviour were significantly and positively related to the career preferences stability/expertise ($r = 0.27$; $p \leq 0.01$, small practical effect size) and variety/creativity ($r = 0.28$; $p \leq 0.01$; small practical effect size). These two correlations may suggest that if the individuals believe that they are able to take initiative in achieving their goals and meeting deadlines they may also prefer a career that involves working on a wide range of tasks or where they have a secure job and are able to use their specific skills and expertise. They may believe that their goal-directed behaviour will enable them to set deadlines and define smaller goals to complete several tasks.

The growth/development career value was only related in a significant and positive way to goal-directed behaviour ($r = 0.25$; $p \leq 0.01$; small practical effect size). The individuals may therefore engage in effective goal-setting and related activities if they also value growth and development as important for their career paths.

Both practical/creative skills ($r = 0.41$; $p \leq 0.001$, medium practical effect size) and self/other skills ($r = 0.39$; $p \leq 0.001$; medium practical effect size) had a significant positive relationship with goal-directed behaviour. This finding may suggest that if the individuals feel confident in their ability to take a proactive approach in achieving their goals they may also have confidence in their ability to apply the practical and creative intelligence needed to identify various career options and different ways of following it. They may also value their ability to connect with people, maintain relationships and exert discipline in their own interactions. The student leaders may feel that they will need to form and maintain successful relationships if they wish to accomplish their goals and engage in teamwork to meet deadlines where applicable.

Only two career drivers showed a significant positive relationship with goal-directed behaviour, namely career directedness ($r = 0.44$; $p \leq 0.001$; medium practical effect size) and career venturing ($r = 0.25$; $p \leq 0.001$; small practical effect size). It appears when the participants have clear future goals and have identified the resources needed to achieve and also know their career orientation they may believe in their ability to take a proactive approach in achieving these goals.

All of the career harmonisers showed a significant positive relationship with presenting and applying information: a) self-esteem ($r = 0.42$; $p \leq 0.001$, medium practical effect size), b)

behavioural adaptability (r = 0.46; p≤0.001; medium practical effect size), c) emotional literacy (r = 0.34; p≤0.001; medium practical effect size), d) social connectivity (r = 0.36; p≤0.001; medium practical effect size). It is suggested that if the participants believe in their ability to remain focused on their careers and take the necessary steps to achieve their goals they may also have confidence in their ability to complete the particular task at hand.

5.3.7 PCRI variables and ethical/responsible behaviour

Both stability/expertise (r = 0.21; p≤0.05, small practical effect size) and variety/creativity (r = 0.24; p≤0.05; small practical effect size) showed a significant positive relationship with ethical/responsible behaviour. It appears that the participants' confidence in their ability to uphold the moral guidelines of their profession and in their workplace may also be influenced by their preference for a career that offers either stability or an opportunity to add value through their experience. Furthermore, it may also be influenced by their preference for a career where they will be required to work on a variety of tasks and learn new skills.

Only the growth/development career value was related in a significant and positive way to ethical/responsible behaviour (r = 0.29; p≤0.01; small practical effect size). It is suggested that if the student leaders believe in their ability to take responsibility for their decisions and take the lead in upholding the code of moral beliefs and values in their work environment they may be also value growth and development in their careers.

With regards to career enablers, both practical/creative skills (r = 0.38; p≤0.01, medium practical effect size) and self/other skills (r = 0.46; p≤0.001; medium practical effect size) were related significantly and positively to ethical/responsible behaviour. Should the participants be willing to take responsibility for upholding the ethical/responsible guidelines set for their workplace may also believe in their ability to apply their practical and creative intelligence to follow different career options? They may also express confidence in their ability to interact with other people in an effective manner and form meaningful relationships. The aforementioned may be due to the student leaders reasoning that if they show ethical/responsible behaviour they will be able to differentiate between various career options and the most suitable one and people will also value their ethical/responsible behaviour and therefore value their relationships.

All the career drivers showed a significant positive relationship with ethical/responsible behaviour: career purpose (r = 0.36; p≤0.001; medium practical effect size), career directedness (r = 0.43; p≤0.001; medium practical effect size) and career venturing (r = 0.27; p≤0.05; small practical effect size). It appears as though individuals, who have clear future

goals, know the career they wish to follow and the people and processes needed to achieve it may also be more willing to take responsibility for their actions and decisions and the ethical/responsible guidelines accompanying.

All of the career harmonisers showed a significant positive relationship with ethical/responsible behaviour: a) self-esteem (r = 0.54; p≤0.001, large practical effect size), b) behavioural adaptability (r = 0.50; p≤0.001; large practical effect size), c) emotional literacy (r = 0.36; p≤0.001; medium practical effect size), d) social connectivity (r = 0.55; p≤0.001; large practical effect size). These findings may suggest that if the participants believed in their ability to take responsibility for their decisions and follow the moral guidelines stipulated for their profession, thereby setting an example, they may also value their ability and skills to complete a particular task, adapt their behaviour to make sound career decisions and furthermore express and respond correctly to other people's and their own emotions and thereby forming meaningful relationships with individuals. Furthermore, participants may feel confident in their ability to prioritise their emotions during decision-making and therefore be in a better position to make ethical/responsible decisions.

5.3.8 PCRI variables and analytical thinking

Analytical thinking showed a significant positive relationship with the managerial career preference (r = 0.26; p≤0.05; small practical effect size) and variety/creativity career preference (r = 0.34; p≤0.001; medium practical effect size). This finding may suggest that individuals who have confidence in their ability to employ logical reasoning and analysis and draw meaningful conclusions from data may also prefer a career where they will have greater responsibilities and achieve upward mobility. They may also be more likely to prefer a career where they will be required to work on various tasks where they will be required to utilise different skills in creative ways.

Only the authority/influence career value was related in a significant and positive way to analytical thinking (r = 0.24; p≤0.05; small practical effect size). It is suggested that when these individuals are confident in their ability to apply their analytical thinking skills they will most likely select careers and follow career paths where they are able to influence people and display authority.

Analytical thinking showed a significant positive relationship with both career enablers: practical/creative skills (r = 0.46; p≤0.001, medium practical effect size) and self/other skills (r = 0.31; p≤0.05; medium practical effect size). It appears that when the participants have confidence in their ability to think and reason in a logical manner and make meaningful

inferences they may also value their ability to apply their knowledge to real-world experiences, challenge existing assumptions based through cognitive processes and focus on new and innovative ways of completing tasks.

None of the career drivers or career harmonisers showed a significant positive relationship with analytical thinking.

5.4. Inferential statistics

5.4.1. Multiple regression analysis

A stepwise multiple regression analysis was conducted to investigate the relationship between the PCRI and GS dimensions further. According to Maree (2008:242), multiple regressions can be computed where more than one independent variable is used to predict a single dependent variable. The aim of multiple regression analysis is to provide information on which of the PCRI variables provide the best explanation of the proportion of the total variance in the scores of the dependent variables (GS). The value of the adjusted R^2 was used for interpretation of the results as there was more than one independent variable. To determine whether a significant regression existed between the dependent and independent variables an F-test was utilised.

5.4.1.1. Interactive skills variable

Table 5.5: Multiple regression analysis: Interactive skills (N = 93)

Variable	Parameter Estimate	Model R-Square	F	Pr>F
Interactive skills (constant)	ß			
Career preference: Variety/creativity	0.09	0.48	2.42	0.12
Career enablers: Self/other	0.15	0.45	9.38	**0.00*** **
Career drivers: Career directedness	0.11	0.46	3.92	**0.05** **
Career drivers: Career purpose	-0.09	**0.51**	3.04	0.08
Career drivers: Career venturing	0.07	0.39	12.84	**0.00*** **
Career harmonisers: Behavioural adaptability	0.15	0.30	39.77	**<.0001*** **

Career harmonisers: Social connectivity	0.17	0.52	3.07	0.08

***p≤0.001 **p≤0.01 *p≤0.05

+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size)

Table 5.6: ANOVA: Interactive skills

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	7	14.20205	2.02886	13.21	**<.0001*** **
Error	86	13.20902	0.15359		
Total	93	27.41107			

Tables 5.5.and 5.6 illustrate that a statistically significant model was produced through the regression of the selected PCRI variables (*self/other, career directedness, career venturing and behavioural adaptability)* upon the interactive skills variable (*F* (13.21); p ≤ 0.001), accounting for 51% of the variance in the *interactive skills* variable.

Despite the fact that the stated PCRI variables contributed significantly to the variance in the *interactive skills* variable scores the career enabler variable *self/other* and the career harmoniser *behavioural adaptability* obtained the largest beta weight (ß = 0.15, p ≤0.0001) This result indicates that these two variables may have a significantly larger influence on the interactive skills variable. The Pearson correlation results in table 5.4 confirmed these results. However, the regression analysis indicated that the career driver variable, *career purpose* (ß = -0.09; p ≤ 0.04), negatively influenced the variance in the *interactive skills* variable which is in contrast with correlation statistics reported earlier. This finding may indicate that as the rating of the *interactive skills* variable increase the *career purpose* variable may decrease.

5.4.1.2. Problem-solving variable

Table 5.7: Multiple Regression Analysis: Problem solving

Variable	Parameter Estimate	Model R-Square	F Value	Pr>F
Problem solving (constant)	ß			
Career preferences: Variety/Creativity	0.13	**0.46**	3.45	0.07
Career preferences: Freedom/Autonomy	-0.18	0.43	6.92	**0.01****
Career enablers: Practical/Creative	0.30	0.26	32.54	**<.0001*****
Career drivers: Career venturing	0.14	0.39	5.13	**0.03***
Career harmonisers: Emotional literacy	0.17	0.36	13.30	**0.00*****

***p≤0.001 **p≤0.01 *p≤0.05

+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size)

Table 5.8: ANOVA: Problem-solving variable

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	5	15.49707	3.09941	14.73	**<.0001*****
Error	88	18.51822	0.21043		
Total	93	34.01529			

Tables 5.7 and 5.8 show that the regression of the selected PCRI variables (*Freedom/autonomy*, *practical/creative, career venturing and emotional literacy)* upon the interactive skills variable produced a statistically significant model (*F* (14.73); p ≤ 0.001), accounting for 46% of the variance in the *problem-solving* variable.

Even though all of the aforementioned PCRI variables contributed significantly to the variance in the *problem-solving* variable scores the career enabler variable *practical/creative* obtained the largest beta weight (ß = 0.30, p ≤0.001) followed by the *emotional literacy* variable (ß = 0.17, p ≤0.00). Consequently, the *practical/creative* variable will have a significantly larger influence on the *problem-solving* variable. This observation was also in line with the Pearson correlation results in table 5.4. In contrast with the latter statistics, the regression analysis indicated that the career preference variable, *Freedom/autonomy* (ß = -0.17; p ≤ 0.01), negatively influenced the variance in the *problem-solving* variable.

5.4.1.3. Continuous learning orientation variable

Table 5.9: Multiple Regression Analysis: Continuous learning orientation

Variable	Parameter Estimate	Model R-Square	F Value	PR>F
Continuous learning	ß			
Career values: Growth/development	-0.15	**0.42**	5.79	**0.02***
Career enablers: Practical/creative	0.29	0.33	12.17	**0.00*****
Career drivers: Career directedness	0.27	0.24	28.85	**<.0001*****
Career harmonisers: Social connectivity	0.21	0.39	8.38	**0.00*****

***p≤0.001 **p≤0.01 *p≤0.05

\+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size)

Table 5.10: ANOVA: Continuous learning orientation

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	4	17.50362	4.37590	16.33	**<.0001*****
Error	89	23.84962	0.26797		
Total	93	41.35323			

Tables 5.9 and 5.10 show that the regression of the selected PCRI variables (*growth/development*, *practical/creative, career directedness and social connectivity)* upon the *continuous learning orientation* variable produced a statistically significant model (*F* (14.73); p ≤ 0.001), accounting for 42% of the variance.

The career enabler variable *practical/creative* obtained the largest beta weight (ß = 0.29, p ≤0.00) followed by the *career directedness* variable (ß = 0.27, p ≤0.001). Consequently, the *practical/creative* variable will have a significantly larger influence on the *continuous learning orientation* variable. This observation was also in line with the Pearson correlation results in table 5.4. However, in contrast with these correlation results, the regression analysis indicated that the career preference variable, *growth/development* variable (ß = -0.15; p ≤ 0.05), negatively influenced the variance in the *continuous learning orientation* variable.

5.4.1.4. Enterprising skills variable

Table 5.11: Multiple Regression Analysis: Enterprising skills

Variable	Parameter Estimate	Model R-Square	F Value	Pr>F
Enterprising skills	ß			
Career preferences: Variety/creativity	0.11	**0.26**	2.63	0.10
Career preferences: Freedom/Autonomy	-0.16	0.23	3.87	**0.05***
Career enablers: Self/Other	0.18	0.18	4.40	**0.04***
Career drivers: Career directedness	0.16	0.14	14.46	**0.00****
Career drivers: Career venturing	0.12	0.20	2.73	0.10

***p≤0.001 **p≤0.01 *p≤0.05

+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size).

Table 5.12: ANOVA: Enterprising skills

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	5	8.10910	1.62182	6.04	**<.0001*** **
Error	88	23.63309	0.26856		
Total	93	31.74219			

Tables 5.11 and 5.12 show that the regression of the selected PCRI variables (*Freedom/autonomy*, *self/other* and *career directedness)* upon *the enterprising skills* variable produced a statistically significant model (*F* (6.04); p ≤ 0.001), accounting for 26% of the variance.

Although all of these PCRI variables contributed significantly to the variance in the *enterprising skills* variable scores the career enabler variable *self/other* obtained the largest beta weight (ß = 0.12, p ≤0.00) followed by the *career directedness* variable (ß = 0.17, p ≤0.05). Consequently, the *self/other* variable will have a significantly larger influence on the problem-solving variable. This observation was confirmed by the Pearson correlation results in table 5.4. The regression analysis indicated that the career preference variable, *Freedom/autonomy* (ß = -0.17; p ≤ 0.01), negatively influenced the variance in the *enterprising skills* variable.

5.4.1.5. Presenting and applying information variable

Table 5.13: Multiple regression analysis: Presenting and applying information

Variable	Parameter Estimate	Model R-Square	F Value	Pr>F
Presenting and applying information (constant)	ß			
Career preferences: Variety/creativity	0.13	0.41	8.63	**0.00*** **
Career values: Authority/Influence	-0.12	0.45	3.76	0.06
Career enablers: Practical/creative	0.18	**0.48**	3.68	0.06
Career enablers: Self/Other	0.26	0.26	32.12	**<.0001** **
Career Harmonisers: Self-Esteem	0.13	0.35	12.47	**0.00*** **
Career Harmonisers: Emotional Literacy	0.15	0.43	3.85	**0.05***

***p≤0.001 **p≤0.01 *p≤0.05

+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size)

Table 5.14: ANOVA: Presenting and applying information

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	7	18.49609	3.08268	13.14	**<.0001*** **
Error	86	20.41328	0.23464		
Total	93	38.90936			

Tables 5.13 and 5.14 show that the regression of the selected PCRI variables (*authority/influence*, *self/other, career venturing and emotional literacy)* upon the *presenting and applying information* variable produced a statistically significant model (*F* (13.14) = ; p ≤ 0.001) accounting for 48% of the variance.

Even though all of the aforementioned PCRI variables contributed significantly to the variance in the *presenting and applying information* variable scores the career enabler variable *self/other* obtained the largest beta weight (ß = 0.26, p ≤0.001) followed by the *emotional literacy* variable (ß = 0.13, p ≤0.05). Consequently, the *self/other* variable will have a significantly larger influence on the *presenting and applying information* variable. This observation was also in line with the Pearson correlation results in table 5.4.

5.4.1.6. Goal-directed behaviour variable

Table 5.15: Multiple Regression Analysis: Goal-directed behaviour

Variable	Parameter Estimate	Model R-Square	F Value	Pr>F
Goal-directed behaviour (constant)	ß			
Career preferences: Stability/Expertise	0.17	**0.47**	2.41	0.12
Career preferences: Variety/Creativity	0.11	0.43	3.22	0.08
Career preferences: Freedom/Autonomy	-0.18	0.41	2.90	0.09
Career values: Authority/Influence	-0.15	0.38	6.18	**0.01****
Career enablers: Practical/Creative	0.24	0.33	6.36	**0.01****
Career drivers: Career directedness	0.15	0.29	9.23	**0.00*****
Career drivers: Career venturing	0.10	0.46	2.15	0.15
Career harmonisers: Emotional literacy	0.16	0.39	2.62	0.11

***p≤0.001 **p≤0.01 *p≤0.05

+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size)

Table 5.16: ANOVA: Goal-directed behaviour variable

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	8	16.82615	2.10327	9.16	**<.0001*****
Error	85	19.50705	0.22949		
Total	93	36.33320			

Tables 5.15 and 5.16 show that the regression of the selected PCRI variables (*growth/development*, *practical/creative and career directedness)* upon the *goal-directed behaviour* variable produced a statistically significant model (*F* (9.16) = 0.21; p ≤ 0.001), accounting for 47% of the variance.

The career enabler variable *practical/creative* obtained the largest beta weight (ß = 0.24, p ≤0.01) followed by the *career directedness* variable (ß = 0.15, p ≤0.01). Consequently, the *practical/creative* variable will have a significantly larger influence on the *goal-directed behaviour* variable. This observation was also in line with the Pearson correlation results in table 5.4. In line with the Pearson product moment correlations, the regression analysis indicated that the career preference variable, *Freedom/autonomy* (ß = -0.15; p ≤ 0.01), negatively influenced the variance in the *goal-directed behaviour* variable.

5.4.1.7. Ethical/responsible/responsible behaviour variable

Table 5.17: Multiple Regression Analysis: Ethical/responsible behaviour

Variable	Parameter Estimate	Model R-Square	F Value	Pr>F
Ethical/responsible behaviour (constant)	ß			
Career preferences: Freedom/Autonomy	-0.15	0.42	3.56	0.06
Career enablers: Practical/Creative	0.21	0.38	10.02	**0.00*** **
Career enablers: Self/Other	0.15	0.40	3.64	0.06
Career drivers: Career purpose	0.12	0.44	2.70	0.10
Career drivers: Career venturing	0.10	**0.46**	3.80	0.05*
Career harmonisers: Social connectivity	0.20	0.31	40.74	<.0001

***p≤0.001 **p≤0.01 *p≤0.05

+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size)

Table 5.18: ANOVA: Ethical/responsible behaviour

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	6	15.10413	2.51736	12.53	<.0001***
Error	87	17.47459	0.20086		
Total	93	32.57872			

Tables 5.17 and 5.18 show that the regression of the selected PCRI variables (*practical/creative*, *career venturing and social connectivity)* upon the *ethical/responsible behaviour* variable produced a statistically significant model (*F* (12.53); p ≤ 0.001), accounting for 46% of the variance.

Even though all of the aforementioned PCRI variables contributed significantly to the variance in the *ethical/responsible behaviour* variable scores the career enabler variable *practical/creative* obtained the largest beta weight (ß = 0.30, p ≤0.001) followed by the *practical/creative* variable (ß = 0.21, p ≤0.00) had a significantly larger influence on the *ethical/responsible behaviour* variable. The Pearson correlation results in table 5.4 reported similar results.

5.4.1.8. Analytical thinking variable

Table 5.19: Multiple Regression Analysis: Analytical thinking

Variable	Parameter Estimates	Model R-Square	F Value	Pr>F
Analytical thinking (constant)	ß			
Career enablers: Practical/creative	0.40	0.21	24.16	**<.0001*** **
Career enablers: Self/other	0.28	**0.27**	4.24	**0.04***
Career drivers: Career purpose	-0.22	0.24	3.48	0.07

***p≤0.001 **p≤0.01 *p≤0.05

+ R^2 ≤0.12 (Small practical effect size) ++ R^2 ≥0.13≤0.25 (Medium practical effect size) +++ R^2 ≥0.26 (Large practical effect size)

Table 5.20: ANOVA: Analytical thinking

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	3	17.50334	5.83445	11.18	**<.0001*** **
Error	90	46.98070	0.52201		
Total	93	64.48404			

Tables 5.19 and 5.20 show the regression of the selected PCRI variables (*practical/creative and self/other)* upon the *analytical thinking* variable produced a statistically significant model (*F* (11.18; p ≤ 0.001), accounting for 27% of the variance.

The career enabler variable *practical/creative* obtained the largest beta weight (ß = 0.40, p ≤0.001). Consequently, the *practical/creative* variable will have a significantly larger influence on the *analytical thinking* variable. This observation was also in line with the Pearson correlation results in table 5.4.

5.4.2. Comparison of sample biographically

5.4.2.1. Reporting of differences in mean scores (PCRI and GS)

To test for differences in mean scores of some of the biographical groups, an ANOVA, analysis of variance test was conducted to determine whether significant differences existed between the biographical variables. However, for the PCRI dimensions the requirements and assumptions for ANOVA were not met. A normal blom transformation was conducted after which the data complied with assumptions. Where differences were found either the Tukeys T-test or the least squares means t-test were used as post-hoc test for pairwise comparison.

The effect size can be interpreted as follows:

0.01-0.05: small effect

0.06-0.14: medium effect

>0.15: large effect

Table 5.21 provides a summary of the ANOVA's for the groups for the PCRI dimensions:

a) Age
b) Gender
c) Field of study
d) Employment status

Table 5.21: Significant differences in mean scores (ANOVA): PCRI

PCRI				
Variable	**DF**	**F Value**	**Sig.**	**Partial Eta Square**
Career preferences: Stability/expertise				
Age		0.84	0.36	0.0099
Gender		0.06	0.81	0.0007
Field of study		0.48	0.62	0.0115
Employment status		0.02	0.90	0.0002
Career preferences: Managerial				
Age		0.19	0.67	0.0020
Gender		0.38	0.54	0.0041
Field of study		2.67	0.08	0.0581
Employment status		0.73	0.40	0.0079
Career preferences: Variety/creativity				
Age		0.29	0.59	0.0034
Gender		0.12	0.73	0.0014
Field of study		1.00	0.37	0.0236
Employment status		0.01	0.94	0.0001
Career preferences: Freedom/autonomy				
Age		0.78	0.38	0.0091
Gender		0.00	0.96	0.0000
Field of study		0.93	0.40	0.0218
Employment status		0.97	0.33	0.0113
Career values: Growth/development				
Age		0.24	0.63	0.0026
Gender		**4.39**	**0.04***	**0.0479**
Field of study		0.62	0.54	0.0136
Employment status		0.01	0.92	0.0001
Career values: Authority/influence				
Age		0.67	0.41	0.0079
Gender		2.50	0.12	0.0295
Field of study		0.59	0.56	0.0138
Employment status		0.08	0.79	0.0009
Career enablers: Practical/creative				
Age		3.60	0.06	0.0399
Gender		0.69	0.41	0.0076

Field of study		2.33	0.10	0.0517
Employment status		3.69	0.06	0.0409
Career enablers: Self/other				
Age		0.10	0.76	0.0009
Gender		2.99	0.09	0.0290
Field of study		**5.42**	**0.01****	**0.1052++**
Employment status		**4.38**	**0.04***	**0.0425+**
Career drivers: Career purpose				
Age		0.48	0.49	0.0050
Gender		**7.77**	**0.01****	**0.0804 ++**
Field of study		0.37	0.70	0.0076
Employment status		0.71	0.40	0.0073
Career drivers: Career directedness				
Age		2.33	0.13	0.0264
Gender		0.23	0.63	0.0026
Field of study		2.42	0.10	0.0548
Employment status		0.18	0.67	0.0020
Career drivers: Career venturing				
Age		0.37	0.55	0.0042
Gender		0.14	0.71	0.0016
Field of study		2.93	0.06	0.0661
Employment status		0.30	0.59	0.0033
Career harmonisers: Self-esteem				
Age		0.49	0.49	0.0052
Gender		**4.02**	**0.05***	**0.0433 +**
Field of study		1.93	0.15	0.0415
Employment status		0.07	0.79	0.0008
Career harmonisers: Behavioural adaptability				
Age		0.03	0.87	0.0003
Gender		2.73	0.10	0.0300
Field of study		2.14	0.12	0.0471
Employment status		0.08	0.78	0.0009
Career harmonisers: Emotional literacy				
Age		0.46	0.50	0.0051
Gender		2.24	0.14	0.0246
Field of study		1.36	0.26	0.0300
Employment status		0.38	0.54	0.0041
Career harmonisers: Social connectivity				
Age		0.66	0.42	0.0074
Gender		2.35	0.13	0.0261
Field of study		1.17	0.32	0.0259
Employment status		0.01	0.90	0.0002

***p≤0.001 **p≤0.01 *p≤0.05 Effect size: +++ >0.15 ++0.06-0.14 +0.01-0.05

Table 5.22: Mean scores: Biographical variables: PCRI

Variable	N	Mean	Std Dev
Career preferences: Stability/expertise			
Age			
18 – 21 years	70	5.25	0.57
22 – 34 years	18	5.11	0.66
Gender			

Male	31	5.17	0.53
Female	57		
Field of study			
Sciences	26	5.12	0.70
BEd, BA and BMus	34	5.25	0.61
BCom, LLB, Political and Social Sciences	28	5.29	0.46
Employment status			
Employed	38	5.25	0.52
Student	50	5.20800000	0.64
Career preferences: Managerial			
Age			
18 – 21 years	70	4.42	0.88
22 – 34 years	18	4.46	1.13
Gender			
Male	31	4.64	0.75
Female	57	4.32	1.00
Field of study			
Sciences	26	4.41	0.90
BEd, BA and BMus	34	4.17	0.88
BCom, LLB, Political and Social Sciences	28	4.76	0.94
Employment status			
Employed	38	4.62	1.08
Student	50	4.29	0.77
Career preferences: Variety/creativity			
Age			
18 – 21 years	70	4.92	0.93
22 – 34 years	18	4.85	1.00
Gender			
Male	31	4.99	0.98
Female	57	4.86	0.92
Field of study			
Sciences	26	4.71	0.98
BEd, BA and BMus	34	4.91	0.91
BCom, LLB, Political and Social Sciences	28	5.08	0.93
Employment status			
Employed	38	4.98	1.02
Student	50	4.85	0.88
Career preferences: Freedom/autonomy			
Age			
18 – 21 years	70	4.46	1.02
22 – 34 years	18	4.25	0.94
Gender			
Male	31	4.30	1.04
Female	57	4.48	0.98
Field of study			
Sciences	26	4.27	1.00
BEd, BA and BMus	34	4.57	1.013
BCom, LLB, Political and Social Sciences	28	4.38	0.99
Employment status			
Employed	38	4.29	1.11
Student	50	4.52	0.90
Career values: Growth/development			
Age			

18 – 21 years	70	5.57	0.59
22 – 34 years	18	5.43	0.71
Gender			
Male	31	5.33	0.69
Female	57	5.65	0.55
Field of study			
Sciences	26	5.39	0.68
BEd, BA and BMus	34	5.60	0.67
BCom, LLB, Political and Social Sciences	28	5.62	0.48
Employment status			
Employed	38	5.45	0.68
Student	50	5.60	0.57
Career values: Authority/influence			
Age			
18 – 21 years	70	4.73	0.94
22 – 34 years	18	4.72	0.85
Gender			
Male	31	4.91	0.76
Female	57	4.63	0.99
Field of study			
Sciences	26	4.66	0.96
BEd, BA and BMus	34	4.75	0.94
BCom, LLB, Political and Social Sciences	28	4.77	0.88
Employment status			
Employed	38	4.80	0.95
Student	50	4.67	0.90
Career enablers: Practical/creative			
Age			
18 – 21 years	70	4.73	0.83
22 – 34 years	18	4.49	0.66
Gender			
Male	31	4.56	0.87
Female	57	4.74	0.76
Field of study			
Sciences	26	4.50	0.95
BEd, BA and BMus	34	4.71	0.69
BCom, LLB, Political and Social Sciences	28	4.79	0.77
Employment status			
Employed	38	4.5	0.89
Student	50	4.79	0.72
Career enablers: Self/other			
Age			
18 – 21 years	70	5.02	0.64
22 – 34 years	18	4.98	0.59
Gender			
Male	31	4.79	0.55
Female	57	5.13	0.64
Field of study			
Sciences	26	4.79	0.77
BEd, BA and BMus	34	5.02	0.51
BCom, LLB, Political and Social Sciences	28	5.21	0.57
Employment status			
Employed	38	4.87	0.70

Student	50	5.12	0.56
Career drivers: Career purpose			
Age			
18 – 21 years	70	5.36	0.88
22 – 34 years	18	4.94	0.91
Gender			
Male	31	4.86	1.09
Female	57	5.50	0.68
Field of study			
Sciences	26	5.13	1.11
BEd, BA and BMus	34	5.45	0.67
BCom, LLB, Political and Social Sciences	28	5.19	0.91
Employment status			
Employed	38	5.20	0.85
Student	50	5.33	0.93
Career drivers: Career directedness			
Age			
18 – 21 years	70	4.83	0.75
22 – 34 years	18	4.64	0.67
Gender			
Male	31	4.73	0.66
Female	57	4.82	0.78
Field of study			
Sciences	26	4.55	0.83
BEd, BA and BMus	34	4.95	0.58
BCom, LLB, Political and Social Sciences	28	4.83	0.78
Employment status			
Employed	38	4.78	0.73
Student	50	4.80	0.75
Career drivers: Career venturing			
Age			
18 – 21 years	70	4.24	1.14
22 – 34 years	18	4.15	0.85
Gender			
Male	31	4.12	0.93
Female	57	4.28	1.17
Field of study			
Sciences	26	3.91	1.10
BEd, BA and BMus	34	4.57	0.96
BCom, LLB, Political and Social Sciences	28	4.10	1.14
Employment status			
Employed	38	4.14	1.03
Student	50	4.29	1.13
Career harmonisers: Self-esteem			
Age			
18 – 21 years	70	4.89	0.91
22 – 34 years	18	4.97	0.71
Gender			
Male	31	4.64	0.92
Female	57	5.05	0.82
Field of study			
Sciences	26	4.61	0.99
BEd, BA and BMus	34	4.90	0.89

BCom, LLB, Political and Social Sciences	28	5.19	0.64
Employment status			
Employed	38	4.86	0.89
Student	50	4.94	0.86
Career harmonisers: Behavioural adaptability			
Age			
18 – 21 years	70	4.88	0.81
22 – 34 years	18	4.84	0.60
Gender			
Male	31	4.62	0.79
Female	57	5.00	0.73
Field of study			
Sciences	26	4.65	0.88
BEd, BA and BMus	34	4.85	0.80
BCom, LLB, Political and Social Sciences	28	5.10	0.55
Employment status			
Employed	38	4.83	0.81
Student	50	4.90	0.75
Career harmonisers: Emotional literacy			
Age			
18 – 21 years	70	4.51	0.99
22 – 34 years	18	4.33	0.87
Gender			
Male	31	4.17	0.99
Female	57	4.63	0.92
Field of study			
Sciences	26	4.15	1.04
BEd, BA and BMus	34	4.57	1.02
BCom, LLB, Political and Social Sciences	28	4.64	0.75
Employment status			
Employed	38	4.48	0.93
Student	50	4.46	0.99
Career harmonisers: Social connectivity			
Age			
18 – 21 years	70	4.83	0.85
22 – 34 years	18	4.86	0.71
Gender			
Male	31	4.57	0.78
Female	57	4.98	0.81
Field of study			
Sciences	26	4.52	0.93
BEd, BA and BMus	34	5.04	0.89
BCom, LLB, Political and Social Sciences	28	4.86	0.48
Employment status			
Employed	38	4.78	0.85
Student	50	4.87	0.80

Table 5.23: Least squares means t-test (PCRI)

Least squares means Pr>ltl for H0: LSMean (i)=LSMean(j) Dependent variable: Career enablers: Self/Other			
i/j	**1**	**2**	**3**
1		0.2837	0.4854
2	0.2837		0.7449
3	0.4854	0.7449	

5.4.2.2. Interpretation of differences in mean scores for the biographical variables in PCRI variables

As per table 5.21 and 5.22 it is suggested that female participants showed a significantly greater need for *growth/development* (m = 5.65) than males (5.33). In addition females scored significantly higher on *career purpose* (m = 5.50) and males (4.86). Lastly, females achieved higher scores with regards to the *self-esteem* career harmoniser (m = 5.05) and males (m = 4.64). Coetzee (2008:15) also found significant differences between males and females regarding the *growth/development* and *self-esteem* variables. The latter may indicate that females have a more positive self-image than the male participants.

With reference to the comparison between the different study fields only the career enablers variable *self/other* indicated significant differences. According to table 5.23 significant differences exist between students studying in science/engineering related fields (m=4.79) and BCom/Law/Political related fields where the latter showed a greater confidence in their self/other skills (m=5.21)

The biographical variable *employment status* identified significant differences on the *self/other* variable where the respondents who are currently not working, but only students achieved significant higher scores (m = 5.12) than employed participants (m = 4.87).

5.4.2.3. Reporting on the differences in mean scores for GS dimensions

Table 5.24 provides a summary of the ANOVA's for the groups for the GS dimensions:

a) Age
b) Gender
c) Field of study
d) Employment status

Table 5.24: Significant differences in mean scores (ANOVA): GS (N=93)

GS				
Variable	**DF**	**F Value**	**Sig.**	**Partial Eta Square**
Interactive skills				
Age		2.34	0.13	0.026
Gender		0.39	0.53	0.004
Field of study		2.32	0.11	0.051
Employment status		0.07	0.79	0.000
Problem-solving				
Age		0.43	0.52	0.004
Gender		1.01	0.32	0.011
Field of study		1.32	0.27	0.030
Employment status		1.23	0.2710	0.014
Continuous learning orientation				
Age		0.01	0.94	0.000
Gender		1.00	0.32	0.012
Field of study		0.11	0.90	0.003
Employment status		1.29	0.26	0.015
Enterprising skills				
Age		0.01	0.92	0.000
Gender		0.37	0.54	0.004
Field of study		0.70	0.50	0.016
Employment status		0.51	0.48	0.006
Presenting and applying information				
Age		0.12	0.73	0.001
Gender		1.05	0.31	0.012
Field of study		1.39	0.25	0.032
Employment status		0.05	0.83	0.000
Goal-directed behaviour				
Age		0.16	0.68	0.002
Gender		3.35	0.07	0.037
Field of study		0.11	0.89	0.003
Employment status		3.73	0.06	0.041
Ethical/responsible behaviour				
Age		0.03	0.86	0.000
Gender		0.21	0.65	0.002
Field of study		1.67	0.19	0.038
Employment status		0.28	0.60	0.003
Analytical thinking				
Age		0.28	0.60	0.003
Gender		1.96	0.17	0.021
Field of study		**3.48**	**0.04***	**0.075++**
Employment status		1.58	0.21	0.017

***p≤0.001 **p≤0.01 *p≤0.05 Effect size: +++ >0.15 ++0.06-0.14 +0.01-0.05

Table 5.25: Mean scores: Biographical variables: GS

Variable	N	Mean	Std Dev
Interactive skills			
Age			
18 – 21 years	70	4.81	0.56

22 – 34 years	18	4.61	0.46
Gender			
Male	31	4.64	0.50
Female	57	4.84	0.56
Field of study			
Sciences	26	4.591	0.49
BEd, BA and BMus	34	4.82	0.57
BCom, LLB, Political and Social Sciences	28	4.87	0.55
Employment status			
Employed	38	4.76	0.59
Student	50	4.77	0.52
Problem-solving			
Age			
18 – 21 years	70	4.55	0.59
22 – 34 years	18	4.48	0.59
Gender			
Male	31	4.46	0.65
Female	57	4.58	0.55
Field of study			
Sciences	26	4.38	0.45
BEd, BA and BMus	34	4.52	0.53
BCom, LLB, Political and Social Sciences	28	4.71	0.73
Employment status			
Employed	38	4.63	0.729
Student	50	4.46	0.45
Continuous learning orientation			
Age			
18 – 21 years	70	4.58	0.68
22 – 34 years	18	4.50	0.57
Gender			
Male	31	4.50	0.60
Female	57	4.60	0.69
Field of study			
Sciences	26	4.566	0.54
BEd, BA and BMus	34	4.56	0.69
BCom, LLB, Political and Social Sciences	28	4.57	0.73
Employment status			
Employed	38	4.62	0.66
Student	50	4.52	0.66
Enterprising skills			
Age			
18 – 21 years	70	4.25	0.60
22 – 34 years	18	4.33	0.48
Gender			
Male	31	4.37	0.68
Female	57	4.21	0.51
Field of study			
Sciences	26	4.24	0.62
BEd, BA and BMus	34	4.17	0.51
BCom, LLB, Political and Social Sciences	28	4.40	0.60
Employment status			
Employed	38	4.37	0.65
Student	50	4.1	0.51

Presenting and applying information			
Age			
18 – 21 years	70	4.54	0.66
22 – 34 years	18	4.61	0.61
Gender			
Male	70	4.46	0.63
Female	18	4.61	0.66
Field of study			
Sciences	26	4.45	0.62
BEd, BA and BMus	34	4.49	0.62
BCom, LLB, Political and Social Sciences	28	4.73	0.69
Employment status			
Employed	38	4.55	0.72
Student	50	4.56	0.60
Goal-directed behaviour			
Age			
18 – 21 years	70	4.42	0.63
22 – 34 years	18	4.30	0.51
Gender			
Male	31	4.26	0.60
Female	57	4.47	0.60
Field of study			
Sciences	26	4.27	0.52
BEd, BA and BMus	34	4.43	0.61
BCom, LLB, Political and Social Sciences	28	4.48	0.67
Employment status			
Employed	38	4.51	0.68
Student	50	4.31	0.53
Ethical/responsible behaviour			
Age			
18 – 21 years	70	4.95	0.64
22 – 34 years	18	5.00	0.47
Gender			
Male	31	4.89	0.60
Female	57	5.00	0.61
Field of study			
Sciences	26	4.75	0.64
BEd, BA and BMus	34	5.10	0.48
BCom, LLB, Political and Social Sciences	28	4.99	0.67
Employment status			
Employed	38	5.01	0.62
Student	50	4.93	0.59
Analytical thinking			
Age			
18 – 21 years	70	4.41	0.87
22 – 34 years	18	4.46	0.81
Gender			
Male	31	4.62	0.87
Female	57	4.31	0.83
Field of study			
Sciences	26	4.59	0.92
BEd, BA and BMus	34	4.10	0.81

BCom, LLB, Political and Social Sciences	28	4.65	0.75
Employment status			
Employed	38	4.39	0.89
Student	50	4.44	0.83

The data complied with the assumptions of equal variance and normality of residuals. Where differences were found Tukey's test was done as a post hoc test to compare pairwise.

Table 5.26: Tukey test: GS dimensions: Field of study

Tukey test				
Tukey grouping		**Mean**	**N**	**Field of study**
	A	**4.6518**	**28**	**7-10**
	A			
B	A	4.5865	26	1,6,2,4
B				
B		**4.1029**	**34**	**3,5**

5.4.2.4. Interpretation of differences in mean scores for the biographical variables and GS dimensions

With specific reference to tables 5.24 and 5.25 the only dimension that showed significant differences was the *analytical thinking* variable *and field of study* biographical variable. The Tukey test was used as a post-hoc test to indicate the differences in mean scores. As per table 5.26 the Sciences study fields showed a significant difference (m = 4.65) when compared to the BCom, LLB and Political Sciences field 9 (m = 4.10). The students studying either Engineering or a medically/science-related field may therefore be more confident in their ability to display *analytical thinking skills*.

5.5. Integration of research findings

The study had three main empirical objectives, namely:

a) to provide a description of the psychological career resources and graduateness profile of students leaders at a higher education institution; and
b) to investigate and evaluate whether a relationship existed between the psychological career resources and graduateness; and
c) to determine whether gender, age groups, employed vs. student and fields of study differed significantly with regards to their psychological career resources and graduateness.

The overall research findings indicated that a significant relationship existed between the participants' *psychological career resources* and *graduateness* and with overall medium practical effect. In addition, some significant differences existed between the most significant predictor psychological career resources and the graduateness variables of the sociodemographic groups. However, with interpretation of the results one should take into account the sociodemographic characteristics of the sample:

a) the sample consisted predominantly of female participants and who are under the age of 21 years; and
b) the sample consisted predominantly of participants who have never worked and represented various study fields;

The overall psychological career resources profile of the participants indicated that they have a strong desire to experience job security and stability in their career and have the opportunity to display their expertise in their specific field. In line with this preference the participants wish to grow and develop themselves throughout their careers (Coetzee & Esterhuizen, 2010). In the context of this study this finding may be significant as participants need to be aware of the uncertain conditions of the world of work and that they may need to be willing to develop themselves at a constant pace if they want to remain employable. The participants furthermore appeared to have a strong sense of career purpose and the career goals they want to achieve. In addition, participants appeared to be confident in their ability to use self/other skills, but did not feel too confident in their ability to translate practical concepts to real-world situations. In the context of this study the latter may come to be problematic as graduates need to be able to translate technical knowledge to practical situations.

The participants lastly appeared to have a positive self-esteem and believe that they have the ability to adapt their behaviour to changing conditions that will assist them throughout their career (Ferreira, Basson & Coetzee, 2010). However, the participants' ability to work independently, explore with new career opportunities and use their own and others' emotions in the career decision-making processes appeared slightly out of balance. However, the participants may realise that *authority/influence* may be less important as they need to remain up to speed regarding the qualities needed to remain employable and therefore growth/development becomes important.

The high scores on *growth/development, stability/expertise* and *career purpose* and directedness may indicate that participants wish to work in an environment where they will have the ability to develop their expertise and skills, take into account their career goals and have the opportunity to accomplish their career goals and objectives. This finding may be partly attributed to the fact that the sample consisted predominantly of students who may still

have clear career goals and objectives and desire to develop themselves early in their careers. This finding is in line with Coetzee and Schreuder (2008) who found similar results. In addition, the study of Chia (2003) confirmed that young accounting graduates wish to work in an environment that values their expertise and where their work is meaningful.

The career preference *variety/creativity* was reported as a positive predictor of all the graduateness constructs. The effect size yielded a medium significance and it may therefore imply that individuals who wish to have a career that offers stability and expertise will most likely view all of the graduateness skills as important skills needed to achieve such a career.

Stability/expertise was reported as a positive predictor of all of the graduateness dimensions except for the *analytical thinking* variable. Only the *interactive skills* variable and the *analytical variable* will be positively predicted by the *managerial* career preference variable. This finding may suggest that the participants believe that they will need to develop their interactive skills and analytical thinking ability if they wish to enter positions of higher responsibility and management. The findings had a small practical significance and one can therefore only make the conclusion that a significant relationship exist between the two constructs, but the degree thereof requires further investigation.

With regards to the career values *growth/development* was reported as a positive predictor of all the graduateness dimensions except for the *analytical thinking* variable. However, only the *interactive skills* and *presenting and applying information* variable yielded a medium practical significance. This finding may suggest that the participants will most likely develop these two skills if they have a desire to develop and grow throughout their careers. However, this finding may need further investigation. The findings of the study also indicated that females had scored stronger on the *growth/development* as a career value. This may therefore indicate that females have a stronger desire to have growth in their careers. This finding is interesting as Coetzee (2008) found contrasting results where males scored significantly higher than females on the *growth/development* variable. The findings furthermore indicated that *authority/influence* indicated a positive relationship with *analytical thinking.* However, the practical significance was small and consequently this finding requires further investigation.

Both the career enablers *practical/creative* and *self/other* variables reported a significant positive relationship with all of the graduateness skills. In addition, the relationships reported had medium and large practical significance. The finding may suggest that if the participants have identified the practical and self-management skills and qualities they believe they need for career success they will most likely develop the graduateness skills. This finding seems true as the graduateness skills are in effect the transferrable skills that people need for career success and employability and one may therefore expect the existence of a

relationship. Furthermore, *problem-solving* and *presenting and applying information* had a large practical effect size which may indicate that the participants will most likely develop these two skills if they score high on the career enablers. These findings are supported by Coetzee and Esterhuizen (2010) who found that graduates who believe in their ability to use problem-solving and practical skills in goal-setting activities will also view themselves as being able to form meaningful social networks to accomplish these goals.

In addition, the findings suggest that participants studying towards a BCom or Law-related degree differed significantly from those participants towards a Science- and Medicine-related degree. This may imply that participants in the former fields of study may believe that they have the skills needed to interact with people and establish meaningful relationships that will assist them in their careers. People studying medicine or science may believe that they do not need to establish relationships if they want to be successful in their particular occupations. Furthermore, the findings indicated that students who have never worked before will have greater confidence in their ability to establish meaningful relationships. This finding is interesting as one may expect that those participants who have worked before would have scored higher. However, it may also be that participants who have worked before may be more realistic about their career success and believe they need further development if they wish to succeed.

The *career purpose* variable reported a positive relationship with only the *ethical/responsible/responsible behaviour* variable. This finding may indicate that individuals who have a strong calling to their career will most likely be willing to take responsibility for actions taken and ensure that the rules and regulations of their profession or work environment are upheld.

Furthermore, the findings indicate that females had a stronger sense of their career calling than males which may imply that females had a greater perception of the meaningfulness of their career and job (Chia, 2003; Coetzee, 2008).

Both *career directedness* and *career venturing* were reported as positive predictors of all the graduateness dimensions except the *analytical thinking* variable. Especially the *career directedness* variable yielded medium practical significance which may in turn imply that if the participants had a clear sense of their future career goals and objectives and the availability and location of resources to achieve these goals they will most likely develop their ability to interact with people, provide creative solutions to problems and present these solutions to people, continue to develop themselves, develop their goal-setting activities and take responsibility for their actions.

All of the career harmonisers, *self-esteem, behavioural adaptability, emotional literacy* and *social connectivity* were reported as positive predictors of all the graduatenesss variables, except for the analytical thinking variable. The findings also reported medium to large practical significance. Since graduateness is closely related to the concept of employability the study of Fugate (2007) is also relevant as the findings also suggest that a person's employability may be significantly influenced by their self-awareness, adaptability and social support. In addition, Griffin and Hesketh (2005) also confirmed that an individual's problem-solving ability, one of the attributes of graduateness, may be related to their behavioural adaptability.

The study of Brown *et al.* (2003) also highlight that individuals who had high emotional intelligence were in a better position to make career decisions and remain committed to their decisions. This is especially relevant to this study as the participants' emotionally literacy may significantly influence the development of their overall graduateness which is in turn related to their career decisions. In addition to the aforementioned studies Dulewicz and Higgs (2000) found that a person's emotional intelligence may significantly influence their willingness and ability to engage in continuous learning and thereby increasing their performance. With regards to this study it is confirmed that an individual's emotional literacy will significantly influence their continuous learning orientation.

More specifically, the variables *social connectivity* had a large practical relationship with *interactive skills, goal-setting* and *ethical/responsible/responsible* behaviour variables. Consequently, this finding may suggest that participants who value their ability to connect with people and develop significant relationships are likely to develop and value their interactive skills, ability to meet deadlines and set meaningful and attainable goals and strive to uphold their workplace's rules and standards and take responsibility for their actions.

Furthermore, the findings indicated that *behavioural adaptability* had a large significant positive relationship with *interactive skills* and *ethical/responsible/responsible behaviour* variable. This finding may suggest that if the participants believe they are capable of identifying the qualities they need to succeed and changing their behaviours to meet their career-related needs they will feel more confident in their ability to communicate and interact with people and also increase their willingness to take responsibility for decisions related to the ethical/responsible guidelines of their workplace and profession.

Emotional literacy and *self-esteem* were also reported as a large positive predictor of *ethical/responsible/responsible behaviour*. These findings may suggest that participants may be more willing to take responsibility for ethical/responsible and moral decisions related to their occupation if they have a positive self-image and belief in their ability to use their

emotions constructively in career-related decision-making processes and making the necessary changes in their career. Greenhaus *et al.* (1995) confirmed this finding and suggest that individuals will be able to engage in meaningful goal-setting activities if they believe in their own personal qualities. In addition, the study found that female participants had a more positive self-image than the male participants. This finding is in contrast with that of Coetzee (2008) who found that males had a more positive self-image, but is confirmed by Ferreira *et al.*'s (2010) study. Consequently, this finding may indicated that female participants who have a positive self-image and confidence in their emotional literacy will be more likely willing to take responsibility for maintaining the ethical/responsible and moral guidelines for their workplace.

In summary, participants who have a positive self-image with the ability to develop meaningful relationships, use their own and others' emotions to facilitate career decisions and adapt their behaviours to be successful in their careers will be also likely to develop their ability to communicate and interact with people, provide creative solutions to problems and present these solutions successfully in written and oral format. In addition, they will be more likely to remain open to learning and improving themselves, set meaningful goals and take action to achieve such goals and be willing to take responsibility for upholding the rules and regulations of their profession and take full responsibility for actions taken.

The overall findings of this study suggests that student leaders prefer careers where they will be required to work in a stable and secure environment, but where they will be allowed to work on a variety of tasks which will enable them to use their creativity. In addition, the student leaders, more specifically the female students will desire to further develop and grow themselves and will believe that they have the ability to take responsibility for the management of their careers and ensure they have appropriate personal resources to do so. The latter will be fuelled by their positive self-image and the willingness to change their behaviours to suit future career needs. These changes in behaviour may however be influenced by their ability to connect with others, forming meaningful relationships and using their emotions constructively to facilitate career decisions. The student leaders feel confident in their ability to accomplish the aforementioned. However, the female student leaders may have greater confidence in themselves leading to a better self-image and also have a stronger career calling which may influence their overall job satisfaction (Coetzee & Bergh, 2008).

Within the context of entry into the labour market the student appears to be satisfied with their ability to display their graduateness (Coetzee, 2010). Specifically, the student leaders appear to be willing to take responsibility for decisions related to the ethical/responsible and

moral guidelines of their profession and workplace, using their ability to interact with people from diverse backgrounds whilst also remaining open to learning and improving themselves. As Pukelis and Pileicikiene (2010:113), Owen (2001:122) and Gow and McDonald (2000: 378) highlight graduates will need to display these characteristic.

However, as the empirical results have indicated a person's psychological career resources may significantly influence the development of their graduateness. This study has highlighted that the student leaders' preference for a stable/secure career that offers a variety of tasks where they have the desire to continuously grow and develop may influence their ability to communicate and interact with people from diverse backgrounds, provide creative solutions to problems and present these solutions to the relevant parties and the motivation to continuously learn and improve themselves. In addition, it may influence their ability to set meaningful and reachable goals, develop action plans to achieve them and take responsibility for decisions made. Furthermore, the successful development of their graduateness skills will be influenced by their degree of self-management and the confidence to translate technical knowledge to real-world situations. However, they will also need to remain adaptable to changing situations, have a positive self-image and belief in their ability to complete tasks and be able to use their emotions effectively to make career decisions.

As Coetzee (2008) confirms a person's psychological career resources will significantly influence their proactive career behaviour and in turn their employability. Since employability will serve as an outcome of a person's graduateness his/her psychological career resources will significantly influence their graduateness.

Table 5.27 provides a summary of the research findings as described by the research hypotheses.

Table 5.27: Hypotheses summary

Hypotheses		Decision
H01	There is no significant relationship between psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness	Rejected
H1	There is a significant relationship between psychological career resources (career preference, career values, career enablers, career drivers and career harmonisers) and graduateness	Accepted
H02	There are no significant differences between gender, age, field of study and employment regarding psychological career resources and graduateness	Rejected
H2	There are significant differences between gender, age, field of study and employment status regarding psychological career resources and graduateness	Accepted

In summary, the null hypotheses are rejected and the alternative hypotheses accepted. The steps required in an empirical investigation have been followed and the empirical objectives formulated to determine whether a relationship exist between psychological career resources and graduateness in a sample of participants who are student leaders at a higher education institution. In addition, steps were completed to determine whether differences existed between gender, age, field of study and employment status and their psychological career resources and graduateness.

5.6. Chapter summary

The purpose of this chapter was to report on and interpret the findings of the empirical inquiry related to the psychological career resources (career preferences, career values, career enablers, careers drivers and career harmonisers) and the graduateness variables (interactive skills, problem-solving skills, continuous learning orientation, enterprising skills, presenting and applying information, goal-directed behaviour, ethical/responsible/responsible behaviour and analytical thinking skills) of student leaders at a higher education institution. These steps included the determination of whether a relationship existed between these variables and whether significant differences existed between predetermined sociodemographic variables. The chapter concluded with an integration of the key findings of the study and focused on the relationship between psychological career resources and graduateness. Chapter 6 will address the conclusions for the study, the limitation thereof and recommendations and implications for practice and future research.

CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1. Introduction

The purpose of this chapter is to make conclusions regarding the literature review and empirical study objectives. The chapter will also address the limitations of the study and make recommendations for practitioners in the higher education and industrial and organizational psychology fields and further research.

6.2. Conclusions

The main objective of this study was to investigate and describe the graduateness and psychological career resources of student leaders at a higher education institution and determine whether a relationship exists. Specific research objectives were set to achieve the main objective of the study. This chapter will serve to draw conclusions of each of the stated research objectives.

6.2.1. Conclusions regarding the literature review

6.2.1.1. The first objective: describe the 21st century workplace, the impact on careers and the skills needed to be successful

The first research objective related to the literature review was to describe trends in the 21st century that changed the workplace and the impact it will have on careers and workplace skills needed to survive in the 21st century workplace.

The following conclusions are drawn:

There have been a number of trends that have impacted how organizations do business today. Globalisation and the advances in technology have led to organizations being able to search for talent in places all over the world (Karoly & Panis, 2004; Jerald, 2009). In addition, these changes have enabled organizations to form virtual teams where skills and talent across national and international borders meet to achieve the company's objectives. The latter has in turn enabled individuals to seek a greater work/life balance and have more flexibility in their careers. The result of these trends have led to the new workplace now characterised by less hierarchies and supervision, more flexible work arrangements and less stability in the workplace (Pink, 2005; Jerald, 2009).

The literature indicated that the changes in the world of work have also impacted the psychological contract between organizations and individuals. Traditionally, the psychological

contract valued security, stability, loyalty and compliance with authority. In addition, there was a strong focus on satisfactory performance and the organization was held responsible for employees' career management (Hilltrop, 1995). However, in the 21st century workplace the psychological contract is strongly influenced by the changes in the workplace. Individuals are now required to focus on their future employability, their skills and the value they can add. Furthermore, workers have the responsibility to manage their careers, reskill themselves and ensure that retraining is conducted. As it is evident from the changing psychological contract individuals should display the ability to show tolerance for uncertainty and ambiguity, enact changes to improve performance and remain flexible. With specific reference to the participants of this study the literature indicated that graduates' pre-employment beliefs and obligations will significantly influence their psychological contract with future employers and how they approach the employer-employee relationship (De Vos & Stobbeleir, 2009). Higher education institutions may therefore need to familiarise students with the psychological contract and how it may impact their performance, satisfaction and commitment.

From the literature it is clear that the changes in the workplace and psychological contract have had a significant impact on careers in the 21st century. The protean and boundaryless career has started to replace the traditional career. The protean career puts the individual at the centre of the career and no longer the individual (Hall, 1996). The individual now has to ensure that he/she engages in continuous learning activities to ensure they acquire and develop the skills needed to be successful. The protean career furthermore value psychological success with a strong focus on employability and the development of the whole self and not only the work self. The boundaryless career, on the other hand, emphasise an individual's responsibility to have self- as well as market-knowledge. Individuals need to be aware of their own interests, preferences and morals and the places in the market where they will be able to exercise these interests and preferences. In addition, individuals should be able to leverage their competencies and develop new skills (Arthur & Rousseau, 1996). The impact of the latter is that individuals will be required to remain open to learning and developing themselves if they wish to remain competitive in the labour market.

The changes in the workplace and careers have changed in the skills employers' demands. Employers now value cultural literacy, global awareness and interpersonal skills. In addition, they expect individuals to be able to cope under changing circumstances, manage their own careers and continuously improve and develop themselves. Employers seek individuals who are able to use technology efficiently, display a high level of reasoning, problem-solving and decision-making abilities take responsibility for enforcing moral and ethical guidelines related

to their workplace and profession. Lastly, employers will expect people to prioritise and plan their activities in such a way that they remain productive and contribute to the organization's goals and objectives (NCREL & Metiri Group, 2003).

The conclusion to be drawn from this research objective is that employers are fully aware of the changes in the workplace and how it will influence their skills demands. Higher education institutions may need to reconsider their approach to the changes in the workplace and how it impacts their curricula and student development. Students may need to be informed more about employer requirements and may furthermore need to have opportunities to develop these skills and competencies. The literature may therefore suggest that students need to have a module focusing on their future workplace, the impact on their careers and the skills needed to be successful.

6.2.1.2. The second objective: conceptualise the construct of graduateness from a theoretical perspective

As it was stated earlier the changes in the workplace had a significant influence on the psychological contract and careers in general. In addition there was a shift in the skills requirements of employers and what they perceive to be critical skills and competencies for success in the workplace. The latter will in turn impact the approach higher education institutions have towards education and the relationship thereof to the workplace. From the literature it is evident that graduate careers have become uncertain and questions were asked regarding the demands for a degree (Harvey *et al.*, 1997). The researchers concluded that employers still valued a person who has a degree. However, the literature also indicated that employers sought graduates for the perceived skills and abilities they bring to the workplace. It was evident from the literature that employers believed graduates possess the so-called generic or transferrable skills needed to succeed in the new world of work. The latter gave rise to the concept of graduateness.

As per the literature graduateness can be described as the level of understanding, knowledge, skills and competencies a person is expected to have as a result of their participation at a higher education institution (HEQC, 1996). The research indicated that graduateness is dependent on the curricula of the higher education institution, the level of education and the tasks and activities presented at the institution.

In addition, the literature indicated that the achievement of graduateness will depend on the ability of the individual to acquire the discipline-specific skills and subject-related knowledge of their specific field of study (Hussain, 2007). Apart from this a student should be able to

acquire and develop the graduate attributes employers expect from them. These attributes included practical competence, continuous learning orientation, effective mobilisation of human resources, international orientation and self-reliant skills (Pukelis & Pileicikiene, 2010). In addition, the literature indicated that graduates should be able to display attributes that will facilitate self-motivating study habits and skills, assist them to contribute to the society, maintain the ethical and moral guidelines of their profession and enhance their overall employability.

However, some of the researchers cautioned that the achievement of graduateness may be influenced by a student's background factors, including their preferences, personality characteristics, approach to learning and level of education (Hussain, 2007). In addition, the literature emphasised the influence perceptions may have on the achievement of graduateness. More specifically, researchers warned that graduateness should be agreed upon by three role players, namely students, employers and universities (Chetty, 2010). This observation was based upon research indicating that the three parties had different expectations on what constitutes graduateness. The literature concluded that universities should form stronger links with employers to ensure they develop the skills, competencies and attributes prospective employers' desire.

Lastly, the following conclusions can be drawn from the literature on graduateness:

a) it may be influence by background factors a student brings to the university;
b) perceptions of the university, student and employer regarding graduateness need to be considered;
c) the focus is on the acquisition of discipline-specific skills and knowledge which may include skills related to a family of degrees; and
d) graduateness also entails the acquisition of the graduate attributes or generic skills perceived to be critical for success in the workplace.

Discussions surrounding graduateness also highlighted the close relationship it has with graduate employability. For this reason it was decided to conceptualise the various graduate employability models and make the necessary conclusions.

From the literature it is evident that graduate employability involves the acquisition and display of discipline-specific skills and competencies. In addition, graduates should have developed and display the generic or transferrable skills employers need in the workplace (Bennet *et al.*, 1999, Knight and Yorke, 2004; Bridgstock, 2009). All of the above should be accomplished through effective self-management and career management activities (Bridgstock, 2009) and with effective use of one's own and others emotions to facilitate these

activities (Pool & Sewell, 2007). The researchers emphasised that graduates should be able to critically evaluate and reflect on their performance, development and improvement and make the changes where necessary (Pool and Sewell, 2007; Bridgstock, 2009). The latter will enable the graduates to display the necessary self-confidence in their ability to demonstrate their field-specific skills and graduate attributes.

The discussion surrounding graduateness and graduate employability highlighted the close relationship between the concept and uncertainties surrounding the differences. The researcher however identified the following potential differences:

c) graduateness is achieved within the academic context where the individual is expected to participate in activities related to a specific degree and is exposed to an academically-coherent program whereas graduate employability may be lifelong and may also be developed through vocational training and in the marketplace or employment context;
d) graduate employability may focus on how the individual, who have completed their tertiary studies, will enter the labour market and the skills and competencies needed to do so. Grauduateness, on the other hand, may focus on merely describing the level of skills, knowledge and competencies a person should develop as a result of participating at a higher education institution. It may not address the specific attributes required to enter the workplace successfully.

Further research may however be required to identify, investigate and analyse similarities and differences between the two concepts (Glover, Youngman & Law, 2002).

6.2.1.3. The third objective: conceptualise the construct of psychological career resources from a theoretical perspective

The psychological career resource model proposed by Coetzee (2008) was also discussed as an employability model. Psychological career resources refer to those career orientations, preferences, attitudes and attributes that will influence an individual's self-empowering career behaviour and overall employability.

The literature indicated that a person has specific ideas and perceptions about their career and the subsequent path it should follow (Kim, 2005). These ideas may in turn influence their career decisions. An individual's career values may serve as the driver behind their career preferences as they believe certain careers may lead to accomplishment of the desired career values. These values are often the result of a person's personality, interests and competencies. From their career preferences and values individuals may set specific goals

and objectives which may in turn influence the perceived skills and competencies required to achieve these goals.

However, Coetzee (2008) warned that the accomplishment of career goals and objectives may be influenced by three career drivers, namely career purpose, career directedness and career venturing. Coetzee (2008) stated that a person's ability to achieve their career goals and objectives may be influenced by their ability to identify and locate resources needed to achieve goals. However, one first needs to be fully aware of what one desires from a career and what activities should be conducted to achieve such a career. Unfortunately, one may not also achieve the desired career and consequently may be forced to reconsider career goals and objectives. The latter is especially relevant in the new world of work as individuals need to display tolerance for uncertainty and change. Individuals may therefore be required to determine their willingness to experiment with different career opportunities.

With the latter kept in mind individuals may be forced to continuously improve and develop their skills and competencies if they wish to remain employable. Coetzee (2008) proposed that individuals should focus on the development of career enablers, which are divided into practical or creative skills and self/other skills. The former category is concerned with the development of the ability to translate a theoretical construct to a practical situation which will in turn enable them to challenge existing assumptions and identify new ways of doing things. Self or other skills will enable individuals to form meaningful relationships with others with the aim of achieving career-related goals and objectives. The self or other skills category may enable individuals to utilise personal relationships to enhance self-awareness and the influence emotions may have on decisions. This category may become important in the new world of work as people may be required to use interpersonal skills effectively if they wish to achieve goals and objectives.

Career harmonisers are needed to promote flexibility and resilience and enable the individual to develop the career enablers. Coetzee (2008) situated emotional literacy and social connectivity at the centre of the career harmonisers. Brown *et al.* (2003) and Emmerling and Cherniss (2003) emphasised that emotional intelligence may significantly influence career decisions and career development behaviours. In the context of this study the literature indicated that students with high emotional intelligence had a higher level of career-related self-awareness and their particular career preference. Emmerling and Cherniss (2003) also emphasised that emotionally-intelligent people will be in a better position to cope with rapidly changing work environments. To accomplish the latter people may be required to make some personal changes. Behavioural adaptability as identified by McArdle *et al.* (2007) and Coetzee (2008) refers to proactive actions initiated by individuals to adapt to change or

reactive behaviour where a person is forced to change themselves to better suit the current environment. Students may need to be exposed to situations where they will be forced to change their behaviours, skills and attitudes if they wish to remain successful in a specific work situation. None of the aforementioned psychological career resources may fully develop if an individual does not have the required social connections. Seibert *et al.* (2001), as well as Creed*et et al.* (2008) emphasise that people need to have access to social support and social networks which may in turn facilitate access to financial resources and career advice. Social connectivity or the ability to form meaningful relationships may enhance the individual's ability to accomplish career-related goals and objectives.

The conclusion to be drawn from this research objective is that an individual's psychological career resources, or their particular career preferences, values, enablers, drivers and harmonisers may influence how he or she manages their career. With specific reference to the context of this study a student's psychological career resources profile may influence how he or she approaches their career development. It may therefore influence the degree of development of discipline-specific skills and generic skills or graduate attributes.

6.2.2. Conclusions regarding the empirical study

The empirical section of this study aimed to address the following objectives:

a) to identify and describe the psychological career resources and graduates of participants occupying a leadership position at a higher education institution;
b) to investigate the relationship between graduateness and psychological career resources as revealed in a sample of participants occupying a leadership position at a higher education institution in South Africa;
c) to determine whether differences existed between age groups, gender, fields of study and employment status regarding their psychological career resources;
d) to determine whether differences existed between age groups, gender, fields of study and employment status regarding their graduateness; and
e) to formulate recommendations for the discipline of Industrial and Organizational Psychology, particularly with regards to career development.

The findings of the study led to rejection of hypothesis H01 and H02. H1 and H2 were accepted. The following sections will address the findings of the research objectives.

6.2.2.1. The first objective: describe the psychological career resources and graduateness profile of student leaders at a university

The following conclusions were drawn:

The overall psychological career resources profile of the participants indicated that they have a strong desire to experience job security and stability in their career and have the opportunity to display their expertise in their specific field. In line with this preference the participants wish to grow and develop themselves throughout their careers (Coetzee & Esterhuizen, 2010). In the context of this study this finding may be significant as participants need to be aware of the uncertain conditions of the world of work and that they may need to be willing to develop themselves at a constant pace if they want to remain employable. The participants furthermore appeared to have a strong sense of career purpose and the career goals they want to achieve. In addition, participants appeared to be confident in their ability to use self/other skills, but did not feel too confident in their ability to translate practical concepts to real-world situations. In the context of this study the latter may come to be problematic as graduates need to be able to translate technical knowledge to practical situations.

The participants lastly appeared to have a positive self-esteem and believe that they have the ability to adapt their behaviour to changing conditions that will assist them throughout their career (Ferreira *et al.,* 2010). However, the participants' ability to work independently, explore with new career opportunities and use their own and others' emotions in the career decision-making processes appeared slightly out of balance. The individuals may believe that authority or the ability to influence others may be less important as they need to remain up to speed regarding the qualities needed to remain employable and therefore growth or development becomes important.

The high scores on growth or development, stability or expertise and career purpose and directedness may indicate that participants wish to work in an environment where they will have the ability to develop their expertise and skills, take into account their career goals and have the opportunity to accomplish their career goals and objectives.

However, all of the psychological career resources dimensions produced relatively high scores which may indicate that the students have a relatively high degree of self-awareness. This may be due to the fact that the university offers career development and counselling activities where students have the opportunity to become aware of their career-related behaviours and attitudes. In addition, students may realise that they need to take responsibility for the management of their careers if they wish to be successful. The latter may therefore require greater awareness of career behaviours, influences and attitudes. This observation may be in line with the literature suggesting that graduates need to take responsibility for career- and self-management if they wish to remain employable.

The following conclusions can be drawn regarding the graduateness of the participants:

The participants rated themselves high in terms of ethical/responsible behaviour, interactive skills, continuous learning orientation and presenting and applying information This may indicate that they are willing to take responsibility for the safekeeping of their profession's and workplace ethical/responsible rules and guidelines. In addition, they are willing to be accountable for decisions taken.

As the literature review indicated higher education institutions are expected to develop specific employability skills and incorporate it into their degree programmes. The participants may realise that they will need to continuously improve themselves if they wish to remain successful in the competitive labour market. Their score on continuous learning orientation may therefore serve as an indicator of their willingness to deal with ever-changing situations and ensuring they have the skills needed to cope with these changes.

The participants' lowest score was on the enterprise skills dimension although it was still quite high. These results may indicate that graduates may feel uncertain in their ability to engage in activities aimed at achieving goals in a timely and effective manner.

In general, the student leaders displayed a high level of confidence in their ability to display the skills constituting their graduateness. This finding may indicate that the higher education institution may provide students with opportunities to develop these graduateness skills and competencies. This study served to suggest that, although the group is small, the information obtained may indicate that student leaders are aware of their ability to portray these skills and where they feel some development is needed. However, since these participants are student leaders at the higher education institution their graduateness should be above-average as they are regarded as high-potential individuals. The expectation may therefore exist that student leaders should have higher levels of graduateness.

6.2.2.2. The second objective: investigate the existence of a relationship between psychological career resources and graduateness as manifested in a sample of participants occupying a leadership position at a higher distance education institution in South Africa

The conclusions drawn from the study is:

Conclusion: It appears that individuals' psychological career resources (career preferences, career values, career enablers, career drivers and career harmonisers) are significantly related to their graduateness.

Limited research is available on the relationship between garduateness and psychological career resources and specifically in the South African context. This observation serves as a

warning against over interpretation of the study findings and more specifically the practical implications thereof. Further research may need to be conducted.

A number of preliminary findings are suggested. Firstly, the findings of the study indicate that individuals who prefer a career offering numerous and various tasks that are conducted to in a stable and secure environment will most likely develop all of the graduateness dimensions. However, individuals who value a career which offers a managerial position will most likely focus more on the development of their interactive and analytical thinking skills. If these individuals have the opportunity to grow and develop in their careers they will most likely develop all of the graduateness dimensions with the exception of analytical thinking. Consequently, individuals who value growth and development in their career paths will most likely believe they need to develop their interactive skills, ability to solve problems and goal-directed behaviour. In addition, they may believe they need to remain open to learning and take responsibility for the enforcement of their profession's or workplace ethical and moral guidelines if they wish to grow in their careers.

Secondly, the study's findings highlighted the influence of individuals' career enablers on their graduateness. If individuals wish to display their practical or creative and self or other skills they will most likely ensure they develop their graduateness skills. They may believe that their ability to challenge existing assumptions and demonstrate practical competence may depend on their level of interactive skills, problem-solving, enterprising skills or goal-directed behaviour. However, practical competence may also influence the development of analytical thinking as the individual may believe that they need to be able to make conclusions from large amounts of data to translate technical knowledge to real-life situations. The ability of individuals to form meaningful relationships and using relationships efficiently to make career decisions may increase the individual's confidence in their interactive skills, problem-solving, continuous learning orientation, enterprising skills, goal-directed behaviour and ethical behaviour. It may also influence their ability to present and apply information.

Thirdly, the results of the study indicate that individuals who have a strong calling to their career will most likely be willing to take responsibility for actions taken and ensure that the rules and regulations of their profession or work environment are upheld.

It is suggested that if the individuals have a clear sense of their future career goals and objectives and the availability and location of resources to achieve these goals they will most likely develop their ability to interact with people, provide creative solutions to problems and present these solutions to people, continue to develop themselves, develop their goal-setting activities and take responsibility for their actions.

Lastly, it is evident from the results that individuals' career harmonisers will have a significant influence on their overall graduateness. Participants who value their ability to connect with people and develop significant relationships are likely to develop and value their interactive skills, ability to meet deadlines and set meaningful and attainable goals and strive to uphold their workplace's rules and standards and take responsibility for their actions. In addition, if individuals believe they are capable of identifying the qualities they need to succeed and change their behaviours to meet their career-related needs they will feel more confident in their ability to communicate and interact with people and also increase their willingness to take responsibility for decisions related to the ethical/responsible guidelines of their workplace and profession. Individuals may be more willing to take responsibility for ethical/responsible and moral decisions related to their occupation if they have a positive self-image and belief in their ability to use their emotions constructively in career-related decision-making processes and making the necessary changes in their career.

6.2.2.3. Determine the differences between psychological career resources of gender, age groups, field of study and employment status

The following conclusions were drawn:

Conclusion: Gender, age groups, fields of study and status of employment groups have a tendency to differ with regards to their psychological career resources.

The study findings suggest that females have a stronger desire to have growth in their careers and also have a greater career calling which may imply that females have a better perception of the meaningfulness of their career and job. Females also appeared to have a more positive self-image.

The study suggest that participants studying towards a BCom or Law-related degree may believe that they have the skills needed to interact with people and establish meaningful relationships that will assist them in their careers. The findings of the study also indicated that students who have never worked before will have greater confidence in their ability to establish meaningful relationships. This finding is interesting as one may expect that those participants who have worked before would have scored higher. However, it may also be that participants who have worked before may be more realistic about their career success and believe they need further development if they wish to succeed.

6.2.2.4. The third objective: Determine the differences between the graduateness of gender, age groups, field of study and employment status

The following conclusions were made in this regard:

Conclusion: Gender, age groups, field of study and status of employment groups tend to differ with regards to their graduateness.

The results of the empirical study indicated that there appears to be no significant differences between gender, age groups and status of employment groups in terms of their graduateness.

The only significant difference suggest by the findings is in terms of the field of study and analytical thinking. It is suggested that individuals who are enrolled for a degree in sciences, whether medical, veterinary or other and engineering will show greater confidence in their ability to make inferences from large amounts of data.

6.2.3. Conclusions regarding the central hypothesis

The study's central hypothesis stated that graduateness (interpersonal skills, problem-solving, continuous learning orientation, enterprising skills, presenting and applying information, goal-directed behaviour, ethical/responsible behaviour and analytical thinking skills) of student leaders at a higher education institution is significantly associated with their psychological career resources (career preferences, career values, career enablers, career drivers and career harmonisers). In addition, it stated that individuals from different age, gender, field of study and status of employment groups will differ significantly with regards to their psychological career resources and graduateness. The empirical study conducted provided significant evidence to support the aforementioned statements and consequently the central hypothesis is accepted.

6.2.4. Conclusions about the contributions to the field of Industrial and Organizational Psychology and Higher Education

The literature review conducted and the results of the empirical study contributed in the following manner to the field of Industrial and Organizational Psychology and Higher Education and in particular graduate career development and management practices.

The literature review highlighted the various changes in the 21st century workplace that led to changes in the psychological contract and traditional careers. It emphasised the impact these changes had on the skills requirements of employers and the changing expectations of

graduates and higher education institutions. The latter led to discussions surrounding graduateness and an integrated model of the construct was suggested. To clarify how graduateness may differ from graduate employability the latter construct was also addressed. Potential similarities and differences were addressed and a model integrating both constructs was developed.

The inclusion of the psychological career resources model in graduate employability provided new insight as to how psychological career resources and graduateness may be related. A theoretical relationship was displayed as an integrated model suggesting the potential relationship. The relationship between the graduateness skills (interactive skills, problem-solving, continuous learning orientation, enterprising skills, presenting and applying information and ethical behaviour) and career preferences (variety/creativity), career values (growth and development) emphasised the potential influence a student's career preferences and values may have on the development of the so-called generic or graduateness skills.

In addition, the relationship between the career drivers (career directedness and career venturing) and graduateness skills (interactive skills, problem-solving, continuous learning orientation, enterprising skills, presenting and applying information and ethical behaviour) may provide valuable information regarding the influence a student's clarity about career goals and objectives and the willingness to experiment with different career opportunities may have on their confidence to display the stated graduateness skills.

The strong relationship that exist between all the career harmonisers (self-esteem, behavioural adaptability, emotional literacy and social connectivity) emphasised that students with a positive self-image, the capacity to change their behaviour to facilitate career development and the ability to use their own and others' emotions and social resources to facilitate career decision-making may determine most aspects of their graduateness (interactive skills, problem-solving, continuous learning orientation, enterprising skills, presenting and applying information and ethical behaviour). This finding may provide higher education institutions and students with valuable information regarding their self-esteem, emotional intelligence and behavioural adaptability and may lead to changes in their self- and career-management activities.

The relationship of the analytic thinking variable with career preferences (managerial and variety/creativity), career values (authority/influence) career enablers (practical/creative and self/other skills) may provide valuable information regarding the students who are most likely to develop this skill.

The theoretical model proposed as well as the empirical findings of the study may provide higher education institutions as well as students with valuable information regarding the relationship between these two construct. Specifically, it may emphasise the significant influence a student's psychological career resources may have on their overall graduateness.

Higher education institutions may therefore consider utilising these two questionnaires in their career counselling and development programs. In addition, students may be invited to complete the questionnaires at the beginning, middle and end of their studies to identify differences and the influence it may have on their career.

With specific reference to the leadership programs available at higher education institutions the questionnaires may be used to identify the strengths and weaknesses of the individuals and the group and adjust their programs accordingly. The latter may lead to greater development of individuals and more effective utilisation of the program which may enhance the value of the program. It may also enable higher education institutions to identify the skills and competencies it expects from their leaders.

While the findings of the study offered new perspectives regarding the relationship between psychological career resources and graduateness and the proposed differences between gender, age, field of study and status of employment, the value of the study is limited to the specific demographic restrictions of the sample population.

6.3. Limitations

The study was limited to Coetzee's (2008) Psychological Career Resources Inventory and Coetzee and Esterhuizen's (2010) Graduateness Scale. Although other models were mentioned it was not considered due to the scientific limitations of the study.

An additional limitation may be related to the nature of the study. Since the study is only foundational the focus was only the relationship between psychological career resources and graduateness. Unfortunately, previous studies conducted focused on the relationship between psychological career resources and subjective work experiences, career resources and coping resources (Coetzee & Schreuder, 2008; Coetzee, 2008; Coetzee & Esterhuizen, 2010). The latter led to difficulties in relating the findings to other studies.

Unfortunately, the sample was rather small as it consisted of student leaders who was selected based on pre-determined criteria. The latter implies that the study finding cannot be generalised to broader populations. As it was mentioned earlier the composition of the sample may have had an effect on the study findings and it may be required in future to have

a truly representative sample. Furthermore, the research design of the study did not enable the researcher to determine cause and effect of the relationship, but to only suggest the definite existence of a relationship between psychological career resources and graduateness.

Regardless the limitations addressed above the conclusion can be made that the study may emphasise the need to investigate the attitudes, behaviours and skills which may influence the achievement of graduateness.

6.4. Ethical considerations

The data collection instruments selected for the research study and their accompanying psychometric properties can be regarded as reliable, valid and fair to all individuals, as underwritten by the Employment Equity Act, No 55 of 1998 (SA, 1998). Care was taken to ensure that the processes required to conduct the study were fair, valid and reliable. Proper measures were utilised to ensure that the processes of data collection and analysis were completed in a fair, valid and reliable manner. The identity of participants will not be known to other participants.

However, the researcher will have access to necessary personal details as feedback will be given to individuals who participated in the study. By participating in the study the respondents will not suffer any harm of any nature. Individuals still have the right to refrain from divulging any personal details.

6.5. Recommendations

6.5.1. Recommendations for the field of industrial and organizational psychology

The study had two main objectives, namely to a) determine the psychological career resources and graduateness of student leaders, and b) determine whether a relationship exists between these two constructs.

The sample consisted predominantly of African females under the age of 21 years and is not working in a part-time, full and self-time employed capacity. The study found significant differences between gender, age groups, field of study and status of employment which was addressed earlier in this chapter.

Although the findings indicated that the student leaders had a high level of confidence in their ability to display their graduateness the leadership development programs may still need to

consider how the development of these skills will be incorporated into their programs. It may also need to consider the influence of the students' psychological career resources on the development of the graduateness skills as the research indicated the existence of such a relationship.

If higher education institutions and student leadership program wish to develop their potential leaders in such a way that they will contribute to the overall well-being of their community and improving current workplace and profession practices whilst experiencing job satisfaction it may need to considering introducing these two questionnaires in their career development activities. This way they may produce high quality graduates with a greater self-awareness and the ability to identify and develop their potential strengths and weaknesses. Through this higher education institutions and their leadership programs will incorporate both student perceptions and employer expectations which may positively influence the relationships between these three parties.

It is therefore recommended that career development counsellors involved with leadership programs have a clear strategy in place to facilitate personal development, awareness of psychological career resources and graduateness achievement.

6.5.2. Recommendations for further research

The findings of the study indicated that there is a need to further investigate the relationship between individuals' psychological career resources and graduateness. Additional research may confirm and even improve the percentage variance explained by the prediction models which may improve the chance to draw significant conclusions. There is also the option of considering the utilisation of other research procedures in future research activities.

The study may also be expanded to other universities focusing on their leadership programs. This may lead to greater generalisability of this study's research findings to a broader spectrum of higher education institutions across the country.

6.6. Integration of research

Through the literature review it was concluded that a significant relationship existed between individuals' psychological career resources and graduateness. This observation was confirmed by the empirical study which aimed to explore this potential relationship between psychological career resources (career preferences, career values, career enablers, career drivers and career harmonisers) and graduateness (interactive skills, problem-solving, continuous learning orientation, enterprising skills, presenting and applying information, goal-

directed behaviour, ethical behaviour and analytical thinking). Higher education institutions who offer leadership programs need to be aware of these two constructs and the influence it may have on individual development and career management. This will enable these institutions to ensure that leadership programs add value and satisfy the perceptions and expectations of both students and employers.

It is concluded that the findings of this study provide new knowledge regarding psychological career resources and how it may influence a student's graduateness. Consequently, it is recommended that the findings of this study are used to improve the leadership programs of higher education institutions in South Africa.

6.7. Chapter summary

The purpose of this chapter was to discuss the conclusions and limitations of the study and to make recommendations for practice and future research. This chapter serves as a conclusion of the study.

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