

**THE DEVELOPMENT AND EVALUATION OF A MEASURE OF GRADUATE  
EMPLOYABILITY IN THE CONTEXT OF THE NEW WORLD OF WORK**

by

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## DECLARATION

I, Mareli Bezuidenhout, declare that “***The development and evaluation of a measure of graduate employability in the context of the new world of work***” is my own, original work and that all sources used and quoted have been 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 submit 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 DEVELOPMENT AND EVALUATION OF A MEASURE OF GRADUATE EMPLOYABILITY IN THE CONTEXT OF THE NEW WORLD OF WORK

Rapid forces for change in the post-modern society have left their mark on the labour market, creating a metamorphosis in the nature of work and the way in which careers should be approached. This has resulted in the need for individuals to possess a combination of attributes that will enable them to take an adaptive, proactive approach to their careers, which involves managing their employability. Employability is especially relevant to graduates, who are expected to acquire more than academic capabilities to 'hit the ground running' in their transition from higher education to the workplace. Despite the significance of the topic, it remains conceptually ambiguous with few empirical studies that explain its foundation, and fewer still that have constructed a measure explicitly gauging employability, particularly in South Africa. The main purpose of this study was to develop and evaluate a measure of graduate employability in the context of the new world of work. A theoretical model of graduate employability was developed based on an extensive review of the literature and the Graduate Employability Measure (GEM) was subsequently constructed. A cross-sectional survey was utilised to collect data from a random sample of final-year undergraduates and postgraduates from the College of Economic and Management Sciences at a higher distance learning institution in South Africa. The 272 useable questionnaires returned were subjected to exploratory factor analysis, which revealed a reliable three-factor model consisting of the dimensions of career self-management drive, career resilience and cultural competence, and explaining 36.42%, 3.5% and 2.97% of the variance respectively. Analysis of variance was used to determine whether there were any significant differences between the biographical variables of the sample and the GEM factors. It was found that females and final-year undergraduates obtained significantly higher means on all the GEM dimensions than males and postgraduates respectively. The findings inform the conceptualisation of the employability construct, the elements it consists of, and how it can be measured in a valid and reliable manner. The GEM has the potential to be useful to students in a career guidance context, to employers that desire to select and develop highly adaptable employees, and to higher education, which can incorporate these important employability attributes in the curriculum to deliver highly employable graduates.

## KEY TERMS

Employability, graduate employability, career management, proactive adaptability, attributes, career success, career self-management drive, career resilience, cultural competence, sociability, entrepreneurial orientation, proactivity, openness to change, career-related core self-evaluations, self-esteem, locus of control, self-efficacy, emotional literacy.

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## CHAPTER 1: SCIENTIFIC OVERVIEW OF THE STUDY

This dissertation is exploratory in nature and focuses on developing a measure of employability for a undergraduate and postgraduate population. This chapter discusses the background and motivation for the study, the problem statement, aims of the study, thesis statement, paradigm perspective, research design and methodology, the significance of the study, delimitations, the definitions of terms and constructs, and the chapter layout of the rest of the work.

### 1.1 BACKGROUND AND MOTIVATION FOR THE STUDY

Rapid forces for change in the post-modern society have left their mark on the labour market, creating a metamorphosis in the nature of work and the way in which individuals approach their careers. Organizations are responding to swift technological changes, increased customer demands and globalisation by implementing work structures that support adaptability and flexibility (Van Dam, 2004:29). Companies that want to be competitive therefore have to react to these changing market conditions by being smarter, smaller and swifter (Hall & Moss, 1998:22), often resulting in constant processes of restructuring and employee redundancies, which are forever changing traditional bureaucracies (Baruch, 2004:58; Brown, Hesketh & Williams, 2003:107). In the face of a volatile business environment that no longer offers long-term employment (Rothwell & Arnold, 2007:24) and clear linear career ladders (Baruch, 2004:60), new career paths for employees are knowledge-driven (Brown *et al.*, 2003) and include frequent changes in employer and even in occupations, lateral instead of vertical job moves and interruptions in employment (Reitman & Schneer, 2008:19). These shifts have resulted in organizations explicitly encouraging workers to take active responsibility for and manage their own learning and development throughout their careers (King, 2004:113; Quigley & Tymon, 2006:523; Williams, 2005:34). This requires individuals with the type of knowledge, skills, creative potential and dispositions (Tomlinson, 2007:285; Williams, 2005:34) to maintain and enhance their attractiveness in the labour market (Rothwell & Arnold, 2007:24). In essence, individuals must take a more adaptive, flexible and proactive approach to manage their careers (Hall & Moss, 1998; Tomlinson, 2007; van Veldhoven & Dorenbosch, 2008), which also involves the management of their employability (Tomlinson, 2007:286).

According to Fugate, Kinicki and Ashforth (2004:15) an individual's employability includes a multitude of person-centred constructs that interactively fuse to assist individuals in successfully adapting to numerous work-related changes in the economy. From this perspective, employability is viewed as a

“... psycho-social construct that embodies individual characteristics that foster adaptive cognition, behaviour, and affect, and enhance the individual-work interface” (Fugate *et al.*, 2004:15). An individual’s employability therefore extends beyond knowledge and skills to include individual attributes and characteristics that make individuals valued assets to both prospective and current employers. The responsibility lies with the individual to manage and develop his or her career, and it is important that individuals know what their career needs are (Van der Heijde & Van der Heijden, 2006:450) and what they can do to improve their employability so as to be successful in their careers. For the purposes of the study, the focus is on individuals’ suitability for employment, and not actually obtaining an appropriate job (Yorke & Knight, 2007:158), which depends on factors such as demand for labour locally and internationally (Gazier, 2001:9) and the economic circumstances of the time (Brown, *et al.*, 2003:110). Employability in this context therefore relates to the value of individuals with regards to future employment opportunities (Schreuder & Coetzee, 2006:37), and emphasises individual-level employability.

Being employable is especially relevant to graduates at the brink of their careers. In this regard Harvey (1999:4) defines graduate employability as “... the propensity of the graduate to exhibit attributes that employers anticipate will be *necessary* for the *future* effective functioning of their organisation”. It should be noted from this definition that employability is not the same as employment, although higher employability increases the chance of obtaining employment. Yorke (2006:8) accordingly defines employability as the skills, understandings and personal attributes that make graduates more apt to obtain employment and be successful in their occupations to their own advantage, but also to the advantage of the labour force, the community and the economy.

Individuals enter higher education mainly to improve their future employment opportunities, but a degree no longer secures employment. Companies expect, apart from academic capabilities, additional qualities and competencies of individuals that will facilitate the most successful and speedy transition from higher education to the workplace (Holmes & Miller, 2000:655). In fact, employers seek to recruit new graduates that can instantly become involved in delivering value to the company, without having to make use of extended induction programmes (Barthorpe & Hall, 2000:165). Such expectations requires graduates to display qualities that will enable them to “hit the ground running” and stay abreast of the latest developments in a changing work environment. To this effect, the attributes needed to make graduates employable in the new world of work need to be investigated.

Despite the obvious significance of employability and widespread interest in the topic, it remains conceptually ambiguous (Harvey, 2001; McQuaid & Lindsay, 2005) and there is a lack of empirical studies that explain its foundation (Fugate *et al.*, 2004:16). Moreover, relatively few studies have attempted to construct an instrument explicitly gauging employability (see for example Fugate *et al.*, 2004; Fugate & Kinicki, 2008; Rothwell & Arnold, 2007; Van der Heijde & Van der Heijden, 2006), and fewer still have focused on developing accurate measures to assess the employability of graduates in particular. Instead, crude measures of graduate employability have been used as a gauge of the quality of higher education (Lindberg, 2007; Harvey, Locke & Morey, 2002; Pool & Sewell, 2007:278). Consequently, there remains a major gap in the literature in understanding the employability of graduates. Within the South African environment, even fewer attempts have been made to measure the employability of graduates, although Coetzee's (2008) Psychological Career Resources Inventory provides valuable insights into enhancing employees' career meta-competencies – an important component of their general employability.

Given the importance of the construct to employees in general, and graduates in particular, the overall purpose of the study was to develop a measure of employability for graduates in the context of the new world of work. In order to develop such a measure, a conceptual model was constructed for which an in-depth literature review provided direction in determining the variables that employability consists of. The principles of scale development were subsequently applied in developing the measure, whereafter it was pilot tested. The measure was then evaluated to determine its factor structure, reliability and validity. The study was therefore exploratory in the sense that it focused on the first phase of scale development which acts as a foundation for further research.

## **1.2 PROBLEM STATEMENT**

A new career era has dawned in which a volatile work environment dictates that individuals need to be flexible and adaptable in order to be marketable to various employers. This has resulted in the surfacing of new career forms and new ways of working, which signifies the necessity for more research into employability (Clarke, 2008:261). Employability, however, remains a contentious topic with conflicting definitions and conceptualisations (Hartshorn & Sear, 2005:272; Rothwell & Arnold, 2007:24) and a lack of theoretically informed research (Brown, *et al.*, 2003:109; Fugate *et al.*, 2004:33). Bridgstock (2009:31) adds that this contention extends to the attributes that tertiary students need to promote their employability. Attempts to measure employability outcomes have encountered even greater problems than efforts to define the concept (Cranmer, 2006:173). There has been a

tendency to adopt “narrow” approaches to assess employability based on initial graduate destination indicators (Bridgstock, 2009:33; Pool & Sewell, 2007:278), while others focus on sets of skills that employers require from graduates entering the new world of work (Holmes, 2001). Employability, however, extends beyond these knowledge, skills and abilities (Fugate & Kinicki, 2008:505) to include a broader collection of individual attributes and actions (Fugate *et al.*, 2004:18). There are consequently a limited number of sound measures of employability, and graduate employability in particular.

In light of these aspects, as well as the fact that the South African environment has scant research on the topic in this context, it is necessary to (re)examine the construct of employability in order to operationalise the term and to determine the variables employability consists of and how it can be measured. In this way the characteristics that help individuals be adaptable in a constantly changing economy can be identified and areas of development can be highlighted that will help those yet to start working, or already employed, to be desirable to current and future employers.

In light of the above, the research aims to answer the following questions in terms of the literature review and empirical study:

### **1.2.1 RESEARCH QUESTIONS WITH REGARD TO THE LITERATURE REVIEW**

- Research question one: What are the trends in the contemporary world of work and what impact do they have on individuals' careers?
- Research question two: What are the attributes needed to thrive in a changing career landscape?
- Research question three: What are the constructs that define and influence employability, and specifically graduate employability?
- Research question four: How can graduate employability be conceptualised in a theoretical model?

### **1.2.2 RESEARCH QUESTIONS WITH REGARD TO THE EMPIRICAL STUDY**

- Research question one: What are the principles of scale development and how can they be used to develop a valid and reliable measure of graduate employability?

- Research question two: How well do the measurement items confirm expectations about the psychometric properties of the instrument?
- Research question three: How does the theoretical model with the sub-dimensions of sociability, career self-management drive, cultural competence, entrepreneurial orientation, proactivity, career resilience, openness to change and career-related core self-evaluation relate to the empirical results?
- Research question four: How do the various age, race, gender, marital status, qualification level, educational and employment groups differ on the employability dimensions?

The theoretical questions therefore mainly relate to the development of a measure of graduate employability, while the empirical research questions mainly relate to the evaluation of the measure.

### **1.3 OBJECTIVES/AIMS OF THE RESEARCH**

Based on the particular problem to be studied, the aims of the research are as follows:

#### **1.3.1 MAIN AIM**

The main aim of this research is to develop a measure of graduate employability within the South African context.

The research additionally endeavours to investigate broad trends on how the various age, race, gender, marital status, qualification level, educational level and employment status groups differ on the employability dimensions.

#### **1.3.2 SPECIFIC AIMS**

The following specific aims are formulated in terms of the literature review and empirical study:

**The theoretical aim of the study is to:**

- Conceptualise employability in the context of the new world of work and its implications for individuals and their careers.

**The empirical aims of the study are to:**

- Develop a measure of employability, and specifically graduate employability, based on the theoretical conceptualisation of the construct
- Administer the measure to a development sample to collect preliminary evidence of its psychometric properties (pilot study)
- Determine how well the measurement items assess the construct of employability
- Compare the theoretical model of graduate employability comprising the sub-dimensions of sociability, career self-management drive, cultural competence, entrepreneurial orientation, proactivity, career resilience, openness to change, and career-related core self-evaluation with the empirical final factor structure of the GEM
- Investigate differences in graduate employability based on age, race, gender, marital status, education level, qualification level and employment status
- Make recommendations regarding employability and future research in the field of industrial psychology

**1.4 THESIS STATEMENT**

The dimensions of sociability, career self-management drive, cultural competence, entrepreneurial orientation, proactivity, career resilience, openness to change, and career-related core self-evaluation significantly reflect the construct of employability in the context of graduates and can be successfully assessed by developing a measure of graduate employability.

**1.5 PARADIGM PERSPECTIVE**

It is important to position the study within the particular disciplinary and paradigmatic context to which it belongs so as to highlight the specific approach followed in the interpretation of the research process within the social sciences. Mouton and Marais (1990) provide an integrated model of social sciences research that will be used to this effect. The authors view social sciences research as a “collaborative human activity in which social reality is studied objectively with the aim of gaining a valid understanding of it” (Mouton & Marais, 1990:7). This definition embodies five dimensions of social sciences research that the above-mentioned research model systematizes within the framework of the research process, namely:

- the sociological dimension, which refers to social sciences research as a collaborative human activity;
- the ontological dimension, which refers to social sciences research as a study of social reality;
- the teleological dimension, which refers to the aim of social sciences research to understand social reality;
- the epistemological dimension, which refers to the aim of social sciences research to provide a reliable and valid understanding of social reality; and
- the methodological dimension, which refers to social sciences research as objective given that it is balanced, critical, unbiased, systematic and controllable (Mouton & Marais, 1990:8).

The above model can further be divided into three subsystems that not only interact with one another, but also with the research domain as expressed within a particular discipline. These subsystems are the intellectual climate of a specific discipline, the market of intellectual resources within each discipline, and the research process itself (Mouton & Marais, 1990:20). These will be discussed with reference to this study.

### **1.5.1 THE INTELLECTUAL CLIMATE**

The intellectual climate relates to the number of metatheoretical beliefs, assumptions and values held by individuals practising within a discipline at whichever point in time, including beliefs about the nature of social reality, beliefs about human beings and discipline-specific beliefs relating to amongst other things society and labour (Mouton & Marais, 1990:20-21). In the context of this research, the intellectual climate of the empirical study will be based on the functionalist paradigm. The research is furthermore contextualized within the discipline of industrial psychology, with its sub-disciplines of career psychology, and psychometrics.

#### **1.5.1.1 Functionalist paradigm**

The functionalist paradigm is based on the assumption that society has a real, tangible existence and is systematic in nature, whilst being focused toward producing order and regulation. Social science activities are thought to be value free and objective, while the paradigm promotes a research process where the rigour of the scientific method distances the scientist from the subject matter. The paradigm furthermore is pragmatically orientated and emphasizes the analysis of society in a manner that generates useful knowledge (Hassard, 1991:277). Functionalism focuses on the mind as it is

functional to an individual's adaptation to his or her environment. The paradigm moreover focuses on pragmatism in industrial psychology through the application of tests, questionnaires and statistics. In personnel selection, for example, the focus is on individual differences with regards to aptitude, skill, interest and other characteristics with the aim of identifying personal characteristics in individuals and making predictions with regard to their suitability for the job (Bergh & Theron, 2003:6). The focus of the study is on finding a systematic manner of measuring the employability of individuals where the researcher is distanced from the participants by means of the survey design, with the aim of creating useful knowledge about human beings. The research was furthermore approached with the necessary rigour which relates to objectivity as far as is possible within social sciences research. The research was therefore approached by way of the assumptions underlying the functionalist paradigm.

### **1.5.1.2 Discipline**

The research was approached from the underlying discipline of Industrial and Organisational Psychology, which is itself anchored in the behavioural sciences, economics and physical science (Bass & Ryterband, 1979:5).

#### **a) Industrial psychology**

Based on the work of others, Van Vuuren (2006:3) defines industrial psychology as the “scientific study of human behaviour in the workplace, or the application of psychological facts, principles, theory and research to the work setting”. Industrial psychology therefore studies the optimal functioning of humans in the workplace. The major sub-fields of industrial psychology are personnel psychology, organisational psychology, career psychology, consumer psychology, ergonomics and psychometrics (Barnard & Fourie, 2007:45).

The role of an industrial psychologist is one of a professional that acts as either internal or external consultant to managers and human resource managers, and operating from within one of the application fields of his or her science. The industrial psychologist's role is consequently mainly to diagnose and intervene by making use of theoretical knowledge and research proficiency (Schreuder, 2001:5). Industrial psychology is therefore an applied science; in other words, scientific knowledge and its practical application are closely related (Barnard & Fourie, 2007:45). The industrial psychologist's knowledge base furthermore lies primarily in general psychology, industrial psychology, personality psychology, social psychology, anthropology, sociology, and the economic sciences

(Schreuder, 2001:5). The major practical contributions of industrial psychologists, according to Pienaar and Roodt (2001:29), relate to affirmative action, counselling, human resource management, psychometric testing, selection and placement, career management, strategic management, organisational development, assessment centres, change management, training and development and labour relations.

Schreuder (2001:6) contends that industrial psychologists must carry out the role of an agent of development for the individual, the group, and the organisation. In terms of the role of consultant for the individual, the industrial psychologist must promote career growth, which is the ultimate aim of this study.

### **b) Career psychology**

Career psychology deals with career and organisational choice, career issues that have an effect on individuals throughout their careers, and organisational changes that affect careers. It focuses on career counselling, career planning and development, and changes in career patterns (Bergh & Theron, 2003:13). Greenhaus, Callanan and Godshalk (2000:12-13) view career management as "... a process by which individuals develop, implement, and monitor career goals and strategies", and define career development as "an ongoing process by which individuals progress through a series of stages, each of which is characterized by a relatively unique set of issues, themes, and tasks". Within the context of this research, the focus is on the qualities that individuals should have in their early life or career stage (Schreuder & Coetzee, 2006:177) that will make them employable. This will enable them to obtain career success despite major changes in the internal and external organisational environment and career field.

### **c) Psychometrics**

Psychometrics collectively refers to the branches of psychology dealing with the measurement of that which is psychological (Reber & Reber, 2001:583). It refers to the "systematic and scientific way in which psychological measures are developed and the technical measurement standards (e.g. validity and reliability) required of measures" (Foxcroft & Roodt, 2005:4). Within the context of this study, the focus was on developing a valid and reliable measure of employability by collecting data in a systematic and scientific manner.

## 1.5.2 MARKET OF INTELLECTUAL RESOURCES

The market of intellectual resources is the collection of beliefs that directly relates to the epistemic status of scientific statements. There are two main types, namely theoretical beliefs about the nature and structure of occurrences, and methodological beliefs about the nature and structure of the research process (Mouton & Marais, 1990:21).

Theoretical beliefs include all statements that shape hypotheses, typologies, models or theories; in other words, beliefs of which testable statements are made about social occurrences. This may relate to testable statements derived from macro theories such as conflict theories, or micro-theories such as Bandura's social cognitive theory (Mouton & Marais, 1990:21). Within the context of this research, the following theories were reviewed:

- The Boundaryless career model of Arthur and Rousseau (1996)
- The Protean career model of Hall (1976)
- Employability models of Fugate, Kinicki and Ashford (2004), Fugate and Kinicki (2008), Van Dam (2004), Pool and Sewell (2007), Van der Heijde and Van der Heijden (2006), Hillage and Pollard (1998) and Bridgstock (2009)
- The psychological career resources model of Coetzee (2008)

Methodological beliefs relate to beliefs about the nature of social science and of scientific research such as positivism, phenomenology and the main methodological models such as qualitative and quantitative models (Mouton & Marais, 1990:23). This study was approached from a positivistic and post-positivistic perspective and makes use of the quantitative model. This will be discussed in more detail in the research paradigm section of the dissertation.

## 1.5.3 THE RESEARCH PROCESS

During the research process researchers "internalize specific inputs from the paradigm(s) to which they subscribe in a selective manner, so as to enable them to interact with the research domain in a fruitful manner and to produce scientifically valid research" (Mouton & Marais, 1990:23). In other words, researchers are apt to include certain paradigmatic beliefs in their approaches, and include only those beliefs (such as specific research models) that are viewed as applicable to the particular research problem and goals, amongst other things. The specific research strategies and goals chosen were the result of the interaction between the research study and particular beliefs about the

phenomenon to be studied, in this case the employability of graduates. These beliefs are present in every facet of the decision-making process, namely the choice of a research topic, formulating the research problem, conceptualisation and operationalisation, data collection, and the analysis and interpretation of data (Mouton & Marais, 1990:24).

The above discussion has highlighted the approach followed in interpreting the research process and delineated the study in terms of its paradigmatic and disciplinary context.

## **1.6 RESEARCH DESIGN AND METHODOLOGY**

A research design refers to a plan or blueprint of how a researcher aims to conduct the research. It underlines the kind of study that is being planned and what type of results is intended (Babbie & Mouton, 2001:75). According to Bergh and Theron (2003:21), research design denotes a “specific, purposeful, and coherent strategic plan to execute a particular research project in order to render the research findings relevant and valid”. Furthermore the research design uses the research question as a point of departure and focus on determining what type of evidence is necessary to address the research question satisfactorily. This section aims to briefly describe the research design followed and the research methods used to achieve the research objectives of the study.

### **1.6.1 RESEARCH APPROACH**

The research approach can be described as a descriptive cross-sectional survey design, the data as primary data and the quantitative statistical procedures used as exploratory. The data were collected by means of self-administered questionnaires that were sent to respondents via email. This method was deemed appropriate given the short time it takes to complete the data collection, its cost-effectiveness, the elimination of the need for assistants, and the ease of automating the data entry (Saunders, Lewis & Thornhill, 2000:280,283; Sternberg, 2001:45). The electronic survey was followed up by a telephonic survey in order to increase the response rate. The research approach will be elaborated on in the following paragraphs.

The research aimed to understand graduate employability and the variables it consists of by developing and pilot testing a measure of employability and determining whether it accurately measures the construct. Based on the results of the exploratory study, adjustments can be made to the measure as necessary and the feasibility of doing a more widespread study can be assessed. The

study was therefore exploratory in nature as exploratory research is an approach in which a researcher typically investigates a new interest or when the subject of study itself is relatively new. It is typically done to satisfy the researcher's curiosity and wish to understand something better (Saunders *et al.*, 2000:97), to test the feasibility of conducting a more extensive study, and to develop the methods to be utilized in any ensuing research (Babbie, 2005:89). Because of its exploratory nature the research follows a basic (or pure) research approach and the main consumer will be the academic community. Basic research refers to research that has no immediate application at the time of its completion, whereas applied research does (Salkind, 2006:15).

In addition, the research was approached from an empirical perspective as it entailed the collection and analysis of primary data, or new data that the researcher collects herself (as opposed to secondary or existing data) (Babbie & Mouton, 2001:76). Primary data were collected by means of questionnaires and the study was cross-sectional in nature, which refers to the study of a specific phenomenon at a specific time (Saunders *et al.*, 2000:96). The sample completed questionnaires only once and the data collected accordingly embodied a "snapshot" in time. The advantages of a cross-sectional survey design is the low cost of collecting data (the research process is not drawn out), response rates are relatively high, and results can be obtained and conclusions drawn and published in a reasonably short time. The disadvantages relate mainly to the undue susceptibility of respondents to time-of-measurement effects. The latter refers to influences on responses due to immediate historical events, e.g. the effect of media attention on the topic of study (Breakwell, Hammond & Fife-Shaw, 1995:100-101). The survey was conducted in such a way as to minimise the effects of historical events on participant responses.

Furthermore, the research was non-experimental as it did not test for cause-effect relationships or seek to control the independent variable (Reber & Reber, 2001:470, Salkind, 2006:9). Rather, the underlying relationship between the variables of employability was assessed by means of exploratory factor analyses, which is a sensible statistical method used in the development of new measures (Byrne, 2005:17). Exploratory factor analyses evaluate the construct validity of a measure during its preliminary development and can be applied to study the underlying dimensionality of the item set after developing the preliminary item set, thereby grouping a large item set into meaningful subsets (Worthington & Whittaker, 2006:907-808). The statistical procedures employed during this pilot study succeeded in grouping the items into meaningful dimensions that reflect the construct of employability. The qualities needed to be employable were accordingly converted to a numerical form, which makes observations more explicit and aids in aggregating and summarizing data. It also makes statistical

analyses of data possible (Babbie, 2005:24). The disadvantage of this is that some of the richness and depth of the meaning of the data may be lost.

## **1.6.2 RESEARCH METHOD**

The research method comprises the individual steps in the research process and the types of procedures and tools chosen as the most objective or unbiased (Babbie & Mouton, 2001:75). This section briefly describes the methods used to achieve the research objectives, including the selection of participants, the assessment measure, the research procedure and the statistical analyses employed. The reliability and validity of the research design will also briefly be discussed.

### **1.6.2.1 Research participants**

The target population was a random non-probability sample of third year undergraduates and postgraduates (Honours, Master's and Doctoral) from the College of Economic and Management Sciences of a large distance learning higher education institution in South Africa during the 2010 academic year. This population was deemed appropriate because of its ease of access and because of the focus of the research. The unit of analysis was individual students and the point of focus (the means by which they were characterised) was their orientations, that is, their attributes relating to employability. The sampling frame was the email and phone listing of students at the higher education institution and the sampling criteria were that respondents had to be registered students and they had to have access to a computer, the internet and a phone.

From a total population of 150 000 students, a random sample of 3000 students was drawn. From the sample of 3000, 272 usable questionnaires were obtained. This amounts to a response rate of 9% which is poor given the total population. The data were collected in two stages. The first stage consisted of a web-based survey (responses: n=66) and the second stage consisted of a telephonic survey using professionally trained field workers (responses: n=206). Random quality checks were done on the telephonic surveys to ensure data integrity and reliability. The sample consisted predominantly of single African females in the age category of 26 to 40 years that are employed full-time as general staff in the business management industry and are enrolled as final-year undergraduates.

### **1.6.2.2 Measuring instrument**

The measuring instrument, the Graduate Employability Measure (GEM), was specifically designed for this study to measure the underlying construct of employability. This was done as there is a lack of instruments measuring employability (and specifically graduate employability), particularly in the South African environment. Employability is conceptualised as a psycho-social construct representing a combination of attributes (dispositions, values, attitudes and skills) that promote proactive adaptability in changing environments and enhance an individual's suitability for employment and the likelihood of obtaining career success. Based on an extensive literature review, eight dimensions were originally identified as contributing to employability. The theoretical model was used to develop the Graduate Employability Measure which, in its final form, consisted of 56 items. A six-point Likert-type scale was used for subject responses. Each item was rated in terms of how true the statement is for the respondent, ranging from "never true for me" (1) to "always true for me" (6). The GEM is shown in Appendix B (note that the questions have been rearranged in the email survey so that questions measuring the same construct do not follow one another) . The 56 items were subjected to an initial round of factor analysis, whereafter fourteen items were deleted because of loadings that were too low and/or items that loaded on more than one factor. The remaining 42 items were retained after a second round of factor analysis. All items were positively scored and the total score for each dimension was acquired by obtaining a mean score for each dimension.

Following exploratory factor analysis, a reliable three-factor model emerged that consisted of the following dimensions:

- Dimension 1: Career self-management drive (sample item: I know what my strengths and limitations are in the career context)
- Dimension 2: Career resilience (sample item: I recover quickly from setbacks in my career)
- Dimension 3: Cultural competence (sample item: I am confident in my knowledge of the nonverbal expressions of other cultures)

### **1.6.2.3 Research procedure**

In order to ensure the validity and accuracy of the measure and to minimise measurement error, the guidelines for developing measurement scales as proposed by DeVellis (1991) were followed. The author describes various steps to developing scales that can be linked with discussions by Clark and Watson (1995), Crocker and Algina (1986), Delport (2002), Foxcroft and Roodt (2005), Hayton, Allen

and Hensley (1999) and Rossiter (2002). After conceptualising employability based on an extensive literature review, an item pool was generated by considering the scale's purpose, the number of items to include, the wording of the items and the correct format of the questionnaire. The initial item pool was subsequently reviewed by experts in the field who provided guidance in terms of how applicable each item was to the employability construct to be measured, and evaluated each item for clarity and conciseness, grammar, reading level, face validity and redundancy, so as to shorten the questionnaire. After revising and deleting items, the questionnaire was again sent to an expert panel consisting of four experts who commented on which items were essential, useful but not essential, or not necessary to the specific dimension of employability as well as whether the items were clear or unclear.

Following the decision on which construct-related items to include in the questionnaire, the final questionnaire was sent electronically to a sample of participants requesting their voluntary participation. Clear instructions were given regarding how to complete and return the questionnaire. A cover letter accompanied the questionnaire in which it was made clear that strict confidentiality would be maintained and that all responses were to be submitted anonymously. The electronic survey was followed up by a telephonic survey to improve the response rate. The data collected were stored in a secure location for future reference.

#### **1.6.2.4 Statistical analyses**

The statistical procedures utilized in this research were selected according to their relevance to the exploratory nature of the research design. The data were analysed by means of descriptive and inferential statistics using the BMDP (1993) Statistical Software and the SAS (2010) Statistical Package. Exploratory factor analyses were carried out to evaluate the underlying relationship between the variables of employability. This technique was used to determine the number of factors present in the instrument, the items that related to each factor and whether the factors were correlated or uncorrelated (Worthington & Whittaker, 2006:807-808). An investigation into the internal consistency of the GEM or the degree to which the various items in the measure are intercorrelated (Cascio & Aguinis, 2005:139) ensures that the scale measures the intended construct of employability and is therefore a valid measure of employability. It also ensures that the study generates results that are statistically and practically significant (Thompson, 2003:5). In order to investigate how respondents' perceptions differed with regard to the biographical variables of gender, age, race, marital status, qualification level, educational level and employment status and the dimensions of the GEM, an

analysis of variance was conducted after a Blom transformation to ensure normality and homogeneity of variance of the data.

#### **1.6.2.5 Validity and reliability**

It is important to report the extent to which the instruments used in the study have reliable and valid scores and whether the research design is valid and reliable (Struwig & Stead, 2001:130). The focus of this section will be on the latter.

Validity in this context refers to the degree to which the broader research design is scientifically sound or satisfactorily conducted (Struwig & Stead, 2001:136). Research studies must be externally as well as internally valid. External validity refers to the degree to which the study's results are generalisable to other research settings and people (Eysenck, 2000:852; Saunders *et al.*, 2000:102; Struwig & Stead, 2001:136) and is associated with the sampling procedures used, the time and place of the research, and the conditions under which the research was conducted (Graziano & Raulin in Struwig & Stead, 2001:136). In the case of this research, the results only pertain to final year undergraduates and postgraduates, but all efforts were made to choose a representative sample and to minimise reactive effects (when participants alter their behaviour because they are being observed) and researcher effects (when a researcher's characteristics have an effect on the behaviour of participants) (Brink, 2006:101).

Internal validity refers to whether variations in the dependent variable can be attributed to the independent variable and not to extraneous or confounding variables related to for example maturation, history, testing or instrumentation (Struwig & Stead, 2001:136). In this study, a possible threat to internal validity was history. This refers to events that take place during the study that may affect the results (Brink, 2006:99; Saunders *et al.*, 2000:101; Struwig & Stead, 2001:137). For example, the questionnaires were not administered to students on the day that they were writing an exam, as this could have interfered with their concentration levels or with their motivation to complete the questionnaire. In fact, respondents could complete the questionnaire at a time convenient to them at home. Another possible threat to validity is selection bias, which refers to differences in the manner that respondents are recruited for a study. Random selection decreased the possibility of selection threatening validity (Brink, 2006:100). A large sample was chosen to offset the effects of extraneous variables (Struwig & Stead, 2001:136) and standard instructions and information were given to all participants.

Reliability refers to the probability that a particular measurement procedure will generate the same results if applied repeatedly to the same object (Babbie & Mouton, 2001:125). Reliability pertains to the whole research process, namely, the overall research design used, sampling, data collection methods and procedures, issues related to measurement, and data analyses (Delpont, 2002:138). In this study every effort was made to deliver quality research and arrive at results that are meaningful and replicable, by minimising the various sources of error that may influence reliability.

Errors of measurement can generally be classified into random and systematic errors. Systematic measurement errors are errors that consistently affect the score of an individual as a result of some specific characteristic of the person or the test that does not relate to the construct being measured (Crocker & Algina, 1986:105). These errors are due to biases in measurement (Broedling, 1974:373), for example social desirability where the subject consistently agrees or disagrees with the questions in order to provide answers deemed socially desirable, or to please the researcher (Brink, 2006:158). Random errors of measurement affect an individual's score entirely by chance (Crocker & Algina, 1986:106) and are unpredictable errors that are unsystematic in nature which lead to inconsistent data. This type of error pertains to the subject, the researcher, the environment or the instrument (Brink, 2006:158). Systematic and random error may consequently influence an individual's observed score which, according to the classical true score model, is the actual score observed by the researcher. The observed score is the composite of an individual's hypothetical true score (a flawless expression of the true value of that variable when it is not influenced by internal or external factors) and error score (all factors that result in the true score and observed score to differ) (Salkind, 2006:106-107). An instrument becomes more reliable the closer it can draw to the true score, and reliability is therefore the ratio of true score to observed score.

In terms of the current study, the following sources of error were reduced as far as possible in order to increase reliability:

- A problem in the study was motivating participants to complete the questionnaire. This was countered as far as possible by explaining the significance of the study and the integral role of the participant in the research process. Distortions such as central tendency response, severity or leniency, and social desirability were also reduced as far as possible by explaining the importance of responses that are truthful and accurate.
- The researcher's impact on the result of the study, for example feeling fatigued, impatient, bored, ill or distracted, may result in random error in the data-gathering process and this was kept in mind when collecting measurement scores (Brink, 2006:159). In the context of this study, this is what

Umbach (2005) refers to as processing error. Consistent scoring procedures were utilized in the study to ensure reliability. Particular attention was also paid to coding, data entry and the existence of outliers and other missing data.

- The sampling methods used in the study may also have an influence on how reliable the measurement scores will be. According to Brink (2006:125), this relates to sampling error or “the difference between a sample statistic and a population parameter”. A large sampling error indicates that the sample is not representative. Sampling error may occur because of chance, bias in the selection of samples primarily because of incorrect techniques, and non-response error when a participant does not respond to the measurement instrument (Brink, 2006:126). These errors was reduced as far as was possible by selecting appropriate sampling strategies, determining appropriate sample sizes and reporting confidence levels (Umbach, 2005:96-97).

The reliability and validity of the instrument are described in more detail in the method chapter.

## **1.7 SIGNIFICANCE OF THE STUDY**

The research is significant in terms of identifying the attributes that graduates need to be employable within the context of the new world of work. Employability encompasses personal qualities, including those that are latent or less immediately visible such as taking initiative (York & Knight, 2007:160). Knowledge of such qualities is likely to enhance graduates’ career management skills, that is, the abilities needed to proactively find one’s way around the world of work and effectively manage the career-building process, which is founded on attributes such as adaptability (Bridgstock, 2009:35). Identifying the dimensions of employability may therefore aid graduates (and employees) in their career planning and management process, which has become increasingly important within the ever-changing organisational and career landscape. Working to improve such qualities may accordingly help individuals to prepare for an uncertain future (Clarke, 2008:271) and lead them to become attractive to employers. It can also result in desirable future career outcomes. Developing a sound measuring instrument of employability can be used within a career counselling context to empower individuals by making them aware of and providing them with choices on how to improve their employability and prepare for future work opportunities. It will therefore provide a means of helping individuals to adjust to changing career patterns in the contemporary workplace (Coetzee & Roythorne-Jacobs, 2007:2).

The study will moreover add to the career psychology field, and industrial psychology in general, by delivering much needed empirical research that broadens an understanding of employability within the South African context. This is significant given the high rate of unemployment, demographic changes in the workplace and an increased focus by the Government on the development of employability in new entrants to the workplace as well as unemployed individuals by means of the National Skills Development Strategy (Schreuder & Coetzee, 2006:49). The study additionally provided valuable insights with regard to the employability of different biographical groups, and more specifically, with regard to the fact that females and final year undergraduates obtained the highest mean scores on all the GEM dimensions.

The research furthermore benefits higher education, as it identifies desirable attributes of students that will make them suitable for future employment. These attributes can be identified and Universities can accordingly seek to develop these attributes in students in order to become reputed high quality institutions.

Within the academic field there is a lack of research on the conceptual foundation of employability that this study helps to clarify. The findings of the study may be used as a foundation for future research on the topic and the Graduate Employability Measure may be further developed to provide a psychometrically sound measure of employability that can be applied in various contexts.

## **1.8 DELIMITATIONS**

This research is limited to the context of a higher education institution in South Africa. The research is moreover limited to part-time and full-time university students with access to a telephone and the internet.

In terms of the construct to be studied, the focus was on supply-side or individual-level employability, which emphasises individual attributes, competencies and skills important to an individual's suitability for future employment. This differs from demand-side perspectives, which include contextual factors such as the demand for labour and economic conditions, which are not under the control of the individual. The focus was not on the skills necessary to be employable in specific professions, since domain-specific occupational expertise is not adequate to ensure positive work outcomes throughout one's entire career (Van der Heijde & Van der Heijden, 2006:450). Rather, the research aimed to identify the attributes necessary to be employable in a wide range of career contexts.

Although the importance of generic skills, discipline-specific skills and human capital for employability are recognized, the focus will be limited to the individual attributes needed by individuals to be employable. The reason for this is that the generic skills concept is enveloped in its own contention (Gilbert, Balatti, Turner & Whitehouse, 2004; Jones, 2009a), while it is difficult to find an acceptable measure of discipline-specific skills, generic skills and human capital across disciplines. The importance of generic skills, discipline-specific skills and human capital are therefore taken as a given, while the focus is on conceptualising employability in such a way as to be applicable to a wide range of contexts and graduates from various disciplines.

## **1.9 DEFINITION OF TERMS AND CONCEPTS**

It is important to define some of the most important key terms to be used within this research:

### **1.9.1 EMPLOYABILITY**

Employability refers to a psycho-social construct representing a combination of attributes (dispositions, values, attitudes and skills) that promote proactive adaptability in changing environments and enhance an individual's suitability for employment and the likelihood of obtaining career success.

### **1.9.2 GRADUATE EMPLOYABILITY**

The skills, understandings and personal attributes that will make graduates more apt to obtain employment and be successful in their occupations not only to their own advantage, but also to the advantage of the labour force, the community and the economy (Yorke, 2006:8).

### **1.9.3 CAREER SELF-MANAGEMENT**

The concept of career self-management has been described as the extent to which an individual frequently gathers information and plans for career problem-solving and decision-making (Quigley & Tymon, 2006:523).

#### **1.9.4 ATTRIBUTES**

Attributes within the context of this research refers to a combination of dispositions, values, attitudes and skills that are important to be employable and to proactively adapt to changing environments. These attributes include but extend past disciplinary and technical knowledge (Bowden, Hart, King, Trigwell and Watts, 2000) and are transferable to a wide range of contexts.

#### **1.9.5 CAREER SELF-MANAGEMENT DRIVE**

Career self-management drive refers to a tendency to proactively manage one's career and to believe in one's ability to cope with demands in various contexts by regularly collecting career-related information; recognizing, understanding and managing emotions in oneself and others; continuously seeking feedback from others and using networks to promote career growth; setting career goals and action plans; and a preference for innovation and taking risks in exploiting opportunities that exist in the career environment.

#### **1.9.6 CAREER RESILIENCE**

Career resilience is a personal attribute that facilitates a high degree of adaptability, an ability to take advantage of change, self-confidence, openness to new opportunities and contacts, self-reliance, and a belief in one's control over events regardless of adverse career circumstances.

#### **1.9.7 CULTURAL COMPETENCE**

Cultural competence refers to a person's effectiveness and motivation to gain knowledge about and successfully work with people across different cultural groups.

#### **1.10 CHAPTER LAYOUT**

The chapters in this dissertation are set out as follows:

## **Chapter 2: The new world of work and implications for careers**

The purpose of this chapter is to describe the new world of work that graduates and employees face. The changes described include increases in job losses, globalisation, technological advances, changing organisational structures and designs, the changing nature of work, the changing workforce, and a higher focus on work–life balance. The focus is consequently on the implications of these changes for individuals' careers and the attributes needed in order to be successful in a turbulent career environment.

## **Chapter 3: The employability construct**

This chapter sets out to conceptualise the construct of employability based on a discussion of its conceptual foundation, a focus on graduate employability, and a discussion of various employability models. The Graduate Employability Model is consequently conceptualised, which provides the foundation for developing and evaluating a measure of graduate employability.

## **Chapter 4: Research methodology**

This chapter discusses the research design and methodology of the study and highlights the purposeful and methodical research approach followed in carrying out the research. Discussion centres on the research paradigm, the determination and description of the sample, the measurement instrument, the data collection procedure, and the data analysis techniques used.

## **Chapter 5: Research results**

This chapter reports, integrates and interprets the empirical results of the study. Discussions focus on the results of an exploratory factor analysis and comparisons between groups

## **Chapter 6: Conclusions, limitations and recommendations**

This closing chapter sets out to draw conclusions regarding the achievement of the objectives of the research (both theoretical and empirical), the implications and limitations of the research, and recommendations for future research. The chapter ends with a final conclusion regarding the results of the study.

## 1.11 CHAPTER SUMMARY

The background and motivation for the study, the problem statement, aims of the study, thesis statement, the paradigm perspective, research design and methodology, the significance of the study, delimitations, and the definition of terms and constructs of the study were all discussed in this chapter. The overriding forces for change have had major implications for the way in which individuals do work and for the career context in which they function. This has necessitated that individuals are more adaptable and take a more proactive approach to managing their careers, and ultimately their employability. Despite the significance of employability, there are few empirical studies that have explained its foundations and have attempted to explicitly measure it, while even fewer studies have focused on developing accurate measures of graduate employability. The main aim of this research is therefore to develop and evaluate a measure of graduate employability.

Chapter 2 deals with the new world of work and its implications for individuals' careers.

## **CHAPTER 2: THE NEW WORLD OF WORK AND IMPLICATIONS FOR CAREERS**

This chapter discusses the changes taking place in the new world of work and its implications for careers and career management. The focus is consequently on the type of attributes that individuals need to possess in order to survive in this turbulent career environment.

### **2.1 THE NEW WORLD OF WORK**

Incessant changes in the external environment have forced companies to change the manner in which they do business, and by implication the way that employees do work. Such changes relate to developments in the political, technological, cultural and economic arenas that result in changes in structures, the composition of the workforce, service contracts, technology and information amongst other things (Schreuder & Coetzee, 2006:26). Based on the work of others, Amundson (2005:92) highlights the following noteworthy changes in working life: (a) more competition and demands for productivity; (b) large-scale organisational changes, spurred by mergers, joint ventures and work alliances; (c) increasingly ambiguous and unpredictable career paths; (d) more opportunities for work internationally; (e) a higher focus on making use of temporary and contract workers; (f) an increased necessity for considering self-employment; (g) a workplace characterized by more diversity; (h) the growing importance of technological skills; (i) greater difficulty in separating work and life demands; (j) higher pressure for dual-career planning; (k) a higher focus on interpersonal skills such as teamwork, networking and the need for continuous learning; (l) fewer opportunities for upward mobility; (m) and larger income differences between managers and workers. Such changes have major implications for organizations and individuals alike and cannot be ignored from a careers perspective. This section will accordingly examine the various changes in the contemporary workplace in order to determine the challenges that individuals face when they enter the world of work. Aspects to be discussed are increases in job losses, globalisation, technological advances, changing organisational structures and designs, the changing nature of work itself, an increasingly diverse workforce, and a higher focus on work-life balance.

#### **2.1.1 JOB LOSS**

There has been a recent upsurge in the number of jobs lost in South Africa with major implications for individuals' careers. The Quarterly Labour Force Survey (hereinafter referred to as QLFS) is a household-based survey collecting data on the labour market activities of South Africans aged 15 to

65. A summary of the key findings of the QLFS showed an overall decline of 770 000 persons in employment between the third quarter 2008 and third quarter 2009. Between the second quarter of 2009 and the third quarter of 2009 alone, 484 000 jobs were lost in all industries with the exception of Transport. The job losses were largely in Manufacturing, Trade, Construction, and Agriculture. The number of unemployed persons moreover increased by 70 000, while there was an increase of 1 071 000 in the number that are not economically active, 561 000 of whom were discouraged work-seekers (Statistics South Africa, 2009:vi-vii). The latter are individuals who are not currently searching for a job because of their belief that there are no jobs on hand for them.

In 2010, the findings of the QLFS showed that employment decreased by 86 000 between the second quarter (April to June) and the third quarter (July to September) with most job losses occurring in finance, followed by private households and community and social services. In terms of occupations, most of the job losses were in clerical (56 000), professional (51 000) and elementary (46 000) occupations. The number of discouraged work-seekers moreover increased by 95 000 (Statistics South Africa, 2010: vi,viii,xi). These findings strongly point to a drastic change in employment patterns and a need for individuals to remain employable across organizations and even industries. The fact that there are so many discouraged work-seekers also calls for educating individuals to know where to look for work, to network with the right people so as to enhance their opportunity to obtain a job, and in general be proactive and adaptable so as to remain employable in a tight labour market.

The situation abroad does not look more encouraging either. The Displaced Workers Survey (DWS) is a supplement to the January 2010 Current Population Survey (CPS), which is a monthly survey of around 60 000 households that provides data on the employment and unemployment of the American nation. From January 2007 to December 2009, 6.9 million workers were displaced from work that they had held for at least three years. Displaced workers are defined as individuals twenty years and older who lost their jobs or left their work because their company or plant closed or moved and there was not enough work for them to do, or because their job position or shift was eliminated. Furthermore, an additional 8.5 million individuals were displaced from jobs that they had held for less than 3 years. The combination of short and long tenured groups therefore places the number of displaced workers from 2007 to 2009 at 15.4 million (Bureau of Labour Statistics, US Department of Labour, 2010:1). Of significance moreover is that downsizings have disproportionately affected managerial employees and educated professionals, a group that was not previously targeted (Jacoby, 1999:124). Challenger (2009:29-30) is of the opinion that as unemployment keep rising, a greater number of people are seeking help to enhance their employability.

These statistics clearly shows that workers can no longer expect lifetime employment with one organisation, whether from the blue-collar or white-collar occupational category, and furthermore that employees have to take measures to make themselves more desirable to other organizations or even industries. The increasing number of discouraged workseekers is also an indicator that more drastic measures have to be taken by individuals to make themselves employable.

### 2.1.2 GLOBALISATION

South Africa has become increasingly integrated with the global economy since the end of apartheid in 1994 (Jenkins, 2006:649), largely in the context of economic and political liberalisation and pressures to transform the economic and institutional foundation of the country so as to increase demographic representativeness (Klein & Wöcke, 2007). Globalisation is in fact a noteworthy characteristic of the twenty-first century and refers to “commerce without borders, along with the interdependence of business operations in different locations” (Cascio & Aguinis, 2005:5). Schermerhorn, Huntland and Osborne (1997:22) view globalisation as the ‘new world order’ that offers a new organizational setting distinguished by international interdependence of resources, product markets, suppliers and organizational competition. Globalisation, however, does not only refer to a more permeable global economic environment and associated business operations. Keohane and Nye (in Dreher, 2006:1092) distinguish between three dimensions of globalisation: *Economic globalisation* is characterized by long-distance flows of capital, goods and services in addition to perceptions and information associated with market exchanges. *Political globalisation*, on the other hand, involves a dispersion of government policies, while *social globalisation* relates to the spread of information, ideas, people and images. All of these aspects of globalisation are largely responsible for changing the “spatial nature” of what work is, what activities it is composed of, and how individuals experience work and its impact on others (Jones, 2008:24).

One of the major forces for globalisation is the revolution in information technologies, which have had a major impact on how companies communicate, the transfer of money, and reduced transport costs, to mention a few examples. This has resulted in many organizations finding it efficient to position different phases of its production in different parts of the world (Richardson, 2000:179-180). Globalisation accordingly carries with it major changes for individuals and businesses around the world through the transfer of capital, goods, and – to an ever larger extent – labour (Cascio & Aguinis, 2005:5). This has implications not only for the way organizations do business, but also for individuals’ careers within organizations.

Globalisation has also altered the way organizations traditionally compete. Companies are increasingly facing competition not only from the industrialized west but also from developing countries around the world. This is largely due to the introduction of free trade areas leading to improved economic flows across countries. This, in turn, has led to cooperative strategic alliances amongst companies, and other forms of restructuring such as mergers, acquisitions and privatisations (Sparks, Faragher & Cooper, 2001:489) in order to increase competitiveness (Thomas, Lazarova & Inkson, 2005:342). This means that employees have to learn new skills and initiate new business processes in order to increase the efficiency of the organisation. This also implies that employees have to be more adaptable in order to cope with major organisational changes. In an article on the impact of globalisation in South Africa, Edwards (2001:66) contends that technological changes have resulted in a move away from lower skilled labour because of higher skill requirements of companies. This skill bias arising in the manufacturing trade, especially exports, implies that South African organizations are heightening their skills levels to better compete internationally. The downside is that elementary and unskilled labour increasingly finds it difficult to obtain employment. The author is accordingly of the opinion that the skill intensity of production makes it crucial to better the educational quality of labour in South Africa. This is particularly important in light of the increased migration of high-skilled labour from South Africa to other countries (Lynham & Cunningham, 2006).

In this global world, organizations increasingly focus on international markets, mainly in order to reduce costs. Organizations in the developed world, face high competition from developing countries such as China and India that are able to produce products at lower costs. This has resulted in increased outsourcing of jobs and work to these lower cost producers (Burke & Cooper, 2006:83). By locating operations in another country, organizations can be closer to their markets and circumvent costly transportation, insurance and administrative expenses. Other reasons that companies around the world are focusing on international business include less stringent government regulations, particularly with regard to pollution control and safety requirements; greater access to opportunities for growth not available in organizations' home countries; and the advantage of labour force availability (Grobler, Wörnack, Carrell, Elbert & Hatfield, 2006:530). The increased surfacing of multinational corporations has dramatically altered managerial careers in particular. Managers increasingly have to obtain considerable experience in the management of international operations in order to climb the career ladder. Managers moreover have to study and understand international politics, cultures, markets, employees and new management styles in order to succeed in the modern multinational corporation (Greenhaus *et al.*, 2000:4-5).

### 2.1.3 TECHNOLOGICAL ADVANCES

Technology is being unleashed onto the world at an increasingly rapid pace and has radically altered the way in which individuals live, work, communicate and organize their activities (Orlikowski & Barley, 2001:145). Indeed, the swift progression of technology has resulted in the development of internet and web capabilities which have contributed to enhanced information exchange along business channels and dramatically redesigned the way in which organizations do work. As an example of the way technology increasingly permeates the business environment, the volume of global corporate e-mails rose from approximately 1.8 billion a day in 1998 to more than 17 billion a day in 2004 (Bryan & Joyce, 2005: 22). Technology has also changed traditional work patterns as workers can telecommute, meet online and work in virtual teams instead of having to commute long distances to their jobs (Burke & Ng, 2006:90). This has resulted in the so-called 24 hour economy where workers and customers can be reached anytime and anywhere. In addition, there has been the emergence of social networking sites such as Facebook, MySpace and LinkedIn which creates opportunities for workers to interact, both formally and informally, with co-workers and customers, thereby facilitating communication and knowledge transfer and providing a means to generate and maintain social networks (Bennet, Pitt & Owers, 2010:63,65). Employers have also started to use such sites in order to interact with and gather information about potential job applicants (Roberts & Clarke, 2008:35) which has created a means to further probe the qualities potential applicants have to offer.

If employed to its full potential by organizations, the internet and related technologies could significantly contribute to a company's value chain by saving costs and time, and adding value to products and services bought by customers (Lessing & Scheepers 2002:305). Many companies are in fact no longer using telephones or mail in carrying out their main business functions, instead using inter-organizational information systems (IOIS) that aid in performing cross-organisational tasks with great savings in terms of labour, time and money (Ko, Olfman & Choi, 2009:1). It is argued that most companies in all sectors of industry, commerce and government are vitally reliant on their information systems and would in fact come to a close if the supporting technology for their operations ever ceased to function (Peppard & Ward, 2004:168).

The significant positive impact of information technology on firm performance is well documented (for example Bharadwaj, Bharadwaj, & Konsynski, 1999; Ko *et al.*, 2009; Lehr & Lichtenberg, 1999; Sircar & Choi, 2009). Modern organizations are investing extensively in information technologies such as web services, data warehousing and customer relationship management in order to leverage the

benefits of these technologies in determining their organizational strategies, customer relationships and enlarged enterprise networks. In other words, information technologies are strategically positioned for organizations to be highly adaptive and obtain a competitive advantage (Sambamurthy & Bharadwaj, 2003). In an extensive review of the topic, Peppard and Ward (2004) found the following five broad categories of organizational outcomes of information technology: (a) the ability to link and enable employees by means of electronic mail, teleconferencing and databases; (b) the ability to store knowledge for easy access and dissemination; (c) improved boundary-spanning capabilities by providing employees with communication links and therefore access to various sources of information such as industry best practices; (d) improved information processing leading to improved efficiency, for example the ability to communicate more quickly and less expensively across time and space; (e) and enhanced collaboration and coordination between employees, especially through extensive knowledge bases available to employees, which increases innovation potential.

The corollary of advanced technology is that the skill requirements of many jobs have been raised, while some jobs have in fact become redundant. In a knowledge economy where services and production are based on knowledge-intensive activities, there is a higher reliance on intellectual capabilities than on natural resources or physical inputs (Powell & Snellman, 2004:201). Bresnahan, Brynjofsson and Hitt (2002:340) define skill-biased technical change as “technical progress that shifts demand toward more highly skilled workers relative to the less skilled”. New technology has therefore brought with it new career paths for those employees that have suitable combinations of skills, while employees that are less adaptable have frequently found themselves obsolete (Greenhaus *et al.*, 2000:5). While developments in the technology area have spurred organizations to promptly harness its potential as a way of improving employee efficiency and organizational productivity, employees at all levels are increasingly being called upon to be more flexible and adaptable in obtaining the necessary skills and competencies to survive the digital revolution. Landry, Mahesh and Hartman (2005:134) refer to the “information empowered” employee as someone who always has access to company and applicable external information by means of the network, and someone who takes part in supporting business processes that encompass information technology. These workers can access data, acquire applicable information and leverage stored knowledge in order to do their work.

In light of the above, it is clear that individuals have to be highly adaptable in order to stay abreast of fast-paced technological change as it permeates all aspects of work in the contemporary working environment. This not only has implications for the demand for highly skilled workers, but also for work values and preferences since technology offers opportunities such as flexitime or working from home.

#### 2.1.4 CHANGING ORGANISATIONAL STRUCTURES AND DESIGNS

In an epoch of universal globalisation, technical advance and mounting competition, numerous organizations must forgo great parts of their secure traditions and change their work organization dramatically (Bryan & Joyce, 2005:23; Caroli & Van Reenen, 2001:1449) so as to ensure future sustainability (Appelbaum, Mitraud, Gailleur, Iacovella, Gerbasi & Ivanova, 2008:21). Organizations are increasingly recognizing the importance of their human assets who produce ideas, are innovative and can easily collaborate with others to create revenues and value by means of forming networks and brands (Bryan & Joyce, 2005:23). Organizations are accordingly reorganising their hierarchies and finding ways to broaden their capacity by flattening their structures rather than increasing vertical management layers (Bryan & Joyce, 2007:26). Such “horizontal” organizations have a smaller number of management levels and employ cross-functional autonomous work teams to manage business processes (Byrne, 1993). A horizontal structure enhances communication and the decentralization of decision-making, which empowers employees (Claver-Cortés, Zaragoza-Sáez & Pertusa-Ortega, 2007:54). An advantage of decentralization to the company is that it reduces the cost of information transfer and communication since information is processed at the level at which it is used. Decentralization also allows for faster market responses since responsibility is transferred downward to teams that can more easily coordinate their activities because only a limited number of multi-skilled workers are involved (Caroli & Van Reenen, 2001:1453). Flexible organizational structures permit communication and teamwork among employees and promote interaction among company members, which allows collective learning to take place from the knowledge that individuals possess. Employees are subsequently able to take better advantage of their individual capabilities and enhance the significance of their input because they are allowed freedom of action (Claver-Cortés *et al.*, 2007:54). Individuals therefore need to be flexible, they should be able to manage themselves and work independently, and network in order to be successful in the face of changing organizational structures.

Globally, modern organizations are rooted in complex relationship networks where they must compete intensely in various markets, and at the same time collaborate in other markets. Where organizations collaborate or initiate joint ventures with their competitors, virtual organizations are usually formed. This implies the creation of boundaries around a temporary company in collaboration with external partners and linking people, assets and ideas by means of technology. Each company brings its own expertise to the business opportunity until it dissolves, whereupon the organizations disband. In this way companies can embrace favourable market opportunities by permitting them to provide a product

extension and to jointly leverage company assets, which are then distributed across the partnering businesses (Anand & Daft, 2007).

Organizations are also increasingly outsourcing, that is, focusing on the identified core business of the organization and converting other divisions or departments into independent businesses (Schabracq & Cooper, 2000:233). This has resulted in the simultaneous use of a permanent workforce that is small, but relies heavily on contingent, part-time and contract workers; self-managed groups that are responsible for the most important activities in flat hierarchies; and widespread alliances with internal and external partners (Cascio & Aguinis, 2005:6). More use is also made of the network structure, which implies working in varying collections of independent individuals and small groups who belong to loose professional networks. This structure allows its members to undertake large projects without the expenditure of maintaining an actual company and therefore permits members to work in a flexible manner (Schabracq & Cooper, 2000:233).

Changing organisational structures and designs have implications for the way in which individuals work, and therefore for the types of skills, competencies and attributes that employers require from their employees. Individuals need to be, amongst others, adaptable, proactive, and innovative, and able to work independently, and manage themselves if they are to capitalize on such organisational changes and be successful in their careers. Individuals that stay abreast of changes and leverage opportunities to acquire the qualities that will be needed to succeed are more likely to be desirable to prospective employers than those that do not stay abreast of the competency and attribute requirements of contemporary organisational structures.

### **2.1.5 CHANGING NATURE OF WORK**

The organisational changes discussed thus far have implications for the type of work that individuals have to perform. The increase in temporary jobs over permanent jobs has for example enhanced the requirements of flexibility that employees have to exhibit (Fournier, Lachance & Bujold, 2009:321). Martin and Healy (2008:10), drawing on the work of others, ascribe changes in the way work is organised to four sets of demands, namely flexibility demand, autonomy demand, customer focus demand, and knowledge demand. *Flexibility demand* relates to companies being able to adapt swiftly to customer demands and relentless competition by altering the products and services supplied to the market. This requires individuals that can easily move between tasks as needed, and work to be reorganised so that individuals work in flexible teams that can complete tasks more efficiently.

*Autonomy demand* refers to exceptional needs for a culture of autonomy amongst employees, largely due to organisational restructuring and its accompanying elimination of management layers. Employees must consequently work with less supervision in their daily functions and organizations are relying on them to be self-directed, have judgement of what they need to do next in their job, and possess the ability to focus on accomplishing the organizational outcomes that were set out. The *customer focus demand* highlights a greater shift towards customer focus and service orientation in companies. Here the focus lies in greater responsiveness to customer demands and needs through employee autonomy, initiative and judgment. Lastly, *knowledge demand* requires work to be organised in such a manner that knowledge can easily and swiftly be developed and distributed throughout the organisation in order to breed innovation and efficiency (Martin & Healy, 2008:10). These flexibility requirements have major implications for the type of attributes that individuals must possess in order to adapt to customer demands, be increasingly service focused, be self-directed and proactively develop the necessary knowledge to deliver high quality work.

Ryan and Watson (2003) found that information and communication technologies (hereinafter referred to as ICT) have also had a major impact on the nature of work, depending on occupation. Increased use of ICT has for example resulted in disseminating certain aspects of traditional jobs to the clients themselves, such as printing of photos and the utilisation of search engines in libraries. In such industries, job requirements have changed to become multi-faceted and employees have to be multi-skilled so as to add more value and avoid becoming obsolete. Technology has also resulted in the automation of certain parts of the production process and consequently several trade skills and occupational duties have become outdated. The authors add that automation requires employees to possess basic computer and clerical skills. The speed at which new products and processes are being developed also requires individuals to be adaptable and responsive to change. Lastly, the authors found that the nature of work is also influenced by customer demands in terms of increasingly complex requirements and the higher speed at which products and processes are expected to be delivered.

In light of the above, it is clear that the changing nature of work requires workers to take initiative and to be self-directed, highly adaptable, autonomous, reliable, and innovative. Greenhaus *et al.* (2000:6) indeed emphasise the fact that as the locus of responsibility moves downward in the company as a result of leaner organizational structures, all employees need to become skilled in self-management. Moreover, in a new paradigm where the organisation is depicted as a network of interconnected goals and structures with a lean core that services a number of units, alliances and outsourced functions, the role of the manager is that of a portfolio specialist who provide value to the company by means of

mastery and experience of varied aspects critical to the company. Managers are furthermore assessed by their outputs and paid according to their skills and they are expected to adapt to the changing needs of the company (Nicholson, 1996:41). This will require flexibility to adeptly move from one project to another, the capacity to interact with individuals from various functional areas, and an interpersonal style that is collaborative and participative (Greenhaus *et al.*, 2000:7). These types of attributes are consequently important to be successful in the workplace and therefore desirable attributes that employers require of workers.

### **2.1.6 THE CHANGING WORKFORCE**

In recent times organizations have placed diversity management under a magnifying glass largely because of the free labour movement due to globalisation, the struggle for human rights by minority groups to be included in the employment sector, and the availability of equal opportunities in the workplace (Ongori & Agolla, 2007:072). In South Africa, the implementation of employment equity and affirmative action has resulted in an increase in the number of previously disadvantaged individuals employed across all occupational categories and levels. The twenty-first century organisation therefore looks different demographically than earlier times. Such organizations contain more females at all levels, have a more ethnically mixed workforce, contain more workers with disabilities, have employees that are older, and make use of more contingent workers (Cascio & Aguinis, 2005:10), in addition to containing different generations of workers (Shaw & Fairhurst, 2008; Yrle, Hartman & Payne, 2005).

Drawing from the work of others, Jorgensen (2003:42) warns that in the coming decades the supply of older employees relative to younger employees will increase, necessitating organizations to look to older employees to enhance the knowledge and skills needed for success in addition to finding better ways to accommodate the needs of young employees. With regards to the latter, the most recent demographic group to have entered higher education and the workforce is named Generation Y and are characterised as technically literate, ethnically diverse, independent, entrepreneurial, socially active, able to multitask, and team oriented, with a need for flexibility, and a good work–life balance, with expectations to be empowered and actively searching for jobs that provide training and professional growth (Jorgensen, 2003:42; Shaw & Fairhurst, 2008:368-369). These characteristics have significant implications for the design of organisations and work groups in order to meet the needs of these younger workers (Yrle *et al.*, 2005:189), in developing strategies to attract and retain

these groups (Jorgensen, 2003:48) as well as designing training and development programmes that suit the needs of a younger generation of workers (Shaw & Fairhurst, 2008:371).

The significance of changing workforce demographics is that companies are reliant on the talents of their workers to thrive, and talent is spread across all groups of individuals despite their dissimilarities (Cavaleros, Van Vuuren & Visser, 2002:50). With the workforce growing even more diverse in terms of race, gender and sexual orientation amongst others, successful organizations will establish a corporate culture that embraces diversity as a means to be more productive (Schreuder & Coetzee, 2006:28). In order to capitalise on such a diverse workforce, organizations need to understand the different expectations and values of different groups and manage them effectively. Greenhaus *et al.* (2000:7) contend that it will also require individual employees to understand various cultures and to cooperate with those holding different perspectives and values. Career success in numerous companies, it is argued, will in fact rely on individuals' capacity to succeed in a multicultural environment. This has clear implications for the type of attributes required to be employable in multicultural settings such as the ability to effectively interact with individuals from different cultural backgrounds. This is also significant given the diverse workforce of South Africa and the forces for globalisation, resulting in an increase in expatriate assignments and international task teams amongst others. Knowledge of the type of values, learning styles and expectations of each generation of workers is also important in order to effectively manage these individuals and help them to manage themselves.

### **2.1.7 A HIGHER FOCUS ON WORK–LIFE BALANCE**

Companies are increasingly faced with the challenge of attracting and retaining talent and to implement methods to keep the labour force healthy and satisfied in order to gain a competitive advantage over companies that have not implemented such measures. In fact, one area that companies are increasingly paying attention to in order to attract, motivate and retain talent is the degree of work–life balance of their employees. In this regard, a survey conducted by the Association of Executive Search Consultants (AESC) involving 138 executive recruiters dispersed globally, showed that 85 per cent of the respondents will reject an executive job offer if there is little chance for maintaining a high-quality work–life balance. The survey additionally showed that 86 per cent of the executive recruiting respondents stated that their candidates rate work–life balance either as important as or even more important than the potential to earn higher salaries and that the issue is brought up early in talks around prospective employment (Roberts, 2007). These findings are in line with various

changes that have taken place in the workforce. One of the most striking demographic changes in the workplace has been the greatly increased number of women, including mothers, in the labour force (Wax, 2004:36). This implies that women may face conflicts between work and family life. The same may be true for fathers, who have become increasingly involved in family responsibilities since women are no longer staying at home to assume these duties single-handedly (Greenhaus *et al.*, 2000:290). Another important feature is the increasing inability of individuals to separate themselves from their work, especially because of technology and flexible work practices (Perrons, 2003:69). The increase in non-standard, flexible work as opposed to permanent, full-time employment therefore has a major impact on individuals' non-work life (Fournier, Lachance & Bujold, 2009:321).

Nicholson (1996:40) asserts that with occupations increasingly being more challenging, complex and demanding, individuals are more apt to think of their careers not as 'part of' their lives, but 'as' their lives. Careers in fact support key facets of individuals' sense of identity, create meaningful activity, offer a sense of purpose to their future prospects, and enables them to consider themselves valuable contributors in relationships and social institutions. All of this means that employees may experience conflict and stress when work and family responsibilities compete for attention. It also implies that many people, typically females, have to consider their family role when making career decisions such as whether or not to turn down career development opportunities that may potentially result in conflict between their work and family role (Greenhaus *et al.*, 2000:298). In terms of employability, people are expected to be simultaneously committed and flexible, and specialized but also despecialized in the workplace, while juggling competing personal and work-life aspects (Van der Heijde & Van der Heijden, 2006:456). It is therefore important that individuals have the ability to be extremely flexible and adaptable in order to alter between competing work, personal, and family roles.

## **2.2 A NEW ERA IN THE CAREER LANDSCAPE**

Changes in the organisational landscape necessarily have implications for careers and career management. This section will focus on what exactly a career is and the changing meaning of 'a career'. The transformation of the work environment has resulted in new career forms being shaped, which will be discussed here. Specifically, the focus will be on the protean and boundaryless career models. The various changes in the organisational and career landscape accordingly provide the impetus for considering how individuals must survive and function in such a turbulent environment.

### 2.2.1 WHAT IS A CAREER?

Careers are central to our lives. Work not only provides a means of living, but it is a source of identity, creativity, and challenge, and it provides meaning, status and access to social networks (Baruch, 2004:59). In order to understand the backdrop of contemporary careers, it is important firstly to examine how the notion of careers have been conceptualised in the literature. Early career literature focused on careers as “the moving perspective in which persons orient themselves with reference to the social order, and of the typical sequences and concatenation of office” (Hughes, 1937:413), “a profession or other calling demanding special preparation and undertaken as a life work” (Webster’s in Reitman & Schneer, 2008:17), and “a succession of related jobs, arranged in a hierarchy of prestige, through which persons move in an ordered, predictable sequence” (Wilensky, 1960:554). These definitions evidently typify what the ideal career looked like in the past where individuals strived to move constantly upwards to the top of their profession over the course of their working lives (Reitman & Schneer, 2008:17). Careers were focused outward on an ideal generalized career “path” of vertical progression which entailed positions that held increased responsibility, status and rewards as well as an offer of security for the employee (Hall & Mirvis, 1995).

Various social and economic developments in the 1980s, however, necessitated a broader definition of the career concept. Careers no longer follow the orderly hierarchical progression with a single employer. Rather, they involve a developmental process where employees gain experience in a number of different companies or through various different work tasks or roles (Schreuder & Coetzee, 2006:57). The modern definition of career accordingly moves away from a static outlook of occupational arrangements towards the relevance of time and moreover does not contain confining statements with regards to location of work and what career success signifies (Arthur, Khapova & Wilderom, 2005:178-179). Greenhaus *et al.* (2000:9) for example view a career as “the pattern of work-related experiences that span the course of a person’s life”. This definition does not entail professional work roles, stability within a single company, or the portrayal of upward mobility; this definition aligns the conceptualisation of a career with the modern organisational landscape. Work-related experiences moreover include both objective events or circumstances (such as job activities, compensation, positions, status and job-related experiences) and subjective understandings of work-related events (such as work expectations, values, ambitions, needs and feelings concerning specific work experiences) (Greenhaus *et al.*, 2000:9). An outcome of these career experiences is career success, that is, the objective or subjective sense of achievement of desirable work-related results during an individual’s work experiences over time (Arthur *et al.*, 2005:179; Schreuder & Coetzee,

2006:60). Depending on the type of career path the individual assumes (traditional or non-traditional), either objective or subjective measures of career success will take prominence.

## **2.2.2 CONTEMPORARY CAREER MODELS: FROM TRADITIONAL CAREERS TO PROTEAN AND BOUNDARYLESS CAREERS**

A great amount of research attention has been devoted to the changing meaning of careers and the emerging nature of career paths (Baruch, 2004:59). The traditional or organisational career, with its accompanying expectations of long-term employment and predictable promotions, has its origin in the bureaucratic organisational form (Peiperl & Baruch, 1997:8). These organizations are characterized by hierarchical, inflexible structures which emphasise stability (Defillippi & Arthur, 1994:307). Careers within one or a few such companies are accordingly characterized by vertical success, giving one's trust, commitment and best efforts to the company, and being rewarded by advancing in rank and monetary compensation (Hall & Moss 1998; Peiperl & Baruch, 1997:8). The consequence of this is the appraisal of career success in objective terms such as upward mobility and external achievement indicators such as salary and social status (Baruch, 2004:60).

It was assumed in organisational theory that traditional notions of work entailed administrative control over staff, long-term employment relationships, and physical proximity between the individual and company (Gow & McDonald, 2000:374). In fact, the ideal career in the managerial field, according to Reitman and Schmeer (2008:18), was portrayed by Whyte (1956) in the well-read book *The Organization Man*. Those who elected to join the large, bureaucratic organisation received excellent compensation, job security and respect in return for loyalty and hard work. It was expected of the individual to be highly committed to his job throughout his career, which entailed climbing the corporate ladder and, as a result, achieving higher status and income. Even though not all individuals realized this "ideal" career, it was still a desired prospect (Reitman & Schmeer, 2008:18). These "desirable" careers were certainly prominent in industrial employment since it was supported by so many organizational structures (Sullivan, 1999). In addition, the responsibility for career development within the traditional careers framework was seen as belonging to the organization (Baruch, 2004:59). This entailed developing career paths for individuals and providing opportunities to gain experience in order to climb the ranks.

The 1970s and 1980s signalled a fundamental change in organizations and associated career paths. The economic slowdown during this period resulted in a shift from vertical to more horizontal career

paths, requiring individuals to advance by moving sideways rather than upwards in the business. This was largely due to organizations responding to difficult times and heightened competition by delayering in order to cut expenses, which resulted in fewer opportunities for promotion (Baruch, 2004:9). Organizations additionally restructured and downsized to increase efficiency and reduce costs (Hall, 2004:5). These developments lead to the violation of the implicit psychological contract between the company and each of its employees. Employees are no longer offered job security and upward progression in exchange for commitment and giving the organization their best (Rousseau in Reitman & Schneer, 2008:19). Employers accordingly make use of consultants and the contingent workforce on a larger basis (Mirvis & Hall, 1994:366) since employment contracts have changed from long-term relationships towards shorter term transactional contracts (Hall & Moss, 1998:24).

Another major development during this time was the entry of females and the baby boomers (offspring of the organisation men) into the workforce. The baby boom cohort was not interested in traditional careers as the ideal, but were more concerned with freedom, individual choice and the expression of values in the workplace. This consequently led this group to be concerned with career self-determination and being motivated to a larger extent by psychological success measures, such as meaningful work, rather than objective success measures such as salary and position (Hall, 2004:4).

The advance of traditional career paths towards non-traditional career paths and the accompanying change in psychological contract had led to two emerging viewpoints on careers. Hall (1996, 2006) pointed out that in the late 1980s a shift took place from the organizational career towards what can be termed the “protean” career. The latter refers to a career anchored in self-direction in search of psychological success in an individual’s work life (Hall & Mirvis, 1995:271). The characteristics of such a career can be explained as follows (Hall, 1976:201):

The protean career is a process which the person, not the organization, is managing. It consists of all of the person’s varied experiences in education, training, work in several organizations, changes in occupational field etc. The protean person’s own personal career choices and search for self-fulfilment are the unifying or integrative elements in his or her life. The criterion of success is internal (psychological success), not external. In short, the protean career is shaped more by the individual than by the organization and may be redirected from time to time to meet the needs of the person.

The second emerging type of career has been defined as the boundaryless career (Granrose & Bacili, 2006:164). According to Arthur and Rousseau (1996:5) boundaryless careers are the opposite of traditional careers, which were viewed as unfolding in a single organization. The role of boundaryless

careers is to provide opportunities to acquire new skills and cultivate networks that could be of use in an individual's current job, as well as in future employment opportunities. Mirvis and Hall (1994:366-367) are of the opinion that the boundaryless career will be characterized by a variety of responsibilities, that may or may not be part of a single job, cyclic redefinitions of an individual's profession, and "fits-and-starts" throughout the individual's working life. Moreover, in order to make sense of this disorder, individuals have to decipher their continuously changing work schedule and combine their range of experiences into a logical self-picture. Only then will one be able to look inwards towards personal values to find one's identity and some kind of career plan for the future. Of importance is also that the person holding a boundaryless career attitude "navigates the changing work landscape by enacting a career characterized by different levels of physical and psychological movement" (Sullivan & Arthur, 2006:9). This means that the boundaryless career not only focuses on transcending the boundaries of jobs, organizations or occupations, but also emphasises an individual's own subjective perceptions of their ability to make changes or transitions (Sullivan & Arthur, 2006:21).

These career forms are closely related to employability and will be discussed in more detail below.

### **2.2.3 PROTEAN CAREER**

The protean career concept is derived from the Greek god Proteus, who could change its shape at will, such as from a wild boar to a tree (Mirvis & Hall, 1994:369). The terms of the new psychological contract between employer and employee based on the protean career is summarized in Table 2.1. The protean career is driven by the person instead of the organization and will occasionally be rebuilt as the individual and the environment change (Hall, 1996:8), contrary to the concern of traditional careers with vertical success. In fact, the shift to the protean career implies that the individual disconnects the career concept from any single company and even from the notion of lifelong paid employment (Hall & Mirvis, 1995:271). There is accordingly a higher degree of mobility in the protean career than in the traditional career and the core value of the protean career can be related to growth in freedom, as opposed to advancement. Moreover, the protean career emphasises psychological success such as personal accomplishment, family happiness, or feeling proud, instead of focusing on objective success criteria such as compensation and status. In the protean career there is also a move away from feeling committed to the organization towards commitment to the profession (Hall, 1996).

**Table 1.1: The new “Protean” career contract**

<b>Characteristics</b>
1. The career is managed by the person, not the organization
2. The career is a lifelong series of experiences, skills, learning, transitions and identity changes (“career age” counts, not chronological age).
3. Development is: <ul style="list-style-type: none"> <li>• Continuous learning</li> <li>• Self-directed</li> <li>• Relational, and</li> <li>• Found in work challenges</li> </ul>
4. Development is not (necessarily): <ul style="list-style-type: none"> <li>• Formal training,</li> <li>• Retraining, or</li> <li>• Upward mobility</li> </ul>
5. The ingredients for success change: <ul style="list-style-type: none"> <li>• From know-how to learn-how</li> <li>• From job security to employability</li> <li>• From organizational careers to protean careers, and</li> <li>• From “work self” to “whole self”</li> </ul>
6. The organization provides: <ul style="list-style-type: none"> <li>• Challenging assignments</li> <li>• Developmental relationships</li> <li>• Information and other developmental resources</li> </ul>
7. The goal: psychological success

Source: Hall and Moss (1998:26)

The advantage of the protean career concept (Mirvis & Hall, 1994:369) is that its dimensions of autonomy and flexibility present a fresh manner to think about *time* over the course of an individual’s work life. In contrast to traditional career concepts which focus on predictable upward mobility on the career ladder, the protean career concept allows for a more flexible and itinerant career path characterized by “peaks and valleys, left turns, moves from one line of work to another etc.”. The protean career is determined by the individual’s distinctive personal needs – their “career fingerprint” – rather than by the idea of an ideal generic career path (Hall & Mirvis, 1995:272).

Another advantage of protean careers is that it broadens the *career space*. Career literature has been inclined to relate careers to paid work, while clearly distinguishing between individuals’ work and non-work lives. The protean concept is, however, more flexible in recognizing the overlap between work and non-work roles and the fact that both are responsible for determining an individual’s identity and sense of self. This broadened career space makes it possible for individuals to spend more time with their families, and justifying it by the notion of obtaining psychological success (Mirvis & Hall, 1994:369).

Individuals who hold protean career attitudes use their own values instead of company values to guide their careers. In other words, they are “values driven”. These individuals furthermore embrace a more independent role in managing their career and its related activities, in other words, they are “self-directed”. They accordingly manage their own experiences in education, training, employment and family life (Hall, 2004). On the other hand, individuals that have not internalised the protean career attitude are more apt to make use of external standards (as opposed to internally developed standards). For example, these individuals are dependant on external direction and assistance from the company rather than taking a more proactive and independent stance (Briscoe, Hall & DeMuth, 2006:31). In other words, those holding a more traditional career concept take a more passive role in the management of their careers and expect the company to guide their career choices and activities (De Vos & Soens, 2008:450). Life and career success in the protean career emphasises to a larger extent personal feelings of self-actualisation, fulfilment and satisfaction with one’s career (Baruch, 2006:129). By following the protean career, the individual therefore assumes a high level of personal responsibility and self-awareness (Hall, 1996:10).

In order to recognize the possibilities of this type of career, new meta-competencies (i.e. learning how to learn) must be developed in order to help individuals manage themselves and their careers. These competencies relate to developing self-knowledge (or identity-awareness) and adaptability. Adaptability allows an individual to respond in a self-correcting manner to novel demands from the environment without relying on formal training and development from the company. A person needs self-awareness, however, to avoid adapting in a reactive way and changing in a manner that is inconsistent with his or her personal goals and values (Hall & Moss, 1998:31). When a person has both a high degree of adaptability and self-awareness, this may result in proactivity and help individuals learn from their experiences and develop their own competencies (Hall, 2004:6-7). Adaptability and identity learning, however, cannot be done alone. It calls for connections with other individuals and interaction between people (Hall, 1996:12). Continuous learning can be leveraged by relationships in the work environment such as co-workers from diverse backgrounds, bosses, mentors and subordinates, as well as customers. This will ultimately result in the creation of employability, and consequently some degree of security for employees (Hall & Moss, 1998:26,31).

In light of the above, the connection between this contemporary career model and employability is clear. Self-directed, values-driven individuals that are adaptable and self-aware are more likely to

proactively seek out opportunities and relationships that will increase their marketability and desirability to future employers.

#### **2.2.4 BOUNDARYLESS CAREER**

We have entered an era where organizations are consistently reshaping and resizing, partnering with other organizations and buying and selling off businesses. These flexible firms, for example virtual organizations, are termed boundaryless. What is important to the success of boundaryless organizations is their ability to self-design in a complex environment and acquire the necessary flexibility to respond to opportunities and threats. This implies “moving people quickly into new assignments, forming them into new structures, and having them hit the ground running” (Mirvis & Hall, 1994:366,368). In simple terms, the boundaryless career is the opposite of the ‘bounded’ or ‘organizational’ career (Arthur, 1994:296). In an environment that no longer offers stability and long-term employment, and in the context of widespread perceptions regarding psychological contract violation, a new career concept was born. A boundaryless career exists where the actual career, or what a career implies, surpasses the boundaries of separate employers; when a career draws validation and marketability externally from other employers (when the employee has in fact become employable to other organizations); and when a career draws significance from outside the present employer through external networks. A boundaryless career furthermore implies that traditional career boundaries are broken, and individuals may in fact decline various career opportunities because of a concern for their personal or family lives. Lastly, the career actor may subjectively interpret their careers as boundaryless independent of the organization he or she works for and its structural constraints (Arthur & Rousseau, 1996:6).

An individual with a particularly high ‘boundaryless’ attitude toward employment relationships across organisational boundaries is keen about generating and maintaining relationships across company boundaries. This attitude has been called ‘subjective boundarylessness’ (Briscoe *et al.*, 2006:31). Sullivan and Arthur (2006:21) refer to psychological mobility as the perceptions by individuals of their ability to make transitions or move. Individuals may also be inclined toward crossing firm boundaries in physical employment mobility. An individual high in this type of organisational mobility attitude will be at ease or even favour a career that involves multiple employers (Briscoe *et al.*, 2006:31). Physical mobility, it has been argued, may include movements between jobs, companies, occupations and countries (Sullivan & Arthur, 2006:21). There are also boundaries between work and family (Inkson, 2006:55).

In light of the blurring of boundaries and careers becoming more open, diverse, and less structured and managed by employers, Arthur, Claman and DeFillippi (1995) propose the “intelligent career”, which marks the qualities required for the successful management of careers by individuals. The intelligent career concept is founded on the competency-based view of the firm and builds on the concept of the intelligent enterprise. Personal competencies, according to the authors, entail various forms of ‘knowing’, while the intelligent career involves the application of these forms of knowing. The authors subsequently describe three different types of career competencies or “career capital” (Inkson, 2006:55) to reflect these different ways of knowing, which can be adapted to and applied to changing career opportunities (Sullivan & Arthur, 2006:25). These are knowing-why competencies, knowing-what competencies and knowing-who competencies.

*Knowing why* describes the degree to which an individual identifies with his or her organization’s culture and is usually rooted in a person’s general work motivation and personal beliefs and values. It also includes family and various other non-work circumstances likely to influence the general commitment and adaptability that an individual carries with him or her to the work situation. *Knowing how* describes the knowledge and skills an individual brings to the organization and can be viewed as the career competencies of expertise, capabilities, and tacit and explicit knowledge. Individuals enhance these competencies through formal learning such as lectures, as well as experiential learning such as on-the-job assignments. People’s pursuit of broadening these capabilities may lead them to cross many organizational boundaries. *Knowing who* describes the various relationships, formal and informal, that an employee forms as part of an organization’s networking actions, for example the relationship between customer and supplier or relationships with professional associates. Individuals with this competency know how to find the right people, depending on the situation (Arthur *et al.*, 1995:9-10). Knowing-why competencies therefore relate to identity and motivation, knowing-how competencies to skills and expertise, and knowing-who competencies to reputation and relationships (Sullivan & Arthur, 2006:25).

In their research, Eby, Butts and Lockwood (2003) set out to determine whether the ‘knowing why’ competencies of proactive personality, openness to experience, and career insight were related to perceived career success, internal marketability and external marketability in the context of the boundaryless career. The authors furthermore proposed that the ‘knowing who’ predictors of experience with a mentor, internal networks, and external networks would be positively related to perceived career success, internal marketability and external marketability respectively. Lastly, it was proposed that the ‘knowing how’ competencies of career/job-related skills and career identity would be

positively related to perceived career success, internal marketability and external marketability respectively. The authors found that 'knowing why', 'knowing how', and 'knowing who' are indeed significant predictors of career success, perceived internal marketability, and perceived external marketability. This implies that the development of appropriate career competencies may enhance an individual's employability. It also alludes to the type of variables that employability consists of.

It is clear from the above that there is a link between boundaryless careers and employability. Individuals that have acquired career competencies are apt to perceive themselves as capable of moving across boundaries (whether departmental, across tasks, industries or even cultures) and being marketable to different employers, while employers are likely to perceive such individuals as valuable and desirable workers.

With regards to the association between protean and boundaryless career models, even though they can be expected to overlap, the models are independent, albeit related to one another. An individual may exhibit a protean attitude and make independent, internally oriented choices, but still not prefer inter-organizational mobility. In contrast, an individual may seize the boundaryless career attitude but look to the organization to manage and develop his or her career (Briscoe *et al.* 2006:32).

## **2.2.5 CONCLUSION**

The above discussion has highlighted the progressive change away from traditional career models to new career pathways. The protean and boundaryless career models have been described. Contemporary career literature includes other career concepts. Schreuder and Coetzee (2006:36) add composite careers and entrepreneurial careers to the mix. Composite careers refer to the expression of parts of individuals' possible selves by having more than one work role and/or holding multiple forms of employment. Moreover, many individuals opt for entrepreneurial careers, which implies selecting self-employment as a career option, that may include the establishment and management of one's own company. Baruch (2004:60-61) suggests that there has been a transition from linear career systems to what he calls a "multidirectional career system" where there is a multitude of ways of defining career success and no single way of reaching success. The evaluation of career success moreover implies that there are multiple options for evaluating career success, such as autonomy and freedom, and work-life balance, alongside external measures such as income and status. In the context of these changes and contemporary career paths there is greater pressure on individuals to

adapt and find their own success. They therefore have to develop desirable attributes and characteristics in order to survive in a turbulent career environment, the subject of the next section.

### **2.3 SURVIVAL IN A TURBULANT CAREER ENVIRONMENT**

The turbulent and unstable work and career environment described above may seem daunting to many, but those with the appropriate personality, behaviour and/or attributes will easily be able to navigate through or even capitalize on the seeming disorder. The key to this is developing one's employability. Thijssen, Van der Heijden and Rocco (2008:167) in fact describe employability as "the possibility to survive in the internal or external labour market", while others link employability to human resource development interventions focused on skill development and the promotion of flexibility and adaptability to change (Van der Heijden & Thijssen, 2003). It is therefore important, from the company's as well as an individual's perspective, to identify the attributes that individuals need to possess in order to be employable and consequently survive in a turbulent career environment.

It is clear from these discussions that the modern work environment places the burden on individuals to manage their own career if they want to succeed. This ability to manage one's career is reliant on the career competencies of self-awareness and adaptability (Hall, 2004). Individuals not only need to know themselves in terms of what their strengths, weaknesses, values and career aspirations are (Fugate & Ashforth, 2003), but also investigate what knowledge, skills, abilities and other characteristics they need in order to be desirable to employers (Fugate *et al.*, 2004) and what job opportunities are available to promote career advancement. In fact, many researchers have emphasised the significance of self-management actions such as seeking feedback regarding one's competencies, goals setting, and creating career opportunities through networking (for example King, 2004; Sturges, Guest, Conway & Davey, 2002). With regard to networking, individuals need to socialise with people who can advance their careers and expose them to various job opportunities and resources (Forret & Sullivan, 2002). The requirement to proactively manage one's career is not limited to the job entry phase but covers all phases of an individual's career (Abele & Wiese, 2008:734). Personal attributes linked to self-direction are therefore vital in attaining career success (Fuller & Marler, 2009:1).

Individuals continuously need to prepare themselves for future challenges and develop an adaptive orientation to employment as part of a successful career self-management strategy. This future-orientated and self-initiated action to change and improve oneself or one's situation is referred to as

proactive behaviour (Parker, Turner & Williams, 2006:636). Grant and Ashford (2008:8) define proactive behaviour as “anticipatory action that employees take to impact themselves and/or their environments”. Proactive behaviour therefore means that individuals act in advance by planning for future events, thereby anticipating change. It also means that the impact of proactive behaviour is to meaningfully change oneself, others or ones circumstances (Grant & Ashford, 2008:8-9). A proactive disposition and proactive behaviour will accordingly help individuals to embrace change.

The concept of career resilience has also been proposed as a vital career competency of individuals to surmount the difficulties that affect career employability and deployment (Van Vuuren & Fourie, 2002:70). Career resilience can be regarded as a personal disposition and individuals that are career resilient demonstrate a high degree of flexibility, adaptability, and competence regardless of adverse career circumstances (Van Vuuren & Fourie, 1998:55). The behavioural component of career resilience includes the ability to adapt to changing circumstances, appreciate work and organisational changes, demonstrate eagerness to work with new and different individuals, exhibit self-confidence, and embrace risks (London in Van Vuuren & Fourie, 1998:53-54). Career resilience can therefore help individuals to cope with changing circumstances. It is also, of course, apparent that personal adaptability is a critical competency to attain career success (O’Connell, McNeely & Hall, 2008:248) as well as being open to change in order to continuously learn and to identify and realise career opportunities that will promote adaptability (Fugate & Kinicki, 2008:506).

Individuals furthermore need to possess a certain set of emotional and social skills order to face environmental demands (Bar-On, 1997). This relates to emotional intelligence or people’s ability to recognise their own feelings as well as those of others, to motivate themselves and to manage their emotions, both in themselves and in their relationships (Goleman, 1998b:317). Bar-On (1997) in fact describes emotional intelligence as encompassing adaptability and it has been shown that people with high emotional intelligence may be better at managing change than people with low emotional intelligence (Goleman, 1998a; Mayer & Solovey, 1997). Blickle and Witzki (2008:157) add that self-confidence, optimism and actively taking part in one’s career (i.e. internal locus of control) are important to successfully adapt to changing work conditions. Related to this is self-efficacy, which refers to a person’s self-belief in his or her ability to cope in various career environments and the changing world of work. Individuals with this belief are more likely to be employable and be successful in their careers (Fugate *et al.*, 2004) and are therefore believed to be better able to face the challenges of the post-modern career field.

In light of major changes in the demographic composition of the workforce as well as the increase of international assignments, individuals will increasingly be interacting and working with culturally diverse individuals (Ang, Van Dyne & Koh, 2006:100) and those that want to survive in a changing world of work accordingly need to possess cultural competence. Incorporated into the cultural competence framework is the concept of cultural intelligence developed by Early and Ang (2003). The authors define cultural intelligence as a person's capacity to successfully function in and manage culturally diverse settings. Individuals with knowledge and appreciation of different cultures and international events and who have the capacity to apply that knowledge to intercultural communication and global business issues will possess significant competencies for taking part in almost all occupations and industries (Gow & McDonald, 2000:390). Such individuals will be better able to navigate successfully through an increasingly complex and changing career environment.

The high rate of job losses, affirmative action measures, mergers, acquisitions and rapid downsizing taking place within the South African workplace has resulted in many individuals considering self-employment. The self-employed individual can be seen as an entrepreneur, and the terms are often used synonymously (Schreuder & Coetzee, 2006:41). Entrepreneurship can be defined as managing one's own business, which requires personal sacrifice, innovation, and risk-taking in order to create something valuable (Greenhaus *et al.*, 2000:363). The entrepreneurial model implies that individuals are able to create employment by profiting from their own connections and skills (Sanders & De Grip, 2004:75), which may also improve their employability. Florin, Karri and Rossiter (2007:21) identify from the literature they reviewed five attitude constructs related to entrepreneurial activity that are relevant to a graduate population. These are preference for innovation, nonconformity, proactive disposition, self-efficacy, and achievement motivation. Greenhaus *et al.* (2000:365-366) add need for achievement, internal locus of control, tolerance for ambiguity, risk-taking propensity, and entrepreneurial self-concept as personal characteristics that will allow individuals to pursue an entrepreneurial career more easily. Fostering these constructs in individuals may lead not only to a higher entrepreneurial drive, but also to enhanced employability. Such individuals may consequently be able to deal with an unpredictable career environment.

The entrepreneurial career is part of contemporary career models in the post-organisational as opposed to traditional career field. It seems that the various constructs related to adapting to changes in the work and career context depend, in part, on the preference by individuals for traditional or contemporary careers. In this regard, Mayrhofer, Steyrer, Meyer, Strunk, Schiffinger and Lellatchitch (2005) found that business school graduates visibly discern between organisational and post-

organisational career fields, with 41% of the sample favouring the former and 59% preferring the latter. Graduates favouring post-organisational career aspirations furthermore demonstrated attributes of high flexibility, self-promotion or self-assertion, leadership-motivation, self-monitoring, networking, while scoring lower on conscientiousness. The inverse applies to graduates favouring organisational or traditional career patterns. These findings make sense in that one would expect individuals who value traditional or organisational career patterns to seek out environments where such dispositions are vital and highly valued (Mayrhofer *et al.*, 2005:52). Although traditional career patterns still exist, it is increasingly important for individuals to feel comfortable with contemporary career patterns and it is moreover vital that they exhibit the attributes necessary to be successful in such environments. These individuals will not only be better able to deal with rapid change and unpredictability, but they are more likely to be desirable and marketable to prospective employers.

The above discussion provides an indication of the type of attributes that individuals, and specifically graduates, need to possess in order to survive and be successful in the ever-changing world of work. Individuals with these attributes will be able to proactively adapt and even capitalize on change and volatility and are expected to be highly employable.

## **2.4 CHAPTER SUMMARY**

The aim of Chapter 2 was to describe the changes taking place in the contemporary workplace in order to determine the challenges that individuals have to face when entering the world of work. The modern work environment is characterised by an increase in job losses and globalisation, major advances in technology, changing organisational structures and designs, changes in the nature of work itself, an increasingly diverse workforce and a higher focus on work–life balance.

The changes taking place in the organisational landscape necessarily have implications for careers and how they should be managed. Attention was accordingly paid to what a career is and how its meaning has changed. The chapter also considered contemporary career models shaped by the transforming work environment.

Lastly, focus was placed on how individuals can survive and function successfully in an increasingly complex and turbulent work and career environment, in other words, the implications of changing organizational and career environments for the individual. The type of attributes that individuals need to possess in order to adapt to and capitalize on change was accordingly considered.

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: THE EMPLOYABILITY CONSTRUCT

This chapter discusses the employability construct, including the origin and development of employability, its conceptual foundation, graduate employability, and various employability models before discussing the conceptualisation of the Graduate Employability Model, which will provide a foundation for developing a measure of graduate employability. The various employability models are compared in order to highlight the significance of the Graduate Employability Model within the employability literature. Lastly, a final integration of the new world of work, implications for careers, the attributes that individuals need to survive and how it all relates to employability is provided so as to place the theoretical discussions in context and pave the way for the empirical component of the study.

### 3.1 INTRODUCTION

In light of the permeable and continuous nature of economic and social change, it is becoming more widely recognized that career choice and career decision-making is a lifetime practice (Amundson, 2006:5). In an increasingly competitive environment individuals can no longer rely on their qualification alone to obtain employment, and if they are already employed, cannot expect security and employment for life from their employers. More than twenty years ago, Kanter (1989:92) suggested that the focus should shift from “employment security” to “employability security” – feeling secure in the fact that one is highly marketable and therefore desirable not only to current employers, but also to other employers and even different work contexts and disciplines. This is even more relevant in the contemporary work and career environment given the changes described in the previous chapter. Individuals should therefore take a different approach to the management of their career and they can no longer rely on their educational institutions or employers to help them become more employable. This section accordingly discusses the employability construct as impetus for the conceptualisation of the Graduate Employability Model.

### 3.2 ORIGIN AND DEVELOPMENT OF EMPLOYABILITY

Despite the recent upsurge of interest in the concept as a response to unrelenting change, discussions around employability emerged decades ago. The employability concept reportedly surfaced in Great Britain as long ago as 1909 in a book called *Unemployment: A Problem of Industry* (1909) by William Beveridge (Mansfield, 2001:26-27), where the focus was on the problem of

underemployment. Sanders and De Grip (2004:74) assert that employability, and what it signifies, has changed steadily throughout the last three decades, mainly as a result of labour market conditions and government policies of the time. The development of employability has in fact been captured by Gazier (2001:6-9) who proposes that the concept has moved through seven operational versions or stages over the past century. These will be discussed next.

### **3.2.1 DICHOTOMIC EMPLOYABILITY**

The first simplistic version of employability appeared in the United Kingdom and United States from the 1900s to the early 1950s where the concept was expressed as a dichotomy relating to able-bodied employees. A distinction was made between those that could not be employed, in other words, those that were entitled to relief such as the elderly and handicapped (De Grip, Van Loo & Sanders, 2004:213), and those that could be employed. This distinction was in fact a means to provide those deemed unemployable (those unable to work and in need of relief) with emergency social assistance, while reforming the employable (those willing and able to work) by returning them to the labour market (Gazier, 2001:6). A criticism of this approach is that individuals were classified as either employable or unemployable, with no degrees in between. The labour market context was also not considered within this system.

### **3.2.2 SOCIO-MEDICO EMPLOYABILITY**

During the 1950s the socio-medical approach to employability was developed in the United States, United Kingdom, Germany and a number of other countries. The focus was on the labour market position of the handicapped such as the physically, mentally or socially disabled. More specifically, aspects such as deficiencies in vision, hearing, motor capacity, and the ability to reason and take initiative were considered. Attention was paid to these disadvantaged individuals predominantly because of a lack of skilled workers in the post-war period, which resulted in companies increasing their recruitment efforts (De Grip *et al.*, 2004:213). This version of employability brought with it a scale that measured individuals as being more or less employable and, according to the deficiencies identified, action was taken to improve employability or to compensate individuals (Gazier, 2001:7).

### 3.2.3 MANPOWER POLICY EMPLOYABILITY

In the 1950s and 1960s employability was portrayed as the potential of individuals to become employed (De Grip *et al.*, 2004:213). This version, which developed mainly in the United States, was an extension of the above deficit approach but applied to a broader population of the unemployed that had problems. The focus was on social and physical deficiencies as well as on mobility (for example whether individuals had a driver's licence or police record) and presentation (for example whether individuals were visibly drug users) (Gazier, 2001:7). The emphasis was once again on the gap between labour market requirements and individuals' knowledge, attitudes and skills (McGrath, n.d.:2). The promotion of employability here was solely for macroeconomic purposes and policy-makers focused on employees' attitudes towards employment in general and on the development of their self-perception during their career. In this way labour market re-entry for those that had lost their self-confidence could be supported (Soloff & Bolton in Sanders & De Grip, 2004:75).

### 3.2.4 FLOW EMPLOYABILITY

During the 1960s the flow employability approach developed, mainly in France. During this time, the focus shifted to a collective initiative and more specifically on how swiftly certain *groups* could find employment. As a mainly demand-side approach, flow employability emphasised the ease of access of the jobless to employment within local and national economies (Grazier, 2001:7; McGrath, n.d.:2). Employability at this stage was defined as "the objective expectation, or more or less high probability, that a person looking for a job can have of finding one" (Gazier in McQuaid & Lindsay, 2005:201). Drawing on the research of others, Sanders and De Grip (2004:75) contend that from 1970 the focus shifted from a person's attitudes to the individual and his or her occupational knowledge and skills. Factors that played a role included understanding one's possibilities and basic occupational skills, knowledge about one's position in the labour market, and awareness of what the general employment situation looked like. Towards the end of the seventies it was understood that individuals needed more than occupational skills to remain marketable to employers. Becoming or remaining employable became very important to individuals since it was hard to find work in the economic recession of the time. During this time the concept of "transferable skills" or the importance of acquiring skills that can be transferred to many different work contexts was introduced (Hoyt in Sanders & De Grip, 2004:75).

### **3.2.5 LABOUR MARKET PERFORMANCE EMPLOYABILITY**

Towards the end of 1970, the notion of labour market performance employability developed internationally and focused on measurable labour market results founded on their human capital. Such measures generally included the probability of obtaining employment, probable duration of jobs in terms of hours worked, and probable wages (Grazier, 2001:8; McGrath, n.d.:2; De Grip, Van Loo & Sanders, 2004:214).

### **3.2.6 INITIATIVE EMPLOYABILITY**

Initiative employability converged with human resource development literature in the 1980s, which focused on the end of the career job for life, discontinuities in careers, and rapid changes in the career and job landscape. This approach accordingly underlined individual initiative and agency by advocating that successful career development necessitates the development of those attitudes and skills that are important for obtaining career success as well as being motivated to search for and obtain better jobs in other companies (McGrath, n.d.:3). With regard to the latter, individuals had to develop transferable skills in order to be flexible and mobile across job functions and even industries (McQuaid & Lindsay, 2005:201). Gazier (2001:9) views this employability version as “the marketability of cumulative individual skills” which is measured by human and social capital. Human capital refers to knowledge, skills and learning ability amongst others, while social capital relates to the size and quality of the support network that a person is able to organize and capitalize on. This approach therefore suggests that the most employable individual is someone who draws on the entrepreneurial model in being able to create employment by profiting from his or her own skills and connections. This individualistic employability concept subsequently developed into a “meta-characteristic” that mixes skills, attitudes and knowledge to establish the labour market value of individuals (Sanders & De Grip, 2004:75).

### **3.2.7 INTERACTIVE EMPLOYABILITY**

While initiative employability was more individually focused, interactive employability encompassed a broader perspective, thereby including policymakers and employers as shared stakeholders in employability. The interactive and collective dimensions of employability were therefore introduced to the employability debate in the nineties. It was claimed that an individual’s employability is to some extent relative to the employability of other individuals in the labour market. The demand for labour

locally and nationally is also taken into consideration over and above the rules or institutions that direct the labour market, thereby demonstrating the institutional nature of employability (McGrath, n.d.:3; Gazier, 2001:9). In this sense, employability policies should not only target the interaction of individual attributes, but a host of other 'context' factors such as labour market conditions and demands, location of labour markets, employer preferences, and other barriers to employment (McQuaid & Lindsay, 2005:205).

From the above it is clear that the employability concept has increasingly become more complex over time, evolving from a simple dichotomous notion to a concept that takes into account both internal individual and external market factors. There is however widespread contention in the literature with regard to the conceptual foundation of employability – whether the focus should be on narrow or more broad definitions, and whether it should be approached from a demand-side or supply-side perspective. In the next section, the debate around the conceptual foundation of employability will be considered.

### **3.3 THE CONCEPTUAL FOUNDATION OF EMPLOYABILITY**

It is argued that the focus of employability as mainly a supply side or individual construct has dominated the literature and governments' responses to employability (Hartshorn & Sear, 2005; Hillage & Pollard, 1998; McQuaid & Lindsay, 2005; Sanders & De Grip, 2004). The point is stressed by Peck and Theodore (2000:729). who contend that even though attention to employability is relatively novel, "the kind of supply-side fundamentalism that it signifies most certainly is not". Supply side conceptions of employability generally focus on narrow definitions which, according to Bridgstock (2009:32), underline the skills and dispositions that individuals capitalize on to make themselves marketable to potential employers while mainly focusing on short-range employment outcomes. In this view, according to Nielsen (1999:393), employability conceptually "expresses how well the individuals' competencies and skills meet the requirements of the labour market, e.g., if it is possible to be employed with the present skills and competencies". This approach implies that individuals lack employability as a result of their own readiness and work motivation and not because of the lack of demand for work from employers in the labour market or as a result of limited job opportunities (Hartshorn & Sear, 2005:272).

Other attempts, more in line with Gazier's (2001) interactive version of employability, have indicated a more holistic perspective to employability by stressing contextual factors such as the effect of labour

market conditions and employer behaviour over and above individual characteristics, in other words, both demand and supply side aspects of employability (Gore, 2005:343; McQuaid & Lindsay, 2005:199). An example of such a broader definition of employability is offered by De Grip, Van Loo and Sanders (2004:216):

Employability refers to the capacity and willingness of workers to remain attractive for the labour market (supply factors), by reacting to and anticipating changes in tasks and the work environment (demand factors) facilitated by the human resource development instruments available to them (institutions).

McQuaid, Green and Danson (2005:194), however, are of the opinion that both narrow supply-side standpoints and wider views have relevance. The authors nevertheless maintain that broader perspectives permit the added concern with critical demand, personal circumstances and other aspects that have an influence on the employability of individuals in a specific labour market or at a specific time and that are therefore essential to those individuals in obtaining or changing employment. A relevant example of the importance of including broader aspects, especially in the South African context, relates to companies that discriminate against certain individuals in terms of race, gender or age. The consequence of discrimination to an individual that belongs to such a discriminated group is that he or she will not obtain employment even if the individual have all the required and desirable skills and attributes (McQuaid & Lindsay, 2005:207). Brown *et al.* (2003:110) similarly state that the employability of individuals will fluctuate according to the economic circumstances of the time – employability is, in fact, relative. When there are more jobs than applicants, the personal qualities and skills of candidates will be less important than when there are more applicants than jobs. The employability of individuals furthermore relates not only to meeting the job requirements of employers, but also to how an individual compares to other job applicants, or the ‘pecking order’ of the job applied for. The authors accordingly define employability as “the relative chances of acquiring and maintaining different kinds of employment” (Brown *et al.*, 2003:111). According to this definition, employability is therefore not static and relates to individual differences.

Despite the demand and supply side debate in the literature, the concept remains ambiguous and both sides suffer from a lack of theoretically defined research (Brown *et al.*, 2003; McQuaid & Lindsay, 2005; Fugate & Kinicki, 2008:504). Even though focusing on both contextual and individual factors of employability adds to its conceptual clarification and is important in terms of policy development, the concept always relates back to the individual and the individual’s *suitability* for appropriate employment. This differs from actually obtaining an appropriate job, which depends on contextual

factors (Yorke & Knight, 2007:158). To this effect Tomlinson (2007:286) states that the subjective dimension of employability is persistently ignored, specifically how it is related to the manner in which people come to recognize and understand the labour market they are penetrating, but also the types of dispositions, attitudes and identities that individuals develop around their future work and employability. Aspects such as employers that discriminate and employer preferences or policies, the economy, governmental rules and other external factors are not under the control of the individual. Individuals can, however, to a greater or lesser extent develop their competencies and other attributes, obtain the necessary qualifications, and engage in other behaviours such as capitalizing on social networks which will increase their chances of being more marketable to potential employers relative to other job seekers. Yorke (2006:10), in line with this view, asserts: “It is, after all, the individual whose suitability for the post is appraised ...”

The focus of this research is accordingly on individual-level employability, while still focusing on a broad definition that includes the relevant factors that makes a person to a greater or lesser extent employable in the context of the new world of work. Definitions of employability that are approached from an individual perspective include those of Sanders and De Grip (2004:74), who define employability as “The capacity and the willingness to be and to remain attractive in the labour market, by anticipating changes in tasks and work environment and reacting to these changes in a proactive way”, and Fugate *et al.* (2004:16), who defined employability as “a form of work specific active adaptability that enables workers to identify and realize job opportunities”. Employability will consequently be conceptualised in a manner analogous to what Gazier (2001) termed *initiative employability*. Employability is viewed as a meta-characteristic where individuals with specific skills, knowledge and attributes will best be able to adapt to the ever changing organizational and career environment. Such individuals are, amongst other attributes, entrepreneurial in that they can use their skills and connections to find employment, they are self-directed, have emotional intelligence, are confident in their abilities, are able to adapt to different social and cultural situations, are proactive, resilient and open to change. These individuals are expected to be highly desirable to employers and successful in their careers.

The focus subsequently shifts to graduate employability as the emphasis of this research is on graduates and the aspects that make them employable in the new world of work. In the following section the nature of graduate employability will be discussed, followed by a discussion of different employability models which will lay the foundation for the conceptual discussion of the Graduate Employability Model.

### 3.4 GRADUATE EMPLOYABILITY

The employability of university graduates, and more particularly the supply of job-ready individuals to the labour market, has for the last decade been the main focus of employer and government policies (Brown *et al.*, 2003:109; Tomlinson, 2007:285). Governments internationally are in fact emphasising the contribution of higher education to the quality of human capital and therefore also the competitiveness and well-being of a country (Yorke & Knight, 2007:158). This increased focus on student development coincided with a move towards the 'knowledge-driven' economy, which by all accounts expects individuals or 'knowledge workers' to have the appropriate knowledge, skills, dispositions and creativity in order to handle the complexities of a constantly changing worldwide economy (Brown *et al.*, 2003:109; Tomlinson, 2007:285; Williams, 2005:34). The link between higher education and employability is widely discussed in the literature (Andrews & Higson, 2008; Cranmer, 2006; Mason, Williams & Cranmer, 2009; Stubbs & Keeping, 2002; Prokou, 2008; Taylor, 1986; Wilton, 2007; Wilton, 2008). It is accepted that higher education has a responsibility for advancing graduate employability in developing the abilities and skills of students and promoting lifelong learning (Prokou, 2008:389). Awareness amongst academics of the need for skills development at degree level has increased which initiated a reassessment of curriculum priorities by academics (Stubbs & Keeping, 2002:205). Further developments in this area led to an emphasis on generic 'key' skills, which are viewed as increasingly critical for individuals to be successful in their jobs. Workers regarded as adaptable and flexible had to obtain generic skills that are transferable across different work tasks and occupations, in addition to developing specific skills (Williams, 2005:35). The literature used to describe desirable graduate attributes have become muddled, however, as terms such as 'generic', 'core', 'key', 'enabling', 'transferable', 'professional' and 'attributes', 'skills' or 'competencies' are used interchangeably, thereby adding to the conceptual confusion surrounding employability (Green, Hammer & Star, 2009:19).

The generic skills concept is indeed a contentious topic (Gilbert *et al.*, 2004; Green *et al.*, 2009; Jones, 2009a) and there is a lack of agreement regarding the nature of generic skills and attributes (Barrie, 2004) as well as semantic confusion with regards to its definition (Bennet, Dunne & Carre, 1999:74). Drawing on the work of others, Green *et al.* (2009:19) assert that skills and attributes are not the same thing, while generic does not automatically mean transferable. Recent evidence moreover suggest that generic skills or attributes are in fact very context specific and strongly influenced by the disciplinary epistemology in which they are formulated and taught (Jones, 2009a, 2009b), and therefore the assumption that they are universal may be flawed. In line with this, it has been shown

that regardless of the assumption of shared understanding, the lists of generic skills needed by graduates seems to mean different things to the various people that have the responsibility to develop such outcomes (Barrie, 2006:239). It may therefore be difficult to find an acceptable measure of generic skills acquired by individuals.

Evaluating whether a graduate is employable depends on whether the graduate displays the attributes that employers view as significant (Ya-hui & Li-yia, 2008:1). Graduate employability as a whole is viewed not only as a result of professional and discipline-specific knowledge, but also the ability to exhibit broader skills such as interactional skills (Clark, 2008:262). With regard to the latter, generic graduate attributes are viewed as the skills, knowledge and abilities that university graduates possess outside their disciplinary content knowledge and that are acquired as a consequence of completing any undergraduate degree. These capabilities are fapplicable in various contexts (HEC in Barrie, 2006:217). Bowden *et al.* (2000) similarly define graduate attributes as follows:

Graduate attributes are 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. In the past, such attributes have sometimes been assumed to be the subject of an implicit understanding in the community about the qualities and characteristics of university graduates.

It is widely accepted that generic skills and discipline-specific skills increase graduates' employability and therefore their attractiveness to potential employers (for example De la Harpe, Radloff & Wyber, 2000; Maclean & Ordonez, 2007; Yeung, Ng & Liu, 2007). Graduate attributes should however not mainly be viewed as sets of skills and knowledge, but should be seen as specific kinds of human dispositions and qualities (Barnett, 2006:61). These qualities and dispositions help individuals to apply the knowledge and skills that they have learnt on a continuous basis (Costa & Kallick, 2000).

Students view higher education as a necessary step in preparing themselves for obtaining a job (Aamodt & Havnes, 2008:233). Even though employability does not secure employment, it does boost an individual's prospects of obtaining employment relative to others in the labour market (Clarke, 2008:270). Obtaining a degree, however, is just the beginning. Current employers require a variety of attributes, dispositions and additional achievements in students (Yorke & Harvey, 2005:41). Yorke and Knight (2007:160) suggest that personal qualities in actual fact permeate employability. Being able to interact with others (interpersonal skills) is valuable in any situation, but so are the qualities not immediately visible, such as taking initiative and a willingness to learn by persevering with a difficult

task. Scott (1995:112) goes even further by stating that personal qualities are more significant than formal qualifications and credentials in order to succeed in the post-industrial adaptable organization. The author emphasises that “personal qualities are more important than professional discipline, possession of specific credentials, mastery of specialized knowledge or even of expert skills” (Scott, 1995:112). This again highlights the fact that employability involves more than acquiring technical knowledge and skills.

Without getting involved in lengthy discussions around semantics and the theoretical foundation of attributes (Green *et al.*, 2009:20), this research will use the term attributes when referring to a combination of dispositions, values, attitudes and skills that are important to be employable and to adapt proactively to changing environments. The focus is on broad attributes that, even though they may have developed in a context-specific manner, are still important and also transferable to a wide range of contexts. These attributes moreover include but extend beyond disciplinary and technical knowledge (Bowden *et al.*, 2000). The focus of this research is therefore on the attributes, rather than discipline-specific or generic skills, that are essential for graduates to be employable.

Attempts to measure employability outcomes have encountered greater problems than efforts to define the concept (Cranmer, 2006:173). In some circles the ability of higher education institutions to ensure employability has been likened to the rate of graduates securing employment using graduate first destination surveys (Bridgstock, 2009:33; Pool & Sewell, 2007:278). League tables rate universities on their success in helping graduates find full-time employment in the first six months after graduation (Taylor, 1986; Harvey, 2001:99). Harvey *et al.* (2002), however, condemn such measures since they only gauge graduate success in the short term and moreover because they measure employability as an institutional achievement rather than an individual achievement. Crude measures such as these (Taylor, 1986) define the employability of students as *immediate employment* (Watts, 2006:6), that is, immediately after completing their studies.

Two additional definitions of graduate employability in the literature are *immediate employability* and *sustainable employability*. Immediate employability circumvents some of the deficiencies in the ‘immediate employment’ definition by focusing on graduates’ possession of the attributes necessary to attain a ‘graduate job’. This definition emphasises graduates’ ‘work readiness’ or ability to handle workplace demands with no supplementary training requirements (Watts, 2006:6). Mason *et al.* (2009:1), in line with this definition, view work readiness as the “...possession of the skills, knowledge, attitudes and commercial understanding that will enable new graduates to make productive

contributions to organisational objectives soon after commencing employment”. Although this definition includes a wider range of characteristics that individuals have to possess in order to be employable, it is still very short-term orientated. The third definition, however, highlights sustainable employability, which focuses not merely on obtaining a first job, but also on remaining employable over the long term. In order to do this, individuals not only need a broader array of attributes in order to be successful in their work, but also need to possess the attributes necessary for career development management in a way that that will sustain their employability throughout their lives (Watts, 2006:6). Such a broader and non-static employability orientation is described by Hillage and Pollard (1998:1), who define employability as the capacity of individuals to “move self-sufficiently within the labour market to realise potential through sustainable employment”, and Brown *et al.* (2003:111), who similarly define employability as “the relative chances of acquiring and maintaining different kinds of employment”. A broader approach is also underlined by Harvey *et al.* (2002), who emphasise the attributes that will allow graduates to manage their careers and the skills that will permit lifelong learning. This research accordingly focuses on sustainable employability in identifying the attributes required to be employable or suitable for employment in the long run.

In order to further investigate the attributes required for employability, various models of employability will now be examined in order to determine the core features of individual employability.

### **3.5 EMPLOYABILITY MODELS**

The notion of employability and what it should encompass has broadened over the years. For the purposes of this study, employability will be approached from an individual-level perspective, while still including a broad definition of the concept. In support of this, it is widely accepted that employability is based on various individual attributes (Clarke, 2008; Fugate & Kinicki, 2008; Hillage & Pollard, 1998; Gow & McDonald, 2000; Kluymans & Ott, 1999; Knight & Yorke, 2002; McArdle, Waters, Briscoe & Hall, 2007; Scott, 1995; Yorke & Harvey, 2005). This section will consequently focus on discussing a number of employability models that approach the concept from a supply-side perspective. Bridgstock’s (2009) conceptual model of employability will be used as a framework for the development of a model of graduate employability. The employability model of Fugate *et al.* (2004) will moreover provide significant input in the development of a graduate employability model and their model is therefore discussed in depth.

### 3.5.1 FUGATE, KINICKI AND ASHFORD'S (2004) MODEL OF EMPLOYABILITY

Fugate *et al.* (2004) conceptualise employability as a psycho-social construct that represents individual characteristics which promote adaptive cognition, affect and behaviour and help individuals to recognize and leverage career opportunities. Employability therefore assists in moving between jobs, both within and between firms, and while it does not assure employment, it does improve the possibility of gaining employment (Fugate *et al.*, 2004:16). Employability is accordingly regarded as a type of work-specific active adaptability that consists of three dimensions, namely, personal adaptability, career identity, and social and human capital.

*Personal adaptability* refers to the willingness and ability of individuals to alter their knowledge, skills, abilities, dispositions, behaviours and other personal factors in order to meet environmental demands. Adaptation implies flexibility and ease of response to environmental changes, and also corresponds with the developmental perspectives of careers (Savickas, 1997:253). Savickas (1997:256) proposes 'planfulness' as a core dimension of adaptability that may facilitate exploration and decision making. The author furthermore states that planful attitudes can indeed be learnt, which offers a significant means for individuals to enhance their adaptability. Hall and Moss (1998:31) describe adaptability as a meta-competency of the protean career, along with identity awareness. When both adaptability and identity awareness are high, individuals are proactive and learn from their experiences while developing their own competencies (Hall, 2004). Hall and Chandler (2005:163-164) are similarly of the opinion that individuals high in adaptability will have the ability to take part proactively in the process of goal-setting, initiating effort and realizing psychological success. Fugate *et al.* (2004:22) moreover integrate a number of personal constructs within the adaptability dimension of employability, namely, optimism, propensity to learn, openness, internal locus of control, and generalized self-efficacy, constructs that combine cognitively and affectively in individuals with high employability to help them identify and realize work opportunities.

The second dimension of Fugate *et al.*'s (2004) employability model is *career identity*, which represents constructs such as role identity, occupational identity, and organizational identity, all of which refer to how individuals define themselves in a certain job context. For example, an individual will see him- or herself as a researcher instead of belonging to a specific research institution where he or she works at present (Khapova, Arthur, Wilderdom & Svensson, 2007:587). Career identity can be viewed as the 'knowing-why' competencies that Arthur *et al.* (1995) identified. Attributes such as career motivation, personal meaning and personal values are included in these 'knowing-why'

competencies (McArdle *et al.*, 2007:249). Career identity, in fact, can be viewed as a 'cognitive compass' for the individual that serves as a navigational tool (Fugate *et al.*, 2004:20) in times when individuals are outside of organisational boundaries – a frequent occurrence in contemporary careers such as protean and boundaryless ones. In this respect, Khapova *et al.* (2007) found that professional identity significantly predicts an individual's intention to change a career.

The last dimension of employability is *human and social capital*. Human capital denotes the personal variables that can affect an individual's career advancement. It may include amongst others age, education, training, skills, work experience, and knowledge (Fugate *et al.*, 2004:24; McArdle *et al.*, 2007:249). Many employability policies are grounded in human capital theory (Moreau & Leathwood, 2006) which posits that investments in human capital through higher education will contribute to the competitiveness and well-being of a country (Yorke & Knight, 2007:158). Human capital includes Arthur *et al.*'s (2005) notion of 'knowing how' career meta-competency, which refers to expertise, capabilities and tacit and explicit knowledge. Social capital on the other hand relates to the size and quality of the support network an individual is able to organize and capitalize on (Gazier, 2001:9). Social capital is also encompassed in Arthur *et al.*'s (1995) 'knowing who' career meta-competency, which refers to the various relationships, either formal or informal, that an individual forms as part of an organization's networking actions. This provides individuals with the knowledge on how to find the right person when the situation demands it, that is, having the right 'connections'.

Fugate *et al.* (2004) carry on to discuss the reciprocal relationship between the component dimensions of employability and compare and contrast them with other proactive constructs, namely proactive behaviour, personal initiative, proactive personality and career motivation. Employability, the authors assert, includes cognitive variables (such as career identity), dispositional variables (such as propensity to learn), and variables that are 'market interactional' (such as human and social capital), which implies a broader collection of personal characteristics (Fugate *et al.*, 2004:30). Employability is also contextualized in the work domain whereas the other constructs (except career motivation) are more general dispositions that have simply been tested in a work setting. The authors suggest that employability incorporates each of these constructs (Fugate *et al.*, 2004:30):

For example, proactive personality and personal initiative are subsumed in personal adaptability; the career identity element of career motivation is included in employability; and the career resilience element of career motivation is reflected in the employability dimension of personal adaptability.

Lastly, employability combines both the dispositional and situational elements of proactivity. Human and social capital represents the situational element that provides a 'market interactional' dimension that is not found in proactive behaviour, personal initiative, proactive personality or career motivation (Fugate *et al.*, 2004:30).

Fugate *et al.*'s (2004) employability model was empirically tested by McArdle *et al.* (2007) in a longitudinal study within the unemployment context. In the first study, employability was explored relative to three unemployment aspects, namely self-esteem during unemployment, job search intensity during unemployment, and re-employment (in a six-month follow-up study) (McArdle *et al.*, 2007:253-254). In the second study, participants had to indicate their employment situation in terms of re-employment, full-time re-employment and unemployment (McArdle *et al.*, 2007:257).

On the whole, the researchers found support for Fugate *et al.*'s (2004) employability model and moreover found evidence for the applicability of employability in an unemployment framework. Employability showed significant relationships with self-esteem, job search and re-employment, which illustrates the model's applicability outside of organisational boundaries and across various career contexts. The adaptability variables (proactive personality and boundaryless mindset), career identity variables (career self-efficacy and identity awareness) and social support all significantly contributed to employability in both studies, while networking contributed significantly to employability only in the first study, possibly due to reduced connections over extended periods of unemployment. The human capital measure of education also did not contribute significantly to employability, possibly due to measuring it in a crude manner (high school or less vs. post-high school). Overall then, the studies suggest that persons that are high in employability do not find uncertainty distressing and are adaptable in new situations. Since these individuals' identities are not coupled to a specific company or job, they will not suffer a lack of identity when they do not have a job. Individuals high in employability furthermore engage in a proactive manner with the labour market through their goal-directed job search behaviour. Social support may also boost self-esteem by offering guidance, information, motivation and reassurance during unemployment (McArdle *et al.*, 2007:258-260).

With regard to the present research, Fugate *et al.*'s (2004) model may prove useful to the graduate population since the dimensions are applicable outside organisational boundaries and across career contexts. The model is valuable in the sense that it focuses on important career meta-competencies, comprising cognitive, dispositional and market interactional variables, which highlights the model's inclusion of a wider collection of personal characteristics needed to be employable. Personal

adaptability is particularly useful in the graduate population as they are entering a new career phase and need to adapt to the demands of a changing work environment which entails a magnitude of uncertainties.

Students study in order to acquire the knowledge and skills needed to be successful in their future careers (and life). Over and above their educational qualifications and theoretical knowledge (human capital), it also becomes increasingly important for graduates to be able to network and seek out and capitalize on various formal and informal relationships when they want to find out more about their job, a specific career, a company or employment opportunities. Graduates with appropriate connections are more apt to find out about various opportunities that will advance their marketability to employers. Such individuals are also more likely to seek feedback about their performance and seek out mentors who will help them develop and accordingly enhance their employability. In light of the above, it becomes clear that this model is very useful within the graduate employability context.

### **3.5.2 FUGATE AND KINICKI'S (2008) DISPOSITIONAL MODEL OF EMPLOYABILITY**

Fugate and Kinicki (2008) offer a dispositional approach to employability, thereby also taking on a broad, supply-side focus of the concept. Their model builds on the theoretical foundation of Fugate *et al.* (2004) and also Fugate (2006) who defines dispositional employability as “a constellation of individual differences that predispose employees to (pro)actively adapt to their work and career environments ... employability is a disposition that captures individual characteristics that foster adaptive behaviours and positive employment outcomes” (in Fugate and Kinicki, 2008:504). Fugate and Kinicki (2008:504) assert that there is a need for a dispositional approach to employability, particularly considering the fast pace of change leading to high levels of uncertainty, which requires employees to adapt in a proactive manner. The authors argue that researchers in the literature assume that the required knowledge, skills and abilities for a given job are known and static. It is contended, however, that these assumptions seem too constricted and unrepresentative of the modern employment scene (Fugate & Kinicki, 2008:505).

Fugate and Kinicki's (2008) employability model subsequently extends past the knowledge, skills and abilities required for employment, and signifies a broad, underlying, higher-order trait that helps proactive adaptability to take place (Fugate & Kinicki, 2008:505). The disposition of employability moreover includes both reactive and proactive individual characteristics which imply that individuals high in dispositional employability can not only reactively adapt to environmental demands, but also

have a tendency to have a “perpetual readiness for change”, that is, they proactively identify and realize various opportunities (Fugate & Kinicki, 2008:505). As such, dispositional employability is viewed as an underlying multidimensional and psycho-social construct which encompasses the dimensions of (i) openness to changes at work, (ii) work and career resilience, (iii) work and career proactivity, (iii) career motivation, and (iv) work identity. The dimensions and their definitions are provided in Table 3.1.

**Table 3.1: Dimensions of dispositional employability and their definitions**

Dimension of employability	Definition
<b>Work and career resilience</b>	Individuals with work and career resilience possess some combination of the following attributes: are optimistic about their career opportunities and work, feel that they have control over the destiny of their careers, and/or they feel that they are able to make genuinely valuable contributions at work.
<b>Openness to changes at work</b>	Individuals that are open to changes at work are receptive and willing to change, and/or feel that changes are generally positive once they occur.
<b>Work and career proactivity</b>	A proactive career orientation reflects people’s tendencies and actions to gain information potentially affecting their jobs and career.
<b>Career motivation</b>	Individuals with career motivation tend to make specific career plans and strategies. People in this category are inclined to take control of their own career management and set work/career-related goals.
<b>Work identity</b>	Work identity reflects the degree to which individuals define themselves in terms of a particular organisation, job, profession, or industry. Work identity is characterized by a genuine interest in what one does, how well it is done, and the impression of others.

Source: Fugate and Kinicki (2008:528).

Based on the above dimensions, the authors developed a 25 item Dispositional Measure of Employability (hereinafter referred to as DME) and three independent studies by the authors support the construct validity of the DME. The instrument is furthermore applicable to both employed and unemployed individuals, demographically diverse individuals, and samples in different contexts (Fugate & Kinicki, 2008:521).

In terms of the present research, Fugate and Kinicki’s (2008) employability model is valuable in that it extends beyond the specific skills that graduates need to become employable, thereby making it applicable to a wider range of circumstances. Dispositions are also important in situations that continuously change and are more likely to influence performance and behaviours in such situations (Mischel in Fugate & Kinicki, 2008:504). The authors’ model moreover focuses on both proactive and reactive personal characteristics, which provides an important additional dimension to the concept. Individuals not only react to environmental demands, but also generate and realize their own opportunities at work.

A potential disadvantage of the model is that by focusing only on dispositions, it excludes important behaviour necessary to become employed, such as networking behaviours to obtain information related to employment. It may also still be important to include the social capital dimension. With regards to the latter, it is important to address relationships, as these are a significant aspect of the contemporary interconnected world. Employability moreover should not concentrate on relationships alone, but also on the skills needed to build and capitalize on those relationships. Employability additionally needs to focus on the underlying motivation of a person to take part in relationship building (Parker, 2008:4). As the focus is on final year undergraduates and post graduates, contextualising employability solely within the work context also poses problems as some graduates may have little work experience.

Resilience is a very important aspect of graduate employability as graduates need to feel in control of their career and be optimistic that they will be successful in their careers. They need to feel confident that they can take advantage of changes within the work environment to seek out and capitalize on opportunities. If graduates are not resilient, they will find it difficult to recover from setbacks such as declined employment applications or missed promotion opportunities. Another important element in Fugate and Kinicki's (2008) model is openness. Graduates need to be open to new opportunities and new ways of doing things in order to adapt to a new work environment. If they are willing to consider new experiences, they will better be able to gain the necessary competencies to become more marketable to employers. Lastly, proactivity is highly relevant to the graduate population as graduates need to proactively gather information about jobs, careers and employers and take initiatives to improve their situation and shape their career in order to be successful. Fugate and Kinicki's (2008) dispositional employability therefore has much value within the context of the current study.

### **3.5.3 VAN DAM'S (2004) EMPLOYABILITY ORIENTATION PROCESS MODEL**

In a different approach to employability than those discussed so far, Van Dam (2004) examined the antecedents and consequences of what she terms 'employability orientation' using a process model. Employability orientation relates to "... the attitudes of employees toward interventions aimed at increasing the organization's flexibility through developing and maintaining workers' employability for the organization" (Van Dam, 2004:30). The author suggests that individual characteristics and perceptions of employment circumstances are significant antecedents of workers' attitudes regarding career changes and development actions. Two personality traits viewed as important precursors to employability orientation are openness (i.e. being open to novel information and changes) and

initiative (i.e. independent attitudes and actions that are self-started and proactive) (Van Dam, 2004:32). Tenure is another employability orientation antecedent according to research revealing that low-tenure employees seem to obtain more mobility opportunities and accept such opportunities more willingly, have higher mobility expectations, and have more positive attitudes towards taking part in employability interventions (Van Dam, 2004:32). Two antecedents that are work-related are career development support and perceived organizational support. Supervisors' career development support relates to the degree of encouragement that supervisors offer their subordinates to pay attention to their careers and self-development. Perceived organisational support, on the other hand, relates to workers' universal convictions about the degree to which the company regards their contributions as valuable and are concerned about their well-being (Van Dam, 2004:33).

Van Dam (2004:33) furthermore posited that workers' career anchors and organisational commitment would mediate the associations between employability orientation and the antecedent variables. The career anchors of managerial competence, variety, technical competence and security were expected to mediate the relationship between employability orientation and the personality variables of openness and initiative. Organisational commitment, and more specifically continuance commitment (i.e. a worker's attachment to the company as a result of the investments made in the worker and expenses coupled with leaving the company), was expected to mediate the relationship between tenure and employability orientation. Affective commitment (i.e. a worker's emotional attachment towards the company) on the other hand was expected to mediate the relationship between employability orientation and perceptions of organizational support (Van Dam, 2004:34-35). Van Dam (2004:35) moreover suggested that there are also consequences of employability orientations, namely employability development activities. She claims that the activities that workers embark on to enhance and sustain their employability, such as expanding their knowledge and job experiences, are vital.

The results of the study confirmed that employability orientation was positively associated with initiative, openness, and the career anchors of variety and managerial competence, while employability orientation was negatively associated with continuance commitment, tenure, and the career anchors of security and technical competence. Individuals that were more open to new experiences and more apt to take initiative were therefore more eager to enhance their employability. Moreover career anchors (except technical competence) mediated the relationship between the personal constructs of openness, initiative and employability orientation, while continuance commitment mediated the relationship between tenure and employability orientation. The hypothesis that affective commitment mediates the relationship between career development support and

employability orientation was not supported, and there was a negative relationship between employability orientation and perceptions of organizational support. Lastly, employability orientation was significantly related to employability activities (Van Dam, 2004:29). The results therefore largely supported the research model, although more complex patterns of relationship were found than had been anticipated.

There are a number of advantages relating to Van Dam's (2004) process model to employability. The use of mediating variables produced knowledge around the different phases that lead to employability activity. Moreover, by focusing on both attitudes and behaviour towards employability development, a better understanding of the concept could be developed. In paying attention to both personal characteristics and perceptions of work characteristics as employability orientation antecedents, the effects of both types of antecedents could be investigated. In this regard, psychological variables including personality, career anchors and organisational commitment were investigated in addition to demographic variables such as age and tenure, which are the main focal point of other studies. The study in fact found that both individual and work-related characteristics were linked with employability orientation and work activities. Lastly, the employability activities in the study can be regarded as a subset of activities that employees may engage in to manage their careers (Van Dam, 2004:45-47).

In terms of the current study, the Graduate Employability Model does not focus on a process perspective in the way that the above model did, although it may be important to know how employability develops and what its outcomes are. The process model includes a work-related dimension that was not relevant to the present study. Van Dam's (2004) model does, however, provide additional evidence of the necessity of initiative and openness in the context of employability as these dispositions are also identified by other authors as important in the conceptualisation of employability (for example Fugate & Kinicki, 2008).

#### **3.5.4 POOL AND SEWELL'S (2007) KEY TO EMPLOYABILITY MODEL**

Pool and Sewell (2007:280) based their Key to Employability model on the following definition: "Employability is 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". The authors accordingly focus on individual facets that will allow students to adapt to the demands of the new world of work, and better prospects for career success and satisfaction. Their model consists of five components, namely (i) degree subject knowledge, understanding and skills, (ii) generic skills,

(iii) emotional intelligence, (iv) career development learning, i.e. becoming more self-aware of their interests by for example identifying opportunities in the job market, and developing marketing and interviewing skills, and (v) work and life experience. It is suggested that providing students opportunities to access and develop these five components, and then reflecting on and evaluating these experiences (through for example creating personal development planning), will result in the development of increased levels of self-efficacy, self-confidence and self-esteem, which are the critical connections to employability (Pool & Sewell, 2007:280-281).

In terms of the current research, the model is sufficiently broad to include many aspects identified in the literature as important to employability. Career development learning is a crucial aspect in the context of graduates as they need to be able to identify job and career opportunities and be able to network and market themselves in order to be viewed as desirable to employers. Emotional intelligence (or emotional literacy) (Pool & Sewell, 2007:284) is also particularly important to graduates as they need to manage their own and others' emotions in order to effectively cope with environmental demands. According to Pool and Sewell (2007:283), graduates need to develop their emotional intelligence competencies in order to realise their full employability potential since individuals with enhanced emotional intelligence have been shown to be successful in their career, relationships and life in general.

The model is similar to Bridgstock's (2009) model, but includes an emphasis on self-confidence and self-esteem, and has a career satisfaction focus. Reflection and evaluation is also important to develop oneself by investigating what is needed to succeed, what one is currently good at and in what areas one needs improvement. This is particularly important in becoming reflective practitioners and being able to apply theory to practice in the workplace. By reflecting and evaluating, individuals will become more self-confident in their abilities and develop self-efficacy and self-esteem that can, in turn, enhance their employability. Individuals who are able to reflect can moreover identify their own shortcomings and proactively take action to gain the necessary competencies to adapt in the changing work environment and to make a success of their career.

### **3.5.5 VAN DER HEIJDE AND VAN DER HEIJDEN'S (2006) COMPETENCE-BASED EMPLOYABILITY MODEL**

Van der Heijde and Van der Heijden (2006) offer a competence-based approach to employability based on an extension of the resource-based view of the organisation. The resource-based view

contends that competences are one potential resource that allows organisations to achieve sustained competitive advantage. Competences are understood to be central for both organisational and individual career success (Van der Heijde & Van der Heijden, 2005:143). For individual workers, employability and occupational expertise are important elements for upholding high quality skilled work throughout their careers as well as different career outcomes such as job satisfaction and salary. The authors are, however, of the opinion that domain-specific occupational expertise is not sufficient to ensure positive employment outcomes during an individual's total career, once again indicating the need for a more diverse and transferable competence package (Van der Heijde & Van der Heijden, 2005:143). Employability is accordingly defined as "the continuous fulfilling, acquiring or creating of work through the optimal use of competences" (Van der Heijde & Van der Heijden, 2006:453). Van der Heijde and Van der Heijden's (2006) model is founded on the theoretical framework of Fugate *et al.* (2004) and Van Dam (2004) and aims to align these different theories.

Van der Heijde and Van der Heijden (2006) developed a measure of employability that is anchored in a domain-independent, five-dimensional conceptualisation of employability. The dimensions of their model apply to both job-related matters and broader career development and consist of occupational expertise and four more general competences, namely (i) anticipation and optimisation, (ii) personal flexibility, (iii) corporate sense, and (iv) balance (Van der Heijde & Van der Heijden, 2006:453).

Occupational expertise refers to a high degree of knowledge and skills particular to a specific professional domain, as well as to being regarded as high performers and first-rate professionals. Occupational expertise is moreover regarded as an important human capital factor beneficial to the company (Van der Heijde & Van der Heijden, 2006:454).

The next two employability dimensions relate to adaptation to changes, both self-initiated and proactive (anticipation and optimisation) and passive and reactive (personal flexibility), at various levels such as the career in total. Anticipation and optimisation refers to preparing, in a creative and personal way, for prospective work changes so as to endeavour to achieve successful job and career results. This dimension relates to proactive personality, creative and active adaptability, and self-initiative in obtaining labour market information so as to create the future for oneself (Van der Heijde & Van der Heijden, 2006:454). Personal flexibility, which the authors view as a requirement for and a component of adaptability, refers to easily adapting to changes in the environment, whether in the internal or external labour market or between jobs or organisations (i.e. reactive or passive adaptation to changes). Flexibility, as opposed to rigid behaviour, includes resilience, which means being able to

cope effortlessly and recover easily from disappointments. Flexible individuals welcome change and know how to take advantage of it in order to further their career development and gain greater benefits from various experiences (Van der Heijde & Van der Heijden, 2006:455).

The fourth dimension of the model is corporate sense. Corporate sense is rooted in social capital (networks), social skills, and emotional intelligence, and relates to "... sharing responsibilities, knowledge, experiences, feelings, credits, failures, goals, and the like" (Van der Heijde & Van der Heijden, 2006:455). It relates to the various groups that employees belong to and participate in, for example occupational networks, working teams, and virtual networks. The last dimension of the employability framework is balance. It refers to a compromise between conflicting employers' interests, or between the demands of an individual's own job, career, and personal interests, or both (Van der Heijde & Van der Heijden, 2006:456).

The authors found support for their model in an exploratory study, using both employee self-ratings and supervisor ratings. The authors suggest that the competence-based employability perspective benefits career and organisational outcomes, as well as present job performance and longer-term career outcomes. They contend, moreover, that employability may include personal aspects such as attitudes, personality, motivation and ability in addition to adaptive behaviour. The authors conclude by indicating that employability embodies the combination of particular and more generic competences (Van der Heijde & Van der Heijden, 2006:468).

In term of the current study this model is valuable in that it focuses on competencies and illuminates its difference from skills. In fact, drawing from the work of others, Van der Heijde and Van der Heijden (2006:432) describe skills as focusing on a single task, while competence focuses on a range of tasks that are performed well and in an integrated way within a particular domain. The integrating process into competence and competent action is furthermore performed with the help of diverse personal qualities such as personality, attitudes, motivation and behaviour. The model therefore includes a broader range of concepts, which implies a richer description and a wider application of the concept of employability. This also highlights the fact that employability is not a unidimensional concept. Competence development is moreover assessed by establishing the suitability of knowledge and skills or their transfer (Van der Heijde & Van der Heijden, 2006:453). The model therefore includes adaptation and learning, which implies a more long-term focus. This is important when looking at graduates, who still need to become skilled in various areas and who often have to be measured on their potential to learn rather than what they know at the time. The authors moreover operationalise

employability as domain independent, thereby increasing the applicability of employability to a wider context. The focus on more generic competencies is appropriate to graduate employability in that graduates do not necessarily have a great amount of experience within a specific domain yet.

With regard to the dimension of anticipation and optimisation, this is very applicable to the graduate population as graduates need to be able to prepare themselves in a proactive manner for changes and uncertainties within the modern work environment and be resilient in the face of difficulties if they want to survive in the turbulent career environment. They need to gather information on their job and career in order to be able to identify and capitalise on opportunities. It is moreover of significant value for graduates to have a corporate sense, and more specifically, be able to network and work in a group in order to achieve goals. Working in a group is considered a necessity in most occupations and are therefore an important competency for graduates to develop. It is therefore apparent that Van der Heijde and Van der Heijden's (2006) competence model of employability also has value to add within the context of graduate employability.

### **3.5.6 COETZEE'S (2008) PSYCHOLOGICAL CAREER RESOURCES MODEL**

Coetzee (2008:10) contends that individuals within the contemporary career context are seen as 'competency traders' and their knowledge, transferable skills, distinctive attributes, experiences and achievements are all important for their employability. Employability is in fact viewed as the ability for gaining access to, adjusting to, and being productive in the employment situation (Coetzee & Roythorne-Jacobs, 2007:60). In order for individuals to adapt to changing work and career environments and attain career success, they need to leverage their psychological career resources or meta-competencies. Based on the work of others, Coetzee (2008:10) defines career meta-competencies as "...skills and abilities such as behavioural adaptability, identity awareness, sense of purpose, self-esteem and emotional intelligence, which enable people to be self-directed learners and proactive agents in the management of their careers". These meta-competencies moreover aid in the attainment of more specific competencies or skills that advance individuals' general employability and occupational expertise.

Coetzee (2008:10) accordingly views psychological career resources as the arrangement of career-related orientations, values, attitudes, abilities and attributes that result in self-empowering career activities and that advance general employability. General employability as described by Herr, Cramer and Niles (in Coetzee & Roythorne-Jacobs, 2007:47) includes emotional intelligence or affective self-

management, career self-efficacy, career resilience and career decision-making skills, that is, planning and preparing for and adjusting to workplace demands. This also includes affective work competencies such as initiative and willingness to learn, which are regarded as important for work adjustment. Coetzee (2008) consequently describes the psychological career resources model, based on Coetzee (2007), as comprising four broad dimensions, namely career preferences and career values, career drivers, career enablers and career harmonisers.

Individuals' *career preferences* and *career values* direct their decisions about their career. The *drivers* are individuals' career motivation, career commitment, career maturity, career self-efficacy, career self-management skills, and intentionality, which invigorate individuals and drive them to try out various career and employment possibilities. The *enablers* are individuals' transferable skills and talents, self-knowledge, work engagement, self-concept, and career identity that help people to be successful in their careers. Within the context of Coetzee's (2008) model, career enablers are people's transferable skills such as their practical or creative skills and self- or other skills. The *harmonisers* (individuals' self-esteem, behavioural adaptability, emotional literacy and social connectivity) refer to the psychological attributes that help to advance flexibility and resiliency. They also act as controls and help to balance the career drivers to prevent people from burning themselves out in the process of practising and reinventing their careers (Coetzee, 2008:10-11; Coetzee & Roythorne-Jacobs, 2007:51). In order to facilitate the enactment of proactive career activities, the various facets of a person's psychological career resources need to be well developed. If any of these aspects are in truth out of balance, none of the career resource aspects can optimally function to enact self-empowering career activities (Coetzee & Schreuder, 2009:1).

Building on the model, Coetzee (2007) developed the Psychological Career Resources Inventory (hereinafter referred to as PCRI) and found broad support for the PCRI's validity and reliability. Coetzee (2008) furthermore found significant differences in the psychological career resources of different age, education, marital, race and gender groups as measured by the PCRI. In a study on the relationship between psychological career resources and career anchors, Coetzee and Schreuder (2009) found that psychological career resources significantly predicted participants' career anchors. Career anchors, as described by Schein (in Coetzee & Schreuder, 2009:9), are the result of core values, motives, skills and talents that combine to create a career self-concept which in turn outlines the form and direction of the career that a person desires to follow. The study not only found evidence of dominant career anchors, but also that people seem to have various career-related meta-skills,

attitudes, preferences and values as embodied by their psychological career resources (Coetzee & Schreuder, 2009:9).

The value of this model is not only that it is based within the South African environment, but that it is sufficiently comprehensive to include many of the important attributes identified in the literature as necessary for graduates to be employable. As such, the model includes concepts such as adaptability, career identity and social and human capital as described by Fugate *et al.* (2004) and career resilience, career proactivity, career motivation and work identity as described by Fugate and Kinicki (2008). The model furthermore relates to Bridgestock's (2009) model of graduate attributes for employability as it includes career self-management skills, self-management skills, career building skills and underpinning dispositions and traits. The model's focus on career meta-competencies also relate to the "knowing why", "knowing how" and "knowing who" competencies described by the boundaryless career model, which makes the model particularly applicable in the modern work environment. Lastly, the PCRI found significant differences in the psychological career resources of different age, education, marital, race and gender groups, which implies that the general employability of individuals differs at various stages of their life, and more specifically that the general employability of graduates may differ from group to group. Coetzee's (2008) model is consequently particularly valuable to the current study and many of the variables described by this model were therefore included in the Graduate Employability Model.

### **3.5.7 BRIDGSTOCK'S (2009) CONCEPTUAL MODEL OF GRADUATE ATTRIBUTES FOR EMPLOYABILITY**

Bridgestock (2009) describes a comprehensive conceptual model of graduate attributes for employability, which is depicted in Figure 3.1. Each dimension of the model, namely career management, self-management skills, career building skills, generic skills, discipline-specific skills, employability skills and underpinning traits and dispositions, is described in what follows (Bridgestock, 2009:35-38).

*Career management* entails a continuous process of drawing on reflective, evaluative and decision-making processes by utilising self-management and career building skills (that are founded on a choice of core dispositions and traits) to successfully attain, demonstrate and make use of generic and discipline-specific skills in contemporary employment landscapes. Such career management activities include creating meaningful career goals, recognizing and taking part in learning opportunities and

strategic employment decisions, becoming familiar with the work and life divide, and realizing the interaction between work, the economy and society. It also holds a short-term meaning in its focus on obtaining and maintaining employment (Bridgstock, 2009:35-36).

*Self-management skills*, which relate to the career identity concept (Fugate *et al.*, 2004), refer to individuals' perception and judgment of their values, abilities, interests and goals. Jones and DiFillippi (1996:93) are of the opinion that people's identities, interests and meanings in contemporary career systems are integrated in the status and roles of certain occupations, professions and industries. Since boundaryless careers pervade one's life and steady employment is increasingly less certain, it is necessary to develop a clear sense of one's personal values and career goals in addition to a greater amount of self direction and motivation (Bridgstock, 2009:37).

*Career building skills* involve those skills necessary for finding and using data about careers, the labour market and the employment landscape and then locating, obtaining and maintaining a job. They also include leveraging career opportunities for promotional or other desirable career outcomes.

Bridgstock (2009:38) describes career building skills as including the following:

- a. Knowledge of one's industry. Individuals have to know which opportunities and threats are present and what aspects are essential to be successful. This involves knowledge of 'the rules of the game' such as the structure of the industry, its beliefs, norms, values and culture, as well as labour market information such as salary averages and unemployment rates.
- b. An individual must have the capability to successfully identify and decide on the best possible prospects for advancement relating to roles, projects and location.
- c. An individual must know how long to stay in a role, and when new employment or training opportunities must be pursued, and have the capability to move swiftly when opportunities emerge.
- d. Individuals must know how to apply for and obtain a job by demonstrating their skills and abilities in an attractive manner to employers or clients.
- e. Individuals must generate strategic relationships (both personal and professional) with people who may offer opportunities and significant resources as part of creating social capital.

*Generic skills* refer to transferable skills, key competencies or employability skills described in the literature. The author asserts that very few empirical studies attempt to prove that generic skills lead to greater employability, partly because of widespread agreement over the importance of generic skills. It

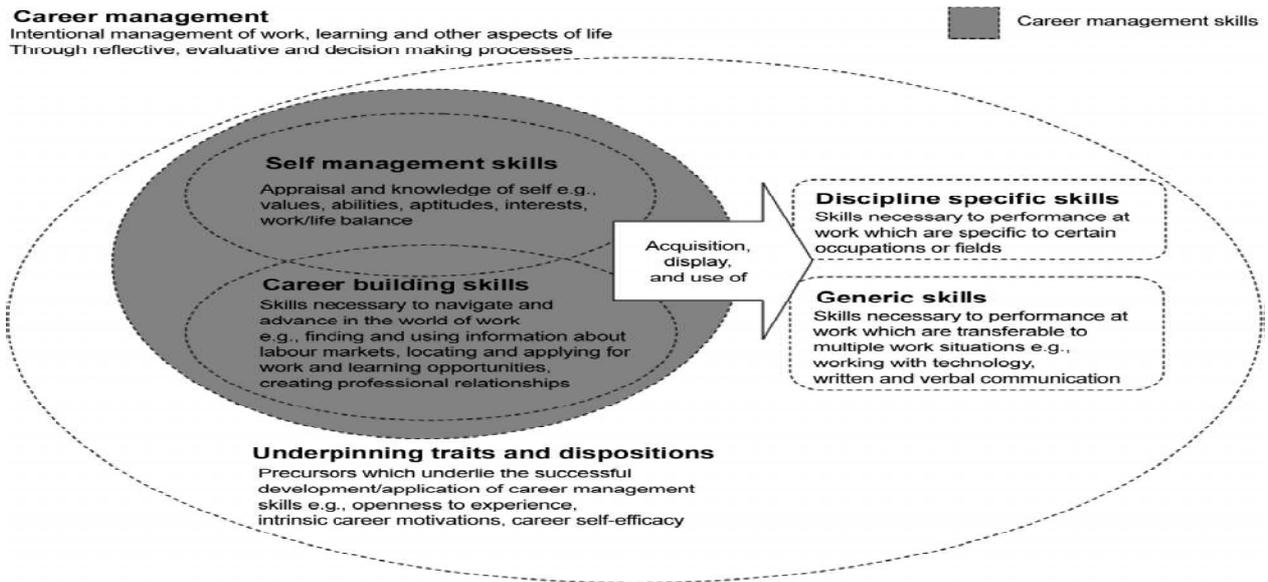
may also be because of disparity over the demarcation and measurement of generic skills as well as the intricacy of separating generic skills from other labour market and graduate variables (Bridgstock, 2009:37).

*Discipline-specific skills* refer to skills derived from specific domains, subject areas or disciplines, which are conventionally included in university curricula to deal with particular job-related requirements (Bridgstock, 2009:37). Although these skills are acknowledged in the current study, the focus will not be on identifying the numerous discipline-specific skills that may form part of employability.

Bridgstock (2009) refers to the above-mentioned skills as *employability skills*. Employability skills comprise generic and discipline-specific skills as well as career management skills, which consist of self-management and career building skills. Career management skills and knowledge are accordingly vital to employability because "... they play a large part in determining which, to what extent, in what manner, when and where generic and discipline-specific skills are learned, displayed (e.g. in applying for a job) and used" (Bridgstock, 2009:36).

Using the research of others, Bridgstock (2009:36-37) describes underpinning traits and dispositions as the antecedents of the successful advancement and application of career management skills. In the context of employability these traits and dispositions may include openness to experience, sociability, agreeableness, initiative, intrinsic motivation, career self-efficacy and self-confidence.

The below model provides valuable insight into the attributes that graduates need to acquire in order to be employable. A great emphasis is placed on the importance of career self-management, particularly in light of the growing need for individuals to deal proactively with the contemporary world of work and prepare for the future by managing the career building process. In this way it is shown that employability includes a number of attributes over and above those generic skills that employers list as desirable. The model furthermore includes most of the variables that have been discussed thus far and is therefore sufficiently comprehensive in its focus on graduate employability.



**Figure 3.1: Bridgstock's (2009) conceptual model of graduate attributes for employability**

It is accordingly important for graduates to have self-management skills, particularly in the modern work environment where individuals need to be more self-directed and manage their own career. It is also vital for graduates to gather information of the job market and to create networks of formal and informal relationships that can enhance a person's likelihood of identifying and capitalising on career opportunities. The model also includes generic and discipline-specific skills, which are regarded as an important part of any employability model and widely accepted in the literature as a given without having to be measured as such (particularly in the light of contentions in the literature with regards to the conceptual foundation of generic skills and how they should be measured).

With regards to underpinning traits and dispositions, Bridgstock's (2009) model, similar to other models, identifies openness, sociability, initiative and career self-efficacy and self-confidence amongst others as important attributes that graduates need in order to be successful in their career and that will help them to apply their career management skills to their fullest potential. The Graduate Employability Model will accordingly be based, in part, on this model and will incorporate many of the aspects identified as important and relevant to enhancing the employability of graduates and which subsequently enable them to adapt proactively to the changing career landscape.

### 3.5.8 CONCLUSION

The above discussion has highlighted the various individual-focused models of employability and how they relate to the purpose of the current study. The variables that are important when considering employability, and more specifically graduate employability, were emphasised. Based on an extensive review of the literature, including the competences, career resources, attributes and other characteristics that are needed to adapt and attain success in a constantly changing organisational and career context, a model of employability can now be conceptualised that will provide the theoretical foundation for the development of a measure of graduate employability.

### 3.6 CONCEPTUALISING THE GRADUATE EMPLOYABILITY MODEL

Employability in this context can be viewed as a psycho-social construct representing individual characteristics that promote adaptive cognition, behaviour and affect, and improve an individual's suitability for appropriate employment (Fugate *et al.*, 2004:15; Yorke & Knight, 2007:158). This will make individuals more likely to gain employment and be successful in their occupations (Yorke, 2006:8). Within this framework, employability can more specifically be defined as follows:

Employability refers to a psycho-social construct representing a combination of attributes (dispositions, values, attitudes and skills) that promote proactive adaptability in changing environments and enhance an individual's suitability for employment and the likelihood of obtaining career success.

Employability is therefore conceptualised, similar to the work of Fugate *et al.* (2004) and Fugate and Kinicki (2008), as a form of active adaptability that help individuals identify and realize career opportunities in a proactive manner. Someone high in employability is expected to adapt easily to the constantly changing world of work and as a result achieve success in their career.

Adaptability is in fact viewed as a key competency for career success (O'Connell *et al.* 2008:248) and can therefore be viewed as the foundation of employability as conceptualised here. The significance of adaptability in the context of employability is well-supported (see for example Clark, 2008; Fugate *et al.*, 2004; Knight & York, 2002:273; Martin & Healy, 2008:10; McArdle *et al.*, 2007:249; McQuaid & Lindsay, 2005:209). It relates to people's willingness and ability to change feelings, behaviours and thoughts in reaction to demands of the environment (Fugate *et al.*, 2004). Fugate *et al.* (2004:22) propose that optimism, propensity to learn, openness, internal locus of control and generalized self-

efficacy are part of personal adaptability, and cognitively and affectively unite within the individual to identify and realize opportunities at work. Being adaptable helps a person to be self-correcting in response to new environmental demands without waiting to be formally trained and developed within the organisation (Hall & Moss, 1998:31). Graduates will need to develop new skills very swiftly and constantly look for alternative job opportunities, which implies being highly adaptable in a changing employment landscape.

Accordingly, in order to conceptualise employability further, the component dimensions have to influence active adaptability in the context of one's career (whether as a student or at work). The criteria used to identify dimensions of employability, similar to the work of Fugate *et al.* (2004), were that they had to be supported by previous research associated with adaptability and they had to relate to the career context and career success. Based on an extensive review of the literature the Graduate Employability Model as conceptualised here consists of the following dimensions: (a) Career self-management drive; (b) Cultural competence; and (c) Personal dispositions for employability consisting of (i) Career-related core self-evaluation, (ii) Entrepreneurial orientation, (iii) Sociability; (iv) Career resilience, (v) Proactivity, and (vi) Openness to change. The component dimensions of the Graduate Employability Model, as depicted in Figure 3.2, will now be discussed.

### **3.6.1 CAREER SELF-MANAGEMENT DRIVE**

According to King (2004:114), people that follow contemporary careers are obliged to seek out opportunities, update their skills and market themselves in a changing world of work. Studying career self-management in this context will consequently help to clarify concepts such as employability within the vocational psychology field. Bridgstock (2009) also highlights the integral part that career management plays in enhancing employability. It is essential for individuals that want to attain career success to manage their own career so as to be certain that they have marketable skills and strong professional networks (Reitman & Schneer, 2008:24).

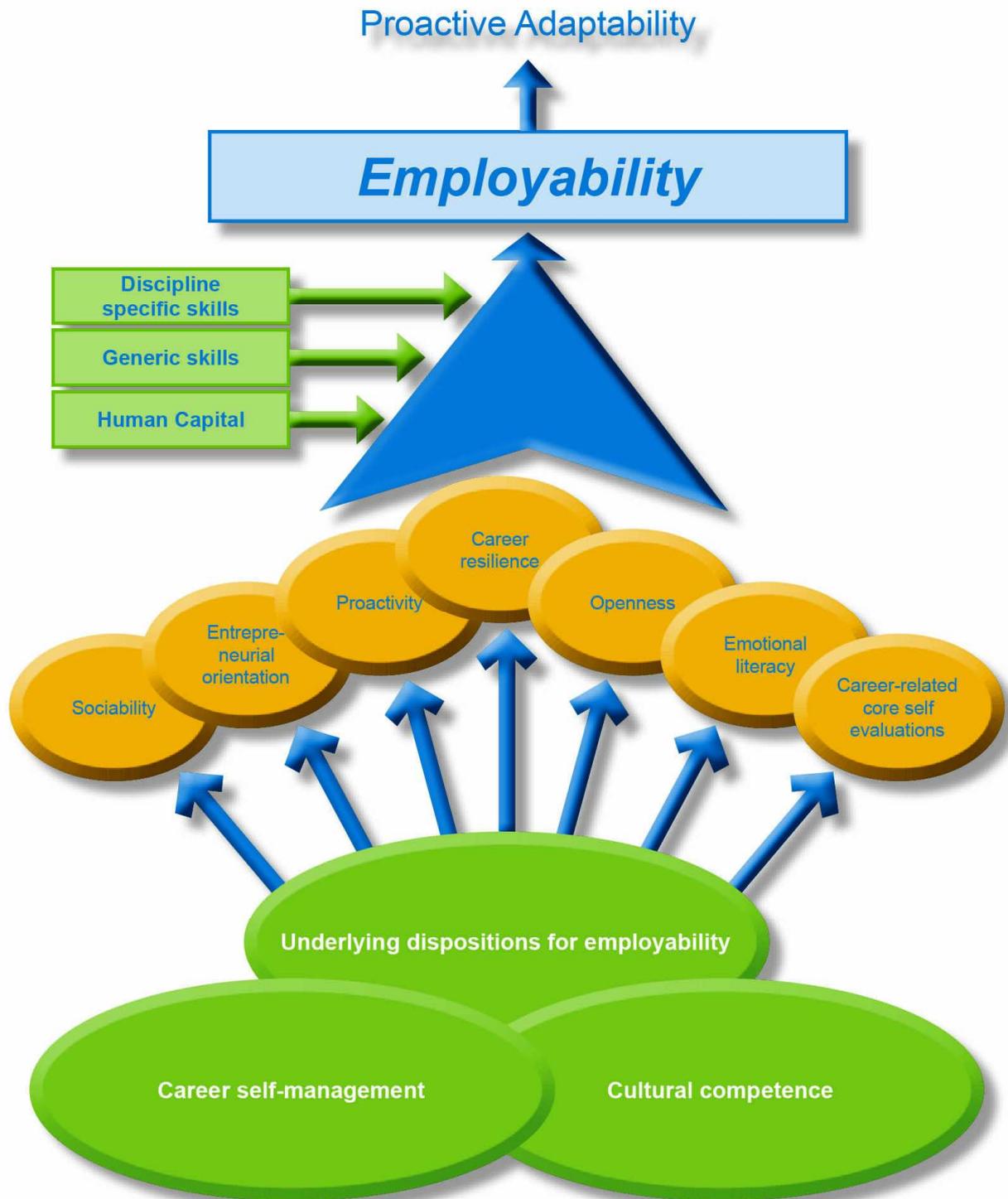


Figure 3.2: The Graduate Employability Model

The concept of career self-management has been described as the extent to which an individual frequently gathers information and plans for career problem-solving and decision-making. Important aspects in the process of career self-management is identifying and understanding one's values, career goals and intrinsic motivation (Quigley & Tymon, 2006). It is the ability to keep up with the speed at which change occurs within the industry or company and to prepare for the future by continuously learning and engaging in career planning efforts. The latter refer to obtaining knowledge about oneself (one's personality, values, interests, preferences and abilities) and information about employment opportunities, formulating goals, and developing a plan for accomplishing those goals (Schreuder & Coetzee, 2006:59).

Incorporating the work of others, De Vos and Soens (2008:450) also relate career self-management to the proactive manner in which people manage their career, including insight that individuals develop into their own career aspirations and the behaviours that they instigate to manage their career, such as creating opportunities or networking. Career self-management furthermore includes people's efforts to define and realize their personal career objectives. Self-management is closely related to the concept of career identity and relates to a person's perception and evaluation of themselves in terms of abilities, interests, goals, work-life balance and values (Bridgstock, 2009:37). Career identity refers to the manner in which people define themselves in the career context (Fugate *et al.*, 2004). Jones and DeFillipi (1996:93) similarly relates career identity to "knowing why" career competencies, which include understanding one's motives, interests and meanings for following a particular career (personal meaning, career motivation and individual values). An individual needs a clear sense of his or her personal values and career goals in an increasingly boundaryless context. Career identity offers a motivational component to employability (such as personal goals and aspirations) since it provides a compass for the individual that defines possibilities for the self at work (finding out who individuals are and who they want to be in the work domain) (Fugate *et al.*, 2004:20).

Two other concepts described in the literature can be related to career self-management drive, namely, career development learning and career building skills. Career development learning refers to activities that help graduates become more self-aware, facilitate their investigating aspects that they are interested in and enjoy doing, motivate them and fit their personality. It also relates to researching job markets to find out what opportunities are available to them, how to effectively present themselves to prospective employers, and how to make well-thought-out decisions regarding their career (Pool & Sewell, 2007:284). Career building skills are skills used to find and use information about careers, labour markets, and the world of work, and then find and obtain work. This concept also include taking

advantage of career opportunities to attain desirable career outcomes. They include (a) identifying the opportunities and threats within one's industry and the aspects needed to be successful, including labour market information, (b) being able to identify the best opportunities for progression, (c) knowing when to exploit a new employment or training opportunity, (d) knowing how to apply for and obtain work, and (e) creating social capital (Bridgstock, 2009:38). The latter will form part of the next dimension of Sociability, but is related to career self-management drive. Furthermore behaviours to improve one's employability may include researching potential markets, developing a skills portfolio, marketing one's competencies, and identifying unique qualities (Clark, 2008:265). These behaviours relate to work exploration behaviours or active job search behaviours.

Based on the above, career self-management drive in this context can be described as follows: *Career self-management drive refers to a tendency to proactively manage one's career by regularly collecting career-related information so as to enhance knowledge of the self (e.g. career identity, career aspirations, values, abilities) and the external environment including the world of work so as to develop realistic career goals and action plans to achieve these goals, obtain feedback to enhance career decision-making, updating one's skills and seeking job opportunities.*

Career self-management drive accordingly consists of (a) self-, environmental and job opportunity exploration; (b) feedback seeking; and (c) formulating career goals and action plans. Each of these aspects will now be discussed.

#### **3.6.1.1 Self-, environmental and job exploration**

Self-, environmental and job exploration form part of career exploration and refer to those activities intended to increase knowledge and insight of the self, such as one's career identity, career aspirations, and abilities, as well as the environment and job opportunities so as to promote advancement in one's career (Blustein, 1992:175). Drawing on the work of others, Nauta (2007:163) describes how career exploration has been empirically linked to various benefits such as congruence between career choice, environment and personality; student interview effectiveness as perceived by recruiters; the number of interviews and job offers received; and increased crystallisation of vocational self-concept and later career establishment. Career exploration has additionally been found to facilitate the vocational adaptation of first year students (Soares & Taveira, 1998).

The protean career inherently promotes the idea that it is the individual that is principally responsible for managing his or her career and that a strong sense of values and sense of identity are significant for directing career decisions (Briscoe & Hall, 2006; Hall, 2002). With regards to identity it is important to understand what one's motives and interests are for following a specific career, who one is and who one wants to be in one's career. It is characterised by an interest in what one does, how one does it and what others think of it (Fugate & Kinicki, 2008); "Who I am or want to be" may include goals, hopes, fears, personality traits, values, beliefs and so forth (Fugate *et al.*, 2004:20). Individuals have to learn about themselves, about their personal identity, attitudes and values, to understand who they are, what they value and how they operate in the career context. They also need to continuously monitor their environment in order to obtain insight into their understanding of themselves, set appropriate goals, make use of career strategies and make appropriate career decisions (Anakwe, Hall & Schor, 2000).

Exploring the environment and job opportunities will give individuals greater insight into the world of work, what changes are currently happening within their career field, what opportunities are available within their chosen career field or within various companies, what the competency requirements for posts are and what new career options are available. For a student, environmental exploration is apt to be occupationally focused for example on what a person in a certain occupation really does, what skills are required to follow the occupation and so forth (Greenhaus *et al.*, 2000:25, 28). It is therefore important for graduates to engage in exploration of the self, the environment and their career in order to enhance their employability.

### **3.6.1.2 Feedback seeking**

Feedback seeking is a kind of proactive behaviour (Crant, 2000) since it is usually anticipatory and future-focused (Grant & Ashford, 2008) and improves individuals' adaptation to their environment, their image and ego and their performance (Ashford, Blatt & VandeWalle, 2003). A person's proactive disposition is apt to result in actions such as developmental feedback seeking, which aids in creating career networks, coping with challenges and adjusting to changes in the environment (Mirvis & Hall, 1994). Obtaining career assessment feedback such as from a career counsellor may facilitate appropriate career decisions, for example attaining new abilities and skills (Anseel & Lievens, 2007:251). Moreover constructive feedback allows individuals to assess whether their career goals and strategies still make sense and to monitor the course of their career (Greenhaus *et al.*, 2000:32). Feedback seeking is therefore an important part of career self-management drive. Within this context

it can therefore be defined as follows: *the extent to which people actively seek out feedback from others regarding their abilities and career development needs so as to assess their strengths and weaknesses and what action plans are needed to improve themselves in the career environment.*

### **3.6.1.3 Formulating career goals and action plans**

A career goal refers to a preferred career-related outcome that an individual aims to achieve (Greenhaus *et al.*, 2000:30). Effective goal-setting behaviour is significant for career decision-making (Dik, Sargent & Steger, 2008:23) and achieving new career goals can enhance career success (Schreuder & Coetzee, 2006:43). Moreover, career strategies or action plans refer to a series of activities that help a person to achieve a career goal (Greenhaus *et al.*, 2000:31). Examples of such activities are attending workshops, finding a mentor (Anakwe *et al.*, 2000:575), acquiring new skills, seeking career guidance, and creating career opportunities. It is therefore important for individuals to have career goals and action plans on how to achieve them if they are to engage in activities that will make them more employable.

Formulating career goals and action plans guides people to envisage their potential future clearly and directs their career-related choices and decisions and how to achieve their career goals. It helps them to fully reflect on how well their employability has been developed up to now and what they can do to enhance it. People with clearly formulated career goals and action plans know what they must do to make a success of their careers.

### **3.6.2 CULTURAL COMPETENCE**

Cross-cultural competence refers to a person's effectiveness in using a set of knowledge, skills and personal attributes in order to understand and effectively work with people between and within different groups (Johnson, Lenartowicz & Apud, 2006:530). The knowledge dimension includes knowledge about culture, language, values, rules of interaction, cultural differences, customs, and the history of different cultural groups. It also communicates an understanding of a cultural group's value system and how values are reflected in people's behaviours, and a heightened awareness of appropriate behaviour in order to correctly attribute the behaviour of people in a specific culture. The skills dimension includes being able to adapt to the behavioural norms of a different cultural environment, conflict resolution and so forth. The personal attributes dimension includes personality traits such as self-efficacy, flexibility and perseverance in addition to one's internalised cultural values,

norms and beliefs (Johnson *et al.*, 2006). According to Greenhaus (2000), career success in numerous companies will rely on individuals' capacity to succeed in a multicultural environment. This has clear implications for the type of attributes required to be employable in multicultural settings such as the ability to interact effectively with individuals from different cultural backgrounds. This is significant given the diverse workforce of South Africa and the forces for globalisation resulting in amongst others an increase in expatriate assignments and international task teams.

Included within the cultural competence literature is the notion of cultural intelligence (hereinafter referred to as CQ) which can be defined as a specific type of intelligence consisting of metacognitive, cognitive, motivational and behavioural dimensions that focus on the competency to grasp, reason and behave successfully in culturally diverse circumstances (Ang *et al.*, 2007). These dimensions can be explained as follows:

- a. Metacognitive CQ refers to people's awareness and control of cognitions used to attain and comprehend cultural knowledge;
- b. Cognitive CQ refers to general knowledge and knowledge structures regarding culture such as cross-cultural customs;
- c. Motivational CQ refers to the extent of and direction of energy applied to gaining knowledge about and operating in cross-cultural circumstances; and
- d. Behavioural CQ is the ability to demonstrate suitable verbal and nonverbal behaviour when interacting with individuals from different cultures (Ang, Van Dyne & Koh, 2006:101).

The acquisition of CQ entails learning from interacting socially with others which, in turn, involves being aware of and welcoming towards important cultural differences between the self and other individuals. This calls for knowledge about cultural differences, how culture affects one's actions, as well as being aware of the context of cultural interactions and being open to the significance and authenticity of different behaviour (Thomas, 2006:90). If individuals understand what is regarded as intelligent everyday behaviour in other cultures and how it is distinct from intelligent behaviour in their own culture, they will better appreciate what they must do to adjust successfully during an overseas assignment for example (Brislin, Worthley & Macnab, 2006:45).

It is therefore clear that cultural intelligence can be a very significant competency needed in the modern workplace. It is also related to other personality traits that can promote career success (Seibert & Kraimer, 2001). In fact, Ang *et al.* (2006) investigated the relationship between the Big Five

personality model and the four factor model of cultural intelligence. The authors found significant relationship between (i) metacognitive CQ and conscientiousness, (ii) behavioural, cognitive and motivational CQ and extraversion, (iii) behavioural CQ and agreeableness and emotional stability, and (iv) openness to experience and all four CQ factors. With regards to the latter, the authors found openness to experience to be a critical personality factor that is extensively associated with an individual's ability to function successfully when interacting with those from different cultures. Individuals with certain personality traits may therefore be better able to adjust to and be successful in different cultural circumstances such as the diverse South African workplace or expatriate assignments.

Drawing on the work of others, Gow and McDonald (2000:377-378) describe intercultural competence as being crucial in the global world of work, comprising an understanding of international business and global events, intercultural communication and knowledge of other countries' economic, political and social systems. Cross-cultural competence also relates to understanding and effectively interacting. In this respect, Abbe, Gulick and Herman (2007:2) describe cross-cultural competence as the knowledge, skills, and affect or motivation that facilitates effective adaptation in cross-cultural environments. Individuals with knowledge and appreciation of different cultures and international events and who have the capacity to apply that knowledge to intercultural communication and global business issues will possess significant competencies for taking part in almost all occupations and industries (Gow & McDonald, 2000:390). Cross-cultural contact moreover enables students to enhance their cross-cultural communication skills and the ability to work in other cultures, which will advance their future employability after they graduate (Ledwith & Seymour, 2001).

Based on the above, cultural competence in this context is defined as follows: *Cultural competence refers to a person's effectiveness in understanding and effectively working with people across different groups.*

### **3.6.3 PERSONAL DISPOSITIONS FOR EMPLOYABILITY**

Employability also consists of various personal dispositions that combine to promote adaptability. A disposition can be defined as the stable and enduring tendency of individuals to demonstrate specific patterns of behaviour in a wide range of situations. It relates to terms such as traits, abilities, habits, motives and temperament (Reber & Reber, 2001:208). It therefore forms part of a person's personality and refers to the way a person normally acts as opposed to temporary actions. Without getting

involved in discussions around traits and states, the General Employability Model includes the dispositions of career-related core self-evaluation, entrepreneurial orientation, career resilience, proactivity and openness to change, dispositions that combine with other attributes to enhance proactive adaptability, which may result in greater career success. These dispositions will now be discussed.

### **3.6.3.1 Career-related core self-evaluations**

Core self-evaluations (hereinafter referred to as CSE) are deep-seated evaluations that individuals make of themselves regarding their self-worth. CSE additionally refer to individuals' beliefs about their capabilities (to control their life) and their competence (to perform, cope, succeed and persevere) and a general belief that life will turn out well for them. Individuals higher in CSE are inclined to evaluate situations as more positive, they have higher levels of motivation, and they have greater confidence in their capacity to influence the world around them positively (Judge, Locke & Durham, 1997). CSE is therefore a broad, latent, higher-order trait signified by (a) self-esteem; (b) locus of control; (c) generalized self-efficacy; and (d) high emotional stability (low neuroticism) (Judge, 2009:58). Individuals that have high core self-evaluations are people that are positive, self-confident, well-adjusted, and efficacious, and believe in their own agency (Judge, Erez, Bono & Thoresen, 2003:304). Core self-evaluations has been shown to relate to various measures including better work motivation, increased job and life satisfaction, better job performance and higher income (a measure of career success) (Judge & Hurst, 2007). They have also been related to a form of adaptability by indicating better adjustment to foreign assignments (Johnson, Kristof-Brown, Van Vianen, De Pater & Klein, 2003). Judge and Hurst (2008) evaluated the association between core self-evaluations and job and work success and found that higher core self-evaluations were associated with higher starting levels of work success as well as higher work success courses (the slope of a person's work success over time). The authors moreover suggest that people with high core self-evaluations have jobs and careers that develop partly because they are more likely to seek out further education and uphold improved health. Such results highlight the importance of core self-evaluations for career success, employability and ultimately proactive adaptability to changing career circumstances.

Core self-evaluations is a very useful construct within the employability context. It was, however, decided that emotional stability had to be replaced by the broader concept of emotional literacy which is based, in part, on the concept of emotional intelligence. Emotional stability forms part of the Big Five Model (Costa & McCrae, 1992) and refers to the extent to which people are calm, self-confident and

cool rather than depressed, anxious and insecure. Individuals that have a high emotional stability are consequently resistant to continuous negative feelings and do not easily become upset (Mayrhofer *et al.*, 2005:41). The reason for replacing emotional stability with emotional literacy is because it is believed that there is more evidence of emotional literacy's relationship with employability (for example Coetzee, 2008; Knight & York, 2002; Pool & Sewell, 2007) and various measures of emotional intelligence have moreover been found to have a strong positive relationship with emotional stability (Catell, Catell & Catell, in Palmer, Manocha, Gignac & Stough, 2003: 1194; Van der Zee, Thijs & Schakel, 2002; Van der Zee & Wabeke, 2004). It is therefore an adequate replacement and addition to the emotional stability concept. Emotional literacy will be discussed later in this section. Core self-evaluations in this context will specifically be related to the careers framework and evidence will be provided regarding how self-esteem, locus of control, self-efficacy and emotional literacy is related to employability which will facilitate proactive adaptability within the career landscape.

#### **a. Self-esteem**

Self-esteem can be described as a global, personal evaluation of an individual's self-worth or a person's overall judgement of his or her own capabilities (Lyubomirsky, Tkack & Dimatteo, 2006; Rosenberg, 1965). It is a personal judgment that reveals what persons think of themselves as individuals (Pierce & Gardner, 2004:592). Incorporating the work of others, Coetzee (2008:12) defines self-esteem as relating to the self-evaluations that individuals make and maintain, including the extent to which individuals feel worthy, capable, significant and effective compared to other individuals in their social group. Individuals with high self-esteem are amongst others optimistic, extroverted, open to criticism, and respectful of differences, while those with low self-esteem *inter alia* have low self-confidence, and are pessimistic, inflexible, indecisive, afraid of making mistakes and apprehensive of change (Humphreys in Oztas, 2010:321). Moreover, those that have high self-esteem have an enhanced ability to organize the goals that they have set out to achieve and attempt to be successful to the extent that their personal values permit (Crocker, Brook, Niiya & Villacorta, 2006). Self-esteem, it is suggested, actively enhances healthy functioning by its association with aspects of life such as achievements, satisfaction, success and the ability to cope with diseases (Mann, Hosman, Schaalma & de Vries, 2004).

Self-esteem has been linked to employability by a variety of authors (Australian Chamber of Commerce and Industry and Business Council of Australia, 2002:8; Clark, 2008; Coetzee, 2008; Pool & Sewell, 2007). According to Pool and Sewell (2007:287) it is vital to have a belief in one's capability

to succeed and to reflect this belief to others. The authors add that high levels of self-esteem will also assist graduates to be realistic about their achievements and enhance their commitment to lifelong learning. Park, Crocker and Kiefer (2007) found that academically contingent high self-esteem individuals show resilience following failure, while academically contingent low self-esteem individuals experience negative results and downplay the importance of appearing competent to others. Having low self-esteem can therefore influence one's ability to market oneself to others and therefore affect one's employability. Salmela-Aro and Nurmi (2007) investigated how measures of self-esteem during university studies would influence the characteristics of individuals' work careers ten years later and found that a high general level of self-esteem predicted permanent employment after ten years, higher salaries, and having a high level of work engagement and job satisfaction and a low level of burnout. On the other hand, low self-esteem predicted unemployment, cynicism and lower levels of achievement at work, low levels of work engagement and job satisfaction as well as feelings of exhaustion. Results such as these clearly indicate the importance of self-esteem for employability and ultimately being able to adapt to the changing world of work.

#### **b. Locus of Control**

Locus of control refers to a person's perceived control over what is happening in his or her life. Rotter (1966) defined locus of control as an individual's general expectation of perceived internal or external control or the extent to which a person views events as being dependent on his or her own actions. The author distinguished between people with an internal locus of control and those with an external locus of control. Those with an internal locus of control believe that they are in control of their own fate and that they can master their environment through their own efforts, skills, capabilities and characteristics. Those with an external locus of control believe that they are not in control of their own fate. Such individuals believe outcomes are dependent on external forces such as chance, fate or powerful others and they view themselves as passive with regards to controlling their environment.

Locus of control has been linked to a variety of career success and adaptability measures. Internal locus of control was found to be strongly related to career satisfaction (Ng, Eby, Sorensen & Feldman, 2005; Turban & Dougherty, 1994; Wallace, 2001) and self-reported promotional opportunities (Turban & Dougherty, 1994; Wallace, 2001), as well as job performance (Rothmann & Coetzer, 2003). Individuals with internal locus of control are also more apt to be visible to senior employees and they are more likely to attain better progression in their career (Phillips & Bedeian, 1994). Research has moreover found that people with internal locus of control feel that they have control over their lives

which decreases their view of being job insecure (De Witte, 2005). According to Bickel and Witzki (2008), personal adaptability to changing employment relationships is increased by internal locus of control or taking an active part in one's vocational life, amongst others. The role that locus of control plays in employability, career success and adaptability, and the need to include it in the model of employability, are therefore clear.

### **c. Generalized Self-efficacy**

The concept of generalized self-efficacy is based on social-cognitive theory (Bandura, 1998) and refers to an individual's belief in his or her capabilities to cope with a wide range of challenging or stressful demands, whereas specific self-efficacy is limited to a specific task (Luszczynska, Scholz & Schwarzer, 2005:439). General self-efficacy therefore captures differences in people's propensity to see themselves as able to meet task demands in a wide variety of contexts (Chen, Gully & Eden, 2001:63). General self-efficacy (GSE) may also explain several differences when an individual encounters new tasks and tasks that are not clearly defined (Choi, 2005:198). Individuals' evaluations of how well they will be able to perform determine to a great extent what outcomes they expect their behaviour to generate. Perceived efficacy in fact functions as a central self-regulatory mechanism of human agency and influences people's choices, aspirations, level of effort expenditure and perseverance, resilience to adversity, and vulnerability to stress (Bandura, 1998:51). Individuals with high self-efficacy set challenging goals for themselves, persevere with tasks and put forth a great amount of effort, even in the face of setbacks, where they recover faster and remain committed to their goals (Luszczynska, Gutiérrez-Doña & Schwarzer, 2005). Individuals with low self-efficacy on the other hand have low self-esteem and are pessimistic about their achievements and personal development (Bandura, 1997).

There is some contention in the literature regarding general self-efficacy, with some arguing that GSE is not unlike other self-evaluation constructs such as self-esteem (Stanley & Murphy, 1997) and that it does not predict behaviour (Bandura, 1997; Choi, 2005), while others criticize its measurement (Scherbaum, Cohen-Charash & Kern, 2006:1048). Various studies have however found measures of GSE to demonstrate acceptable psychometric properties (Chen, Gully & Eden, 2001; Luszczynska *et al.*, 2005b; Scherbaum *et al.*, 2006), while Becker (2007) found general self-efficacy and specific self-efficacy to measure academic success equally well for a student population.

Rimm and Jerusalem (1999) found that individuals with high general self-efficacy reported lower degrees of depression, anxiety, stress, irrational beliefs and negative affectivity and a greater extent of self-control and positive affectivity than individuals with low self-efficacy. The authors view such findings as confirming previous studies that found high self-efficacy beliefs to be a protective factor, while low self-efficacy suggests a personal vulnerability regarding adaptive behaviour to cope with environmental demands. Luszczynska *et al.* (2005b) similarly found evidence of the association between GSE and coping behaviour. GSE has also been found to predict specific self-efficacy for a number of tasks in a range of contexts (Chen *et al.*, 2001).

Self-efficacy has been linked to exploration of self and the environment (Taylor & Popma, 1990), applied to the process of career decision-making (Betz, 2000), and found to be related to career development (Hackett & Betz, 1981) and career satisfaction (Punnett, Duffy, Fox, Gregory, Lituchy, Miller, Monserrat, Olivas-Lujan & Santos, 2007). General self-efficacy is relevant in this context, as a person's self-belief of his ability to cope in a variety of career environments is important in order to be employable. Efficacy beliefs have been linked to employability by a number of authors (Bridgstock, 2009; Clark, 2008:266; Fugate *et al.*, 2004; Knight & York, 2002:265; Pool and Sewell, 2007; Van der Heijde & Van der Heijden, 2006:453). Pool and Sewell (2007:286) in fact argue that graduates with a belief that they can do whatever is needed are more apt to attain a position and be successful in any occupation they choose than a graduate without such a self-belief. The adaptive role that general self-efficacy plays to changing environments and its link to employability is therefore clear.

#### **d. Emotional literacy**

Emotional literacy refers to the extent to which people are able to accept and express a range of affect, founded on the idea that a range of emotional responses assist career adaptive behaviours in the career decision-making process (Emmerling & Cherniss, 2003; Coetzee, 2008). Emotional literacy is based on the concept of emotional intelligence (EI), the notion of which was first pioneered by Salovey and Mayer (1990) and defined as a person's ability to recognise, use, understand and manage their own and other individuals' emotions so as to regulate behaviour and determine solutions to problems (Salovey & Mayer in Brackett & Salovey, 2006:34). It therefore entails the ability to reason accurately about emotions and to use one's emotions and knowledge about emotions to improve one's thoughts (Mayer, Roberts & Barsade, 2008:511). The authors furthermore regard emotional intelligence as consisting of four branches or abilities, namely (a) the ability to perceive and identify emotion in oneself and others; (b) the use of emotions in cognitive processes; (c) the ability to

understand and appreciate emotions; and (d) the ability to manage emotions in oneself and others in order to enhance understanding and growth (Brackett & Salovey, 2006:35). The most recent measure of this Four Branch Model of Emotional Intelligence is the Mayer-Salovey-Caruso Emotional Intelligence test (MSCEIT V2.0) (Mayer, Salovey, Caruso & Sitarenios, 2003).

Ability models of emotional intelligence (hereinafter referred to as EI) such as the Four Branch Model mentioned above define EI as a set of cognitive abilities that are separate to and contribute to logical thought and universal intelligence (Palmer, Manocha, Gignac & Stough, 2003:1192). EI is also categorised in terms of lists of competencies and skills that add to successful managerial performance (Goleman, 1998a) as well as so-called mixed models of EI (for example Bar-On, 1997) that conceptualise EI as a mixture of competencies, personality traits and dispositions related to emotions (Mayer, Salovey & Caruso, 2002; Palmer *et al.*, 2003:1192). Goleman (1998b:317) accordingly defines EI as people's ability to recognise their own feelings as well as those of others, to motivate themselves and to manage their emotions, both in themselves and in their relationships. In a similar approach, Bar-On (2010:57) defines emotional-social intelligence as a collection of interrelated social and emotional competencies and skills that establishes how successfully people understand and express themselves, understand others and relate with them, and cope with everyday demands and challenges. These emotional and social skills and competencies (non-cognitive abilities) include five meta-components, namely intrapersonal emotion skills, interpersonal emotion skills, stress management, adaptability and general mood. Both Bar-On (1997) and Goleman (1998b) therefore conceptualise EI in the context of the personality and competency fields rather than the intelligence field (Cartwright & Pappas, 2008:154).

With regards to its association with the career landscape, adaptability and career success, it has been shown that individuals with high levels of emotional intelligence experience more career success (Cartwright & Pappas, 2008; Cooper, 1997:32; Dulewicz & Higgs, 1998; Thorlakson, 2002; Weisinger, 1998), are more effective leaders, are healthier (Cooper, 1997:32) and build stronger personal and work relationships than individuals that have low emotional intelligence (Cooper, 1997:32; Salovey & Grewal, 2005). Such individuals are additionally better able to adapt to stressful events (Nikolaou & Tsaousis, 2002; Slaski & Cartwright, 2002). Emotional intelligence is moreover directly associated with career progression (Goleman, 1998a), career decision-making self-efficacy (Brown, George-Curran & Smith, 2003), and career decision-making (Emmerling & Cherniss, 2003). With regards to the latter, the emotions that individuals experience during career decision-making may have an impact on the number of career options that are considered, a greater acceptance of career decisions that seem

“risky”, the amount of self-exploration that individuals will take part in during the career choice process, the amount of effort geared towards the process, and the processing of information regarding career choice (Emmerling & Cherniss, 2003:154). Drawing on the work of others, Coetzee (2008:12) moreover reports that emotional literacy, amongst others, enhances an individual’s behavioural adaptability and assists in gaining self-confidence in their capability to perform a specific task effectively. The role that knowledge about emotions and the ability to manage them plays in the development of employability accordingly becomes clear. In fact, Pool and Sewell (2007:283) suggest that a graduate will need to have acute emotional intelligence competencies in order to reach their true potential to become employable. The authors are moreover of the opinion that, given the amount of research focusing on the academic and life success of individuals with high levels of emotional intelligence, or emotional literacy, it is “... difficult to see how any model of graduate employability would be complete without its inclusion” (Pool and Sewell, 2007:284).

Based on the above, emotional literacy in this context is accordingly defined as follows: *Emotional literacy is the adaptive use of emotions and refers to the extent to which individuals perceive themselves as able to recognise, understand and manage emotions in themselves and in other people. People with emotional literacy are generally aware of their own emotions, have empathy with others, can regulate their own and others’ emotions, use emotions when making decisions, and are able to express a range of affect.*

### **3.6.3.2 Entrepreneurial orientation**

The entrepreneurial model implies that individuals are able to create employment by profiting from their own connections and skills (Sanders & De Grip, 2004:75), which may improve their employability. Florin, Karri and Rossiter (2007:21), from a review of the literature, identify five attitude constructs related to entrepreneurial activity that are relevant to a student population. These are preference for innovation, nonconformity, proactive disposition, self-efficacy, and achievement motivation. Greenhaus *et al.* (2000:365-366) add the need for achievement, internal locus of control, tolerance for ambiguity, risk-taking propensity, and entrepreneurial self-concept as personal characteristics that will allow individuals to pursue an entrepreneurial career more easily. According to Vecchio (2003:306), the many attributes ascribed to entrepreneurs can be thought of as the “Big Five” personality dimensions of the entrepreneurial field. These attributes are risk-taking propensity, a need for achievement, a need for autonomy, self-efficacy, and locus of control. These constructs are accordingly important to enhance not only one’s entrepreneurial orientation, but also one’s

employability. Individuals exhibiting such attributes may easily cope with and even take advantage of an uncertain career environment. In fact, Markman and Baron (2003) suggest that the greater the degree to which entrepreneurs are high on several unique dimensions (such as the capability to identify opportunities and having social skills), the closer the individual–entrepreneurship fit will be, and as a result, the greater the possibility or degree of their success.

Supported by the literature, the entrepreneurial orientation model in this context includes the concepts of (a) creative orientation and preference for innovation (Cromie, 2000; Greenhaus *et al.*, 2000; Hartshorn & Sear, 2005; Florin *et al.*, 2007; McClelland, 1961; Raposo, do Paço & Ferreira, 2008); (b) risk-taking propensity (Cromie, 2000; Greenhaus *et al.*, 2000; Lumpkin & Dess, 1996; Raposo *et al.*, 2008; Vecchio, 2003); (c) need for achievement (Collins, Hanges & Locke, 2004; Cromie, 2000; Greenhaus *et al.*, 2000; Florin *et al.*, 2007; McClelland, 1961; Vecchio, 2003); (d) tolerance for ambiguity (Cromie, 2000; Greenhaus *et al.*, 2000); and (e) autonomy (Cromie, 2000; Lumpkin & Dess, 1996; Vecchio, 2003). The definitions of these concepts are set out in Table 3.2. Many of the attributes associated with the graduate employability model as defined here are also found in entrepreneurial models (for example proactivity and locus of control) and are therefore not included in the entrepreneurial orientation definition.

**Table 3.2: Entrepreneurial personality dimensions and their definitions**

<b>Entrepreneurial personality dimensions</b>	<b>Definition</b>
<b>Creative orientation and preference for innovation</b>	An action-based orientation relating to generating new ideas and better ways of doing things and creating something new
<b>Risk-taking propensity</b>	A willingness to take risks
<b>Need for achievement</b>	A person's need to try hard to achieve success
<b>Tolerance for ambiguity</b>	People with a high tolerance for ambiguity are comfortable working in unstructured and uncertain situations and do not perceive ambiguous events as a source of threat
<b>Autonomy</b>	An aspiration to be self-directing and independent in making decisions

Entrepreneurial orientation in this context accordingly refers to *a preference for innovation and creativity, a propensity to take risks, a need for achievement, tolerance for ambiguity, and a preference for autonomy in exploiting opportunities that exist in the career environment.*

According to Hall (2002), increased self-employment and entrepreneurship are examples of hallmark careers in the modern career environment. While some individuals become self-employed because there is a shortage of work, other individuals believe that self-employment is a positive career choice

that is pursued because market niches or opportunities are recognized and capitalised on (Moreland, 2006:6). Because of the swiftly changing and uncertain environment that entrepreneurs generally face, they must have the capability to react rapidly to widespread changes in a broad range of external circumstances (Baron, 2008:334). Entrepreneurs accordingly display, amongst others, the important characteristic of adaptability (National Commission on Entrepreneurship, in Moreland, 2006:5).

Entrepreneurship can moreover be regarded as a unique graduate career choice (Nabi, Holden & Walmsley, 2006: 378) and can therefore be seen as an important aspect of the graduate employability model. Entrepreneurial orientation has in fact been linked to employability by various researchers (for example Moreland, 2006). Hartshorn and Sear (2005:280) offer a preliminary classification of employability skills as a set of entrepreneurial skills and competencies related to the entrepreneurial model described above. Such competencies, the authors add, form part of the “how” of engaging in the modern knowledge economy. Drawing on the work of others, Gow and McDonald (2000:378) moreover suggest that graduates with entrepreneurial ability know how to network in order to generate new business, are able to assess markets and can market not only their ideas, but also themselves. These aspects are closely related to the employability construct.

### **3.6.3.3 Sociability**

Mayrhofer, *et al.* (2005:42) describe sociability as encompassing networking behaviours as well as being open for social contacts. Networking refers to social behaviour in which a person seeks several different business contacts which can spread into a person’s private life, while openness for social contacts relates to being sociable, outgoing and extraverted. Successful networking has been found to influence career outcomes such as increased job opportunities, income, promotions and career satisfaction and additionally have more immediate advantages such as gaining information, friendships, career advice, social support, business leads and resources (Forret & Sullivan, 2002:252).

Sociability accordingly includes the notion of social capital, which refers to networks of contacts that provide support and information to individuals (Fugate *et al.*, 2004). Social capital relates to a person’s capacity to connect with others and create and maintain mutually supporting and satisfying relationships (BarOn, 1997). It can also be viewed as the size and quality of the support network that an individual is able to organize and capitalize on, thereby improving their employability (Gazier, 2001:9). The advantage of network ties in providing access to information and resources is however the basic proposition that underlies social capital theory (Liao & Welsch, 2005:349).

Social capital can also be related to DeFillipi and Arthur's (1994) 'knowing-who' career competencies in which individuals become close with those that can provide opportunities and vital resources. In this regard, Eby, Butts and Lockwood (2003) found that the 'knowing who' predictors of experience with a mentor, internal networks, and external networks are positively related to perceived career success, internal marketability and external marketability respectively. Sociability therefore has clear links to the employability construct.

Social capital is especially relevant to graduates as they have to seek out and capitalise on various formal and informal relationships when they want to find out more about a specific career, company, or employment possibility. Graduates with appropriate connections are furthermore more apt to find out about various opportunities that will advance their marketability to employers. Who individuals know and the quality of their relationships with other individuals is a distinctive, valuable and nonreplicable asset which accordingly provides them with a strategic competitive advantage. It provides a number of benefits such as job opportunities, promotions, influence and venture capital (Forret & Sullivan, 2002:251). Sociability is moreover associated with extraversion, warmth, assertiveness and activity as opposed to being reserved, sober, introverted and aloof (Gelissen & de Graaf, 2006:704). Sociability is also associated with proactivity in that individuals with proactive dispositions are generally good at socializing with others, are likeable, trusting and easy to cooperate with and are expected to adapt easily to new work environments (Wahat, 2009:283, 287).

Based on the above, sociability in this context can consequently be defined as follows: *Sociability refers to being open to establishing and maintaining social contacts and utilising formal and informal networks to the advantage of one's career.*

#### **3.6.3.4 Career resilience**

Resilience refers to the capacity to swiftly recover from difficult circumstances and the ability to tolerate continuing adversity in any possible manner imaginable (Walker, Gleaves & Grey, 2006:251). Luthens, Luthens and Luthens (2004:47) suggest that this ability to "bounce back" from difficulties is especially relevant in the unstable modern work environment. Resilient individuals have positive self-evaluations and are optimistic, show confidence in their capacity to handle challenges and have positive expectations about future events (Fugate & Kinicki, 2008:57).

Resilience has been associated with performance in the work context by various researchers (for example Harland, Harrison, Jones & Reiter-Palmon, 2005; Waite & Richardson, 2004). Resilient individuals can moreover deal with career disruption within an uncertain environment (Clark, 2008:273). Schreuder and Coetzee (2006:36) define career resilience as “the ability to adapt to changing circumstances by welcoming job and organisational changes, looking forward to working with new and different people, having self-confidence, and being willing to take risks”. This definition indicates that individuals who are highly resilient within the career environment will be more than equipped to adapt to and even capitalise on change, and particularly the changing world of work. Career resilience in fact characterises a person’s ability to adapt to changing circumstances, even in the face of particularly discouraging situations (Chiaburu, Baker & Pitariu, 2006:623). If there are obstacles in people’s lives, such as entry into new careers, resilient individuals are therefore more likely to cope than those that are not resilient.

Based on the above, career resilience in this context is defined as follows: *Career resilience is a personal disposition that facilitates a high degree of adaptability, flexibility, self-confidence, and competence regardless of adverse career circumstances.*

Career resilience has been associated with career success (Day & Allan, 2004). Career resilient individuals are moreover apt to take part in self-developmental activities that will help them to capitalise on opportunities (London & Smither, 1999). In fact, Chiaburu *et al.* (2006:627) found the association between proactive personality and self-management behaviours to be mediated by career resilience. This implies that career resilience has a significant part to play in career self-management – an important aspect of employability. Indeed, career resilience has been related to employability by various authors (for example Baruch, 2004; Luthans, Vogelgesang & Lester, 2006; Rothwell & Arnold, 2007:28). Fugate and Kinicki (2008) moreover identified career resilience as an important construct in their employability model, based on evidence that it signifies an active orientation, is supported by literature related to adaptability, and can be related to the careers framework. Based on the above, the inclusion of career resilience within the graduate employability model is accordingly justified.

#### **3.6.3.5 Proactivity**

Proactive behaviour relates to anticipatory activities that individuals engage in to impact on their environment or themselves. The first unique quality of proactive behaviour is that individuals act in advance, while the second relates to the choice to behave proactively by focusing on changing the

self, others or the context in which they function (Grant & Ashford, 2008:8-9). Crant (2000:436-437) defines proactive behaviour as “taking initiative in improving current circumstances or creating new ones; it involves challenging the status quo rather than passively adapting to present conditions”. The author moreover proposes that employees who are proactive take an active approach towards their work and initiate favourable situations for themselves, rather than passively waiting for opportunities to come their way. A proactive personality is a core antecedent of proactive behaviour and is deemed a stable disposition that relates to taking initiative in a wide range of situations (Seibert, Kraimer & Crant, 2001:847). Proactive individuals are particularly efficient in looking for improved ways of doing things in the workplace, such as proposing new ways to achieve goals and enhance performance (Kim, Hon & Crant, 2009:95). A person’s proactive disposition may lead to behaviours such as developmental feedback-seeking, which are essential for creating career networks, coping with work challenges and adjusting to changes, amongst others (Mirvis & Hall, 1994).

Proactive individuals who are attentive to and prepared for future demands can manage their own careers instead of reacting to changes in the workplace (Mihail, 2008:524). Van Veldhoven and Dorenbosch (2008:113) suggest that proactive workers are likely to be continuously productive in a changing work context by (a) actively engaging in solving problems that occur within dynamic work processes (on-the-job proactivity); and (b) scanning new work contexts for developmental needs and searching for opportunities to learn and attain new skills and knowledge to enhance their future employability (developmental proactivity). Proactivity is therefore an “action orientation” and can relate to new ways of doing work and solving problems, challenging the status quo (job proactivity) and setting challenging goals, looking for situations to enhance knowledge and skills, as well as assessing knowledge and skills that will be needed in the future, and taking action steps to adapt to such needs (Van Veldhoven & Dorenbosch, 2008:119-120).

Proactivity in this context can accordingly be defined as follows: *Proactivity refers to a person’s disposition towards engaging in active role orientations and implies future orientated and self-initiated action to change and improve oneself and/or one’s situation.*

Based on an extensive review of the literature, Crant (2000) relates proactivity to leadership, organizational innovation, team performance, entrepreneurship, feedback seeking, innovation, career management, coping with stress, and career success. With regard to the latter, Seibert, Crant and Kraimer (1999:423) surveyed a sample of 496 employees (business and engineering graduates) in order to determine the relationship between proactive personality and both objective and subjective

career success. The authors found that proactive personality was significantly related to both objective (current salary and the number of promotions received) and subjective (career satisfaction) career success. The relationship between proactive personality and career success is widely supported (Byrne, Dik & Chiaburu, 2008; Erdogan & Bauer, 2005; Fuller & Marler, 2009). Mihail (2008:534) moreover found proactive personality to be positively related to employability, networking and career planning, thereby rooting the construct firmly within the career and employability framework. The inclusion of proactivity in Fugate and Kiniki's (2008) dispositional model of employability moreover provides additional evidence of the necessity to include it within a model of employability. The authors suggest that employable individuals search for information relevant to their work role and career and proactivity accordingly assists in identifying and realising work opportunities.

Proactivity is also closely related to Van der Heijde and Van der Heijden's (2006) employability dimension of anticipation and optimisation. Anticipation and optimisation refers to preparing, in a creative and personal way, for prospective work changes so as to endeavour to achieve successful job and career results. This dimension relates to proactive personality, creative and active adaptability, and self-initiative in obtaining labour market information so as to create the future for oneself (Van der Heijde & Van der Heijden, 2006:454). It is consequently extremely important for graduates and individuals at large to be proactive when managing their careers in the modern workplace so as to ensure that they will be employable and adaptable to the constantly changing world of work.

### **3.6.3.6 Openness to change**

Openness relates to being open to novel ideas and changes (Van Dam, 2004:32). Within the Graduate Employability Model framework, it relates to the extent to which individuals seek out new experiences and are willing to consider new ideas. Openness to change and openness to new experiences are used interchangeably in this context since both openness to change and openness to new experiences have been related to positive attitudes towards change. Openness to experience forms part of the "Big Five" personality taxonomy (Costa & McCrae, 1992). It depicts individual workers who are able to cope effectively, who are open to novel ideas and who are open-minded and insightful (Vakola, Tsaousis & Nikolaou, 2004:92). According to Rothman and Coetzer (2003:69), openness to experience includes "active imagination, aesthetic sensitivity, attentiveness to inner feelings, a preference for variety, intellectual curiosity and independence of judgement". Openness to experience furthermore refers to the degree to which individuals are creative and unconventional (Ng *et al.*, 2005:374). The unstable employment environment in fact dictates the necessity to continuously

learn new skills and a willingness to consider new and sometimes unconventional ideas (Eby *et al.*, 2003:691). It is this curiosity about new things that enables individuals to more easily see possibilities within their environment. Openness to change and new experiences therefore enables individuals to continuously learn and gather information, which allows them to identify and realise career opportunities. Such individuals are therefore adaptable to changing work environments, which ultimately enhances their employability (Fugate & Kinicki, 2008:507).

Openness to change has accordingly been linked to employability and forms part of Fugate and Kinicki's (2008) dispositional model of employment. In a study examining the antecedents and outcomes of employability orientation – or workers' attitudes towards developing their employability for the company – it was furthermore found that employability orientation was positively associated with openness, initiative, and the career anchor of managerial competency and variety (Van Dam, 2004:29). It has furthermore been suggested that openness to experience should be associated with both internal and external lateral mobility, as such lateral moves permit individuals to search for new experiences (Ng, Sorensen, Eby & Feldman, 2007:373).

Openness has also been related to career success. In this regard, Eby *et al.* (2003) found a significant relationship between openness to experience and perceived career success. This is in contrast to previous research which found that openness did not predict any aspect of intrinsic success, although there was a small but significant effect on job satisfaction (Boudreau, Boswell & Judge, 2001). It is however possible that different jobs require different levels of openness, which may have an influence on perceptions of career success. Openness has furthermore been associated with task performance and creativity (Rothman & Coetzer, 2003), feedback seeking (Wanbeg & Kammeyer-Mueller, 2000), career satisfaction (Lounsbury, Loveland, Sundstrom, Gibson, Drost & Hamrick, 2003) and decision-making performance (Le Pine, Colquitt & Erez, 2000). Ang *et al.* (2006) also found openness to experience to be an essential personality characteristic for individuals to successfully function in diverse cultural settings. Openness is therefore deeply entwined within the careers literature and is seen as essential to personal adaptability (Fugate *et al.*, 2004:22). It is therefore clear that openness to change should be included in the employability model.

Based on the above, the General Employability Model and its dimensions can be summarised in the table below.

**Table 3.3: Graduate Employability Model: Definitions of dimensions**

Graduate Employability Model		
Employability dimensions	Employability sub-dimensions	Definitions
Career self-management drive		Career self-management drive refers to a tendency to proactively manage one's career by regularly collecting career-related information so as to enhance knowledge of the self and the external environment, including the world of work.
Cultural competence		Cultural competence refers to a person's effectiveness in understanding and effectively working with people across different groups.
Personal dispositions for employability	Career-related core self-evaluations	Career-related core self-evaluations is a broad, higher-order trait consisting of (a) self-esteem, (b) locus of control, (c) generalized self-efficacy, and (d) emotional literacy, and relate to the basic evaluations that people make of themselves regarding their self-worth within the career context.  Emotional literacy in this context is the adaptive use of emotions and refers to the extent to which individuals perceive themselves as able to recognize, understand and manage emotions in themselves and in other people.
	Entrepreneurial orientation	Entrepreneurial orientation refers to a preference for innovation and creativity, a propensity to take risks, a need for achievement, tolerance for ambiguity, and a preference for autonomy in exploiting opportunities that exist in the career environment.
	Sociability	Sociability refers to being open to establishing and maintaining social contacts and utilizing formal and informal networks to the advantage of one's career.
	Career resilience	Career resilience is a personal disposition that facilitates a high degree of adaptability, flexibility, self-confidence, and competence regardless of adverse career circumstances
	Proactivity	Proactivity refers to a person's disposition towards engaging in active role orientations and implies future orientated and self-initiated action to change and improve oneself or one's situation.
	Openness to change	Openness to change refers to the extent to which individuals seek out new experiences and are willing to consider new ideas.

As seen in the depiction of the Graduate Employability Model in Figure 3.2, it is also necessary to include discipline-specific skills, generic skills and human capital in any employability model, and particularly in an employability model pertaining to graduates. Human capital refers to the personal variables that can have an influence over advancement in one's career such as education, training, knowledge, skills and experience (McArdle *et al.*, 2007:249). It is evident that those with appropriate education and training will have an advantage over those lacking in these areas. Human capital is accordingly extensively related to employability in the literature (for example Arthur *et al.*, 1995;

Fugate *et al.*, 2004; McArdle *et al.*, 2007). Discipline-specific skills are those skills – rooted within specific subject matter areas – that are developed within universities in order to deal with particular occupational prerequisites (Bridgstock, 2009:37). Employers not only seek graduates with suitable discipline-specific skills, but are also seeking individuals that have generic skills within various areas (Harvey, Moon, Geall & Bower in Pool & Sewell, 2007:282) such as written and verbal communication skills, working with technology and working in teams (Bridgstock, 2009:37). Generic skills and discipline-specific skills are widely accepted to increase individuals' employability (for example De la Harpe *et al.*, 2000; Maclean & Ordonez, 2007; Yeung, Ng & Liu, 2007).

Although it is evident that human capital, generic skills and discipline-specific skills are highly relevant with regards to employability, these variables are included in a more indirect manner within the Graduate Employability Model, largely because they are so widely accepted to be of significance to employability that they can be taken as a given, and also because of difficulties in measuring these aspects within the employability context (see for example Barrie, 2006). It is therefore self-evident that human capital, generic skills and discipline-specific skills can affect a person's career advancement opportunities, whereas the attributes described within the Graduate Employability Model provide the means to fully apply such skills in the workplace and the motivation to engage in continuous learning throughout one's career.

### **3.6.5 COMPARISON OF OTHER EMPLOYABILITY MODELS WITH THE GRADUATE EMPLOYABILITY MODEL**

Based on the discussion around employability and its different conceptualisations, it is now possible to compare the models discussed in the previous section with the Graduate Employability Model (see Table 3.4 below). This will aid in identifying commonalities and differences between the models so as to make clear the contribution of the Graduate Employability Model within the employability literature.

**Table 3.4: Comparison of other employability models with the Graduate Employability Model**

Employability model	Definition of employability	Dimensions of employability	Focus of model
<b>Fugate, Kinicki and Ashford's (2004) model of employability</b>	A psychosocial construct that embodies individual characteristics that foster adaptive cognition, behaviour, and affect, and enhance the individual-work interface (Fugate <i>et al.</i> , 2004:15).	<ul style="list-style-type: none"> <li>• Personal adaptability</li> <li>• Career identity</li> <li>• Social and Human capital</li> </ul>	Individual characteristics
<b>Fugate and Kinicki's (2008) dispositional model of employability</b>	A constellation of individual differences that predispose employees to (pro)actively adapt to their work and career environments (Fugate & Kinicki, 2008:503).	<ul style="list-style-type: none"> <li>• Work and career resilience</li> <li>• Openness to changes at work</li> <li>• Work and career proactivity</li> <li>• Career motivation</li> <li>• Work and career identity</li> </ul>	Individual dispositions
<b>Van Dam's (2004) process model to employability orientation</b>	Employability orientation refers to the attitudes of employees toward interventions aimed at increasing the organization's flexibility through developing and maintaining workers' employability for the organization (Van Dam, 2004:30).	<p><b>Antecedents:</b> (1) <i>Personality characteristics:</i> Openness Initiative Organizational tenure</p> <p>(2) <i>Work-related characteristics:</i> Career development support Perceived organizational support</p> <p><b>Mediating variables:</b> Career anchors Managerial competence Variety Technical competence Security Continuance Commitment Affective Commitment</p> <p><b>Consequences:</b> Employability activities (e.g. engaging in developmental activities and extending their knowledge and work experience)</p>	Process (combination of individual and contextual factors)
<b>Pool and Sewell's (2007) Key to Employability model</b>	Employability is 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 (Pool & Sewell, 2007:280).	<ul style="list-style-type: none"> <li>• Degree subject knowledge, experience and skills</li> <li>• Generic skills (e.g. enterprising)</li> <li>• Emotional Intelligence</li> <li>• Career Development Learning</li> <li>• Experience – Work and Life</li> </ul>	Personal characteristics

		<ul style="list-style-type: none"> <li>• Reflection and Evaluation (personal development planning)</li> <li>• Self-efficacy/Self-confidence/Self-esteem</li> </ul>	
<b>Van der Heijde and Van der Heijden's (2006) competence-based employability model</b>	The continuous fulfilling, acquiring or creating of work through the optimal use of competences (Van der Heijde & Van der Heijden, 2006:453).	<ul style="list-style-type: none"> <li>• Occupational expertise</li> <li>• Anticipation and Optimization</li> <li>• Personal flexibility</li> <li>• Corporate sense</li> <li>• Balance</li> </ul>	Individual competencies
<b>Coetzee's (2008) psychological career resources model</b>	Psychological career resources 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 (Coetzee & Roythorne-Jacobs, 2007:47).	<ul style="list-style-type: none"> <li>• Career preferences and career values</li> <li>• Career drivers</li> <li>• Career enablers</li> <li>• Career harmonisers</li> </ul>	Individual meta-competencies
<b>Bridgstock's (2009) conceptual model of graduate attributes for employability</b>	Adequate preparation for transition to the world of work, and maintaining employability once there, involves activities such as clarification of personal aims and abilities, understanding the requirements of the labour market and the ability to actively engage in the career building process (Bridgstock, 2009:35).	<ul style="list-style-type: none"> <li>• Career management</li> <li>• Self-management skills</li> <li>• Career building skills</li> <li>• Generic skills</li> <li>• Discipline-specific skills</li> <li>• Employability skills</li> <li>• Underpinning traits and dispositions</li> </ul>	Graduate attributes
<b>Graduate Employability Model</b>	Employability refers to a psycho-social construct representing a combination of attributes (dispositions, values, attitudes and skills) that promote proactive adaptability in changing environments and enhances an individual's suitability for employment and the likelihood of obtaining career success.	<ul style="list-style-type: none"> <li>• Career self-management drive</li> <li>• Cultural competence</li> <li>• Personal dispositions for employability: <ul style="list-style-type: none"> <li>✓ Career-related core self-evaluations;</li> <li>✓ Entrepreneurial orientation;</li> <li>✓ Sociability;</li> <li>✓ Career resilience;</li> <li>✓ Proactivity; and</li> <li>✓ Openness to change</li> </ul> </li> </ul>	Individual attributes

As can be seen from the above table, the employability models are similar in the sense that they all focus on individual level employability, except for Van Dam's (2004) process model which focuses on employability from an individual and a contextual perspective. The latter model moreover differs from all the other models in describing antecedents, mediating variables and consequences of employability orientation, which is valuable especially from a policy perspective as it approaches

employability, and specifically employability orientation, from a broad perspective. The other models all have in common a focus on attributes, characteristics, dispositions or competencies. From this perspective, employability is something to be found in the individual. This is powerful in the sense that individuals can determine their own future by engaging in a self-exploration and self-management process in order to improve on developmental areas within their selves, rather than passively becoming a victim of contextual changes. It moreover seems that employability models focusing on students view it necessary to include discipline-specific and generic skills since a newly graduated individual will need to rely to a large extent on his or her qualifications in obtaining employment. With regards to the Graduate Employability Model, generic and discipline-specific skills are included in the model, but given that they are so widely accepted as important for employability and because of contentions regarding their measurement, they are taken as a given within the model. In other words, the fact that graduates will need discipline-specific and generic skills is so apparent that it will not be included in the development of a measure of graduate employability.

The significance of the Graduate Employability Model, apart from including the most important aspects identified as vital to employability by other employability models, is that it includes the two important dimensions of cultural competence and entrepreneurial orientation. It is important worldwide, and particularly in South Africa with high rates of job loss and its cultural diversity, to be able to adapt to different cultural situations and to be able to look out for new opportunities, be creative and be willing to take risks in order to adapt to the changing environment and make a success of one's career and life.

### **3.6.6 CONCLUSION**

The above discussion focused on the conceptualisation of the Graduate Employability Model. The emphasis was on defining employability within the context of the research, discussing the criteria for inclusion in the model, followed by a discussion of the dimensions of the Graduate Employability Model, namely (a) career self-management drive; (b) cultural competence; and (c) personal dispositions for employability, comprising (i) career-related core self-evaluations, (ii) entrepreneurial orientation, (iii) sociability, (iv) career resilience, (v) proactivity, and (vi) openness to change. Lastly, the different employability models were briefly compared in order to establish the Graduate Employability Model as a significant contribution to the employability literature.

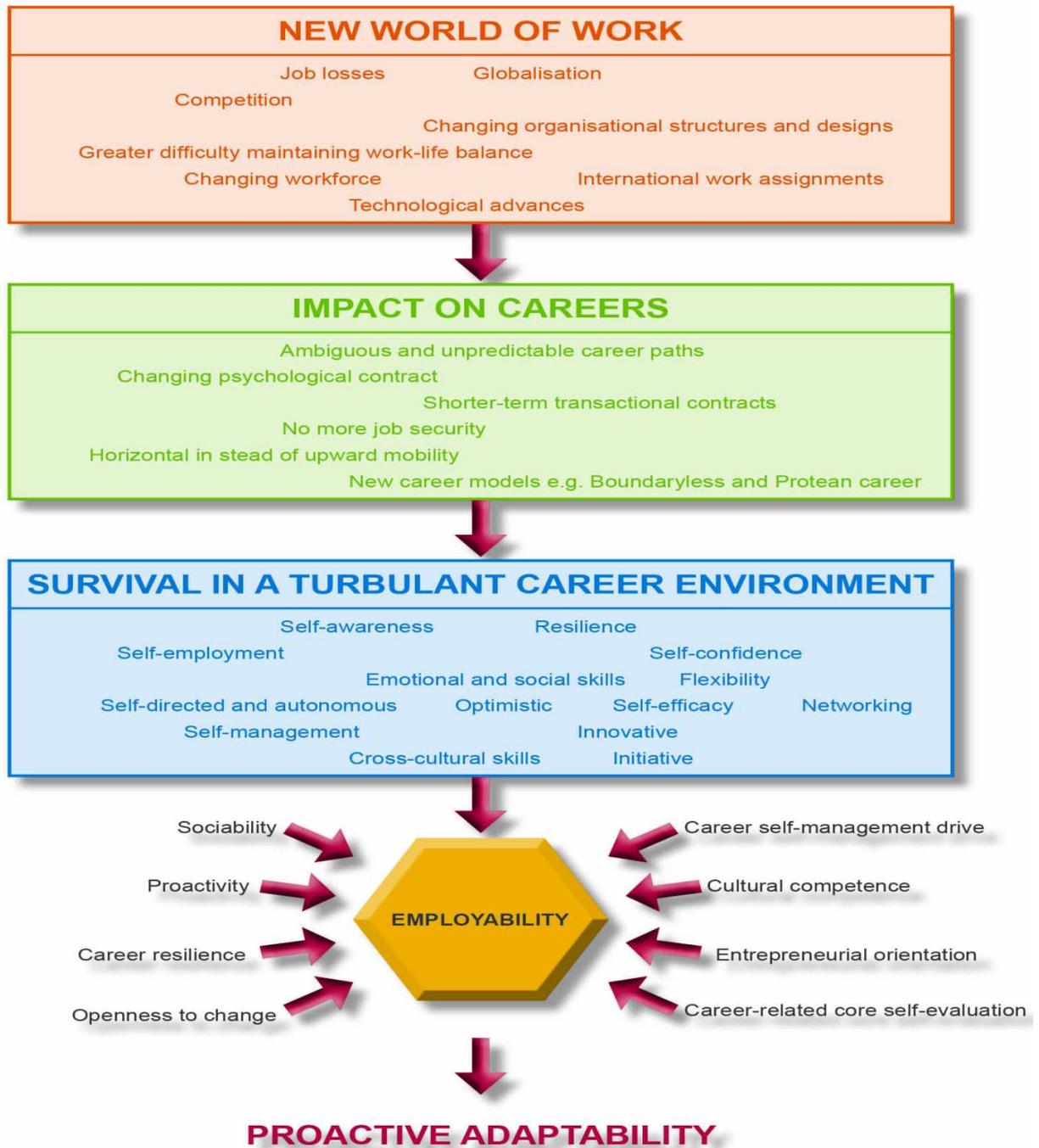
### **3.7 FINAL INTEGRATION: NEW WORLD OF WORK, IMPLICATIONS FOR CAREERS, AND THE NECESSITY OF ENHANCING ONE'S EMPLOYABILITY**

From the discussions in Chapter 2 and Chapter 3, it is important to integrate and summarise what challenges the new world of work offers, how these challenges have affected the career environment, what individuals need to do to survive in the modern turbulent career field, and how it all relates to employability. Figure 5.1 offers a summary of this final integration.

With regards to the new world of work, workers can no longer expect a lifetime of employment with one company as evidenced by the great number of job losses in recent times. Job losses are amplified by the global financial crisis and recession, changes in technology, changes in organisational structures and other organisational changes. These drastic changes in employment patterns have made it necessary for individuals to take steps to become more employable.

Globalisation is also impacting organisations through the increased international interdependence of business operations and the permeation of a global economic, political, social, and technological environment. Effects of globalisation include an increased need to be technologically skilled, outsourcing of jobs, organisational changes (such as mergers), the need to understand different cultures because of international trade, and different ways of communicating within a company and externally.

Technological advances such as the internet and web capabilities contribute to the twenty-four-hour economy and have had a major impact on the way organisations do business. The technological revolution has resulted, for example, in the increased ability to link employees by means such as email and teleconferencing, the increased need for knowledge management, access to increased sources of information (via internet search engines such as Google), and quicker and more cost effective methods of communication internally and externally. The impact of technology on individuals' careers include increased use of virtual teams, increased flexibility, and increased chances for networking. Such knowledge-intensive activities mean that employees must remain up to date with the latest technological advances and ways to harness its advantages to the benefit of their career. Individuals that stay technologically empowered know how to obtain information and capitalize on stored knowledge to work more effectively.



**Figure 3.3: Integration of the new world of work, implications for careers and the necessity of enhancing one's employability**

Organisations also change their structures and designs such as becoming more horizontal and decentralised, participating in joint ventures, establishing virtual organisations, and outsourcing business operations. This has resulted in amongst others a smaller number of management levels, autonomous work teams, a project driven culture, and an increase in part-time and contract workers. The impact on individuals' careers is the enhanced need to be flexible, to work independently, to manage themselves, to become competent in communicating inter-culturally, to continuously stay abreast of technology, and to network in order to capitalize on these changing structures.

The modern workforce contains more females at all levels and industries, there are more multi-cultural and ethnic workers, and there are more workers with disabilities. The workforce is additionally aging with the potential to leverage more information from knowledgeable and experienced employees. The younger generation of workers also necessitates different ways of managing individuals characterised as being increasingly technically literate, socially active, with an expectation of greater work-life balance amongst others. There has also been a greater necessity for individuals to work overseas and therefore inter-culturally because of organisational changes such as mergers and joint ventures. A more culturally diverse workforce therefore requires individuals to understand, communicate and interact with various cultures, both locally and globally.

There is an increased understanding of the importance of work-life balance, particularly since technology and flexible work practices makes it harder for individuals to disconnect from work. Employees, particularly women, may therefore experience conflict and stress between different work and personal roles which impacts on the way that their career is managed and their career choices. Individuals therefore need to be adaptable in order to alter between different roles, both at work and at home.

In light of the above, the nature of work has changed and has a major impact on the way that individual have to work. The changing nature of work requires individuals to heed to the demands for flexibility, autonomy, customer focus and knowledge within organisations. These demands require individuals to be adaptable and work within flexible teams to complete tasks more efficiently; to be more self-directed and autonomous; to be more responsive to the demands of customers by showing initiative and judgement; and to position themselves in such a way so as to develop, distribute and use knowledge within and outside the organisation. Individuals need to be particularly responsive to change, stay up to date with technological advancement, be innovative and entrepreneurial, and have the capacity to interact with individuals from various functional areas.

The advance of traditional career paths towards non-traditional career paths has led to two emerging viewpoints on careers. The Protean Career is one where (a) the individual manages his or her career rather than the organisation, (b) autonomy and flexibility is emphasised, (c) the core value of the protean career relates to freedom growth, (d) and individuals are self-directed and values-driven, with the focus on psychological success. There is a connection between this contemporary career model and employability. Self-directed, values-driven individuals that are adaptable and self-aware are more likely to proactively seek out opportunities and relationships that will increase their marketability and desirability to future employers. The Boundaryless Career is one where the career exceeds and draws meaning outside the boundaries of one employer. Individuals with a boundaryless attitude are eager to generate and maintain relationships across company boundaries. Arthur *et al.* (1995) proposed that individuals following this career path have various competencies, such as knowing who (for example internal and external networks), knowing how (for example career-related skills) and knowing why (for example proactive personality and openness to change) that can be applied to changing career opportunities. There is consequently also a link between boundaryless careers and employability. Individuals that have acquired career competencies are apt to perceive themselves as capable of moving across boundaries (whether departmental, across tasks, industries or even cultures) and being marketable to different employers, while employers are likely to perceive such individuals as valuable and desirable workers.

The changing career environment therefore requires individuals to be employable and it is important to identify the qualities that individuals should possess to make them employable and consequently survive the turbulent career landscape. Aspects that were identified in Chapter 2 and Chapter 3 were a high need to be adaptable; to be self-aware; self-management actions such as goal setting and feedback seeking; to socialise and network with people that can expose them to job opportunities and advance their career; being proactive by anticipating change; to be career resilient and consequently demonstrating a high degree of flexibility, adaptability and competence even in the face of adverse career situations; emotional intelligence; self-confidence; optimism; internal locus of control and self-efficacy; cultural competence; and being entrepreneurial. Individuals with these attributes will consequently be able to proactively adapt and even capitalize on change and volatility and is expected to be highly employable. Many of these qualities were also emphasised in existing employability models such as Fugate and Kinicki's (2008) dispositional model of employability and Bridgestock's (2009) conceptual model of graduate attributes for employability.

As described earlier in this chapter, the model of graduate employability developed in this research consequently incorporates the following qualities identified as important to be employable and subsequently proactively adapt to the constantly changing career environment within the context of the new world of work: (a) Career self-management drive; (b) Cultural competence; and (d) Personal dispositions for employability consisting of (i) Career-related core self-evaluations, (ii) Entrepreneurial orientation, (iii) Sociability, (iv) Career resilience, (v) Proactivity, and (vi) Openness to change.

### 3.8 CHAPTER SUMMARY

The aim of Chapter 3 was to conceptualise the employability construct so as to provide the underpinning for developing the Graduate Employability Model. The model provides the foundation for constructing a measure of graduate employability.

It is important to understand how various conceptualisations of employability have evolved over time in order to appreciate the increased complexity of the concept. The focus was therefore on Gazier's (2001) discussions, which indicated that the employability construct has moved through seven operational stages over the past century, namely, dichotomic employability, socio-medico employability, manpower policy employability, flow employability, labour market performance employability, initiative employability and interactive employability. The focus then shifted to demand-side versus supply-side conceptualisations of employability, where the foundation was built for contextualising the research within individual-level employability while still focusing on a broad definition of employability.

The emphasis was subsequently placed on a discussion of graduate employability as this study centres on the employability of graduates in the new world of work. Contentions regarding the generic skills concept were highlighted and the need for attributes over and above technical skills was made clear.

Various individual-level employability models were discussed, including those of Fugate *et al.* (2004), Fugate and Kinicki (2008), Van Dam (2004), Pool and Sewell (2007), Van der Heijde and Van der Heijden (2006), Bridgstock (2009), as well as Coetzee's (2008). These models highlighted the variables that are important to employability and provided the impetus for conceptualising the Graduate Employability Model.

In order to identify the dimensions to include in the model, the following criteria were applied: each dimension had to be related to adaptability and to the career context and career success. The dimensions identified were: (a) career self-management drive; (b) cultural competence; and (c) personal dispositions for employability consisting of (i) career-related core self-evaluations, (ii) entrepreneurial orientation, (iii) sociability, (iv) career resilience, (v) proactivity, and (vi) openness to change. Generic skills, discipline-specific skills and human capital were also identified as important to graduate employability, in that they provide the means of applying the other attributes identified as contributing to the enhanced employability of individuals.

Lastly, the various employability models were briefly compared in order to contextualise the Graduate Employability Model within the employability literature and to highlight its significance as an important model that contributes to a better understanding of employability within the complexities arising from the modern work environment.

The chapter concluded with a final integration and summary of the challenges that the new world of work offer, how these challenges have affected the career environment, what qualities individuals need to possess in order to survive in the turbulent career landscape, and how it all relates to employability.

The discussion surrounding employability in Chapter 3 provides the context for developing a measure of graduate employability. The next chapter will accordingly discuss the research methodology and the process involved in developing the Graduate Employability Measure.

## CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

This chapter deals with the research design and methodology of the study, which explains the rigorous scientific research approach with which the study was conducted. The chapter discusses the research paradigm or philosophy, design and methodology in order to inform the statistical analysis and interpretation of the research data described in Chapter 5. With specific regard to the methodology, the chapter discusses the determination and description of the sample including the sampling method used and the biographical distribution of the sample; the measurement instrument, including its development, purpose and rationale, the different dimensions it is composed of, how it is administered, and how it is interpreted; the data collection procedure; and data analyses. The chapter concludes with a chapter summary.

### 4.1 RESEARCH PARADIGM/PHILOSOPHY

Drawing on the work of others, Schnellker (2006:44) defines a research paradigm as a set of fundamental beliefs that are acknowledged based on faith and that offer a framework for the research process as a whole. This philosophy of science includes beliefs and assumptions concerning ontology (which refers to the nature of reality), epistemology (which refers to the relationship between the researcher and the research participant), axiology (which relates to what role a researcher's personal values play in the research process), rhetorical structure (the language and presentation of the research study), and methodology (the process and procedures of the research) (Ponterotto, 2002:396). This research study was approached from the positivistic and post-positivistic paradigm. The main ontology, epistemology, axiology, rhetorical structure and methodology of positivism and post-positivism are summarised in Table 4.1 below.

Positivism is a philosophical point of view based on the assumption that all knowledge is contained within the boundaries of science and it focuses on those questions that can be answered by the application of the scientific method (Reber & Reber, 2001:549). The positivistic paradigm therefore relates to the external reality governed by particular laws and is used by observers that are objective and removed and who have tested their hypotheses against experimental and other quantitative methods (Bergh & Theron, 2003:22). In a similar manner Trochim (2006) explains that positivism views science as a means to obtain the truth and to understand the world to the extent that it may be predicted and controlled. Consistent with this approach the universe operates by cause-and-effect laws that can be determined by applying the scientific method. Positivism therefore makes use of

deductive reasoning when hypothesizing theories that can be tested and subsequently revised if they do not predict reality well. Positivists furthermore believe in empiricism, or the view that observation and measurement is at the centre of scientific undertakings (Trochim, 2006).

**Table 4.1: Research paradigm and philosophy of science**

	<b>Definition</b>	<b>Positivism and post-positivism</b>
<b>Ontology</b>	The nature of reality	One true reality, either apprehendable (positivism) or approximate (post-positivism)
<b>Epistemology</b>	The relationship between the researcher and research participant	Researcher and participant are independent of one another (dualism); detached and objective researcher role
<b>Axiology</b>	The role of values in the research process	Researcher values have no place in research; must be carefully controlled and kept in check to not bias the study
<b>Rhetorical structure</b>	The language and presentation of the research	3 <sup>rd</sup> person, objective and scientific; detached and unemotional prose
<b>Methodology</b>	The process and procedure of the research	Experimental and quasi-experimental; field research (post-positivism); chiefly quantitative methods; deductive

Source: Adapted from Ponterotto (2002:397)

The major assumptions that are intrinsic to the positivistic approach are described as follows by Wardlow (1989:3):

- Social events and the physical world are akin, as researchers can study social occurrences in the same way as they study physical occurrences.
- Theory is universal and sets of principles and suppositions can describe human behaviour and other occurrences throughout individuals and settings.
- When investigating social phenomena, researchers are independent from their research subjects and deal with them as though they have an independent existence (subject-object dualism).
- Knowledge needs to be formalised through the use of theories and variables that are operationally distinct from one another.
- The hypotheses regarding laws of theories are examined by means of the quantification of observation.

Positivism is not without its limitations and some of the major post-modern critiques of this approach, as discussed by Babbie and Mouton (2001:40-41), are the following:

- The post-modernists argue that the social world and social phenomena are fundamentally different from natural phenomena, and as such, social theories will not have identical forms and logical structures to natural science theories.
- The assumption of universality is criticized on various grounds, such as not being sensitive to differences in culture.
- It is argued that prediction of phenomena is only possible in closed systems (where all extraneous forces can be removed or, alternatively, are known and measured).

The post-positivistic paradigm addresses some of these critiques. In the post-positivistic paradigm, frequently associated with quantitative approaches, the focus is on cause-and-effect thinking; reductionism by focusing on choice variables to interrelate; detailed and empirical observation and measurement of variables; and theory verification (Creswell & Clark, 2007:22). The main difference between post-positivism and positivism is that the latter emphasises “theory verification” and the former “theory falsification”. While positivists recognize an objective apprehendable reality, the post-positivists believe in an objective reality that is merely imperfectly apprehendable. In other words, the human ability to observe is flawed and life’s events are essentially intractable, and one can therefore never really capture a “true” reality (Lincoln & Guba in Ponterotto, 2002:129). Nevertheless, positivism and post-positivism share the same foundational perspective, as described in Table 4.1. Both paradigms function from both an etic and nomothetic perspective and provide a primary foundation for quantitative research (Ponterotto, 2002:129).

**Motivation for paradigm choice** The positivistic and post-positivistic paradigm is appropriate to the study as the goal of the research is to obtain reliable and valid knowledge as a set of universal principles that can explain and predict human behaviour across individuals (Kim, 2003:12), in this case, with special reference to employability and the variables it consists of. The paradigm is also appropriate in light of the fact that the study makes use of a survey design and is furthermore aimed at quantifying attributes related to employability. Lastly, the study aims to generalize the results to some extent to the sample population as the results have the potential to be valuable to various groups of individuals. The role of the researcher in this research is to be objective, neutral and distant while attempting to follow as far as is possible strict scientific methods and procedures (Ponterotto, 2002).

## 4.2 RESEARCH DESIGN

The literature review highlighted the fact that the construct of employability is conceptually ambiguous and that there is a definite need for a valid and reliable questionnaire that can measure the employability of graduates in the South African context. The purpose of the study was therefore to develop and evaluate a measure of graduate employability within the South African context. As such, the research was approached from a quantitative perspective since data was gathered by means of the distribution of questionnaires, that is, instruments explicitly created to extract information that are constructive to analysis (Babbie, 2005:253). This approach highlights the quantification of constructs, in other words, it is believed that the best manner of measuring constructs is to assign numbers to the perceived qualities of things. Quantitative research furthermore underlines the key role of variables in describing and analysing the behaviour of individuals and considers the control for sources of error in the research process as important (Babbie & Mouton, 2001:49). With regard to the study, this approach was deemed appropriate since the variables that employability consists of were quantified; in other words, the variables were described numerically in order to determine relationships between the various dimensions of employability.

Drawing on the work of others, Struwig and Stead (2001:4-6) describe the following characteristics of quantitative research:

- Quantitative research investigates constructs or variables based on the hypotheses developed from a theoretical scheme. The measurement of such constructs is usually undertaken by means of questionnaires and/or some form of structured observation.
- Quantitative research frequently attempt to ascertain causal relationships between constructs by making use of independent and dependent variables. These endeavours are inherited from the positivistic paradigm, which seeks to make use of the methods and assumptions of the natural sciences.
- Quantitative research endeavours to generalise results beyond the limits of the research sample by focusing a great amount of attention on sampling issues and the representativeness of the sample.
- By replicating a study, the extent to which the research findings are applicable to other contexts can be determined and this serves as a means of confirming whether the researcher was unbiased.
- In quantitative research the focus of the empirical inquiry is on the individual. The research makes use of survey instruments administered to individuals (independent from each other)

whose responses are subsequently aggregated in order to form overall measures for the sample.

The quantitative approach is contrasted to the qualitative approach in the literature, and it is important to know the differences between the two approaches to ensure the correct choice of inquiry strategy. It should, however, be noted that the two paradigms are not mutually exclusive. Fouché and Delport. (2002:81) compare the quantitative and qualitative approach in Table 4.2 presented below.

**Table 4.2: A comparison of the quantitative and qualitative approaches in social research**

Quantitative approach	Qualitative approach
Epistemological roots in positivism	Epistemological roots in phenomenology
Purpose is to test predictive and cause–effect hypotheses about social reality	Purpose is to construct detailed descriptions of social reality
Methods utilise deductive logic	Methods utilise inductive logic
Suitable for a study of phenomena that are conceptually and theoretically well developed; seeks to control phenomena	Suitable for a study of a relatively unknown terrain; seeks to understand phenomena
Concepts are converted into operational definitions; results appear in numeric form and are eventually reported in statistical language	Participants' natural language is used in order to come to a genuine understanding of their world
The research design is standardised according to a fixed procedure and can be replicated	The research design is flexible and unique and evolves throughout the research process; there are no fixed steps to be followed and the design cannot be exactly replicated
Data are obtained systematically and in a standardised manner	Data sources are determined by the information richness of settings; types of observations are modified to enrich understanding
The unit of analysis is variables that are atomistic (i.e. elements that form part of the whole)	The unit of analysis is holistic, concentrating on the relationship between elements, contexts, etc.; the whole is always more than the sum

Source: Fouché and Delport (2002:81)

From the above, it is evident that the quantitative approach was the best strategy of inquiry for this research given the purpose of the study. Even though it would have been possible to approach the study from a qualitative perspective by focusing on individuals' interpretations of employability, the

quantitative approach was more appropriate because the researcher was interested in developing a measure of graduate employability in a valid and reliable manner by making use of a large sample.

#### 4.2.1 SURVEY RESEARCH AS A FORM OF QUANTITATIVE RESEARCH

Survey research in the social sciences, also called sample surveys, is generally quantitative in nature (Malhotra & Grover, 1998:409; Mouton, 2001:152) and investigates the frequency and relationships between psychological and sociological variables, while tapping into constructs such as attitudes, beliefs, preferences, prejudices and opinions (Salkind, 2006:186). Surveys endeavour to provide a broad overview of a representative sample of a large population (Mouton, 2001:152) and the researcher consequently uses data from a sample of individuals to make various inferences about the wider population (Kelley, Clark, Brown & Sitzia, 2003:261; Malhotra & Grovera, 1998:409). The survey approach is a research strategy in which the same information is collected about all the cases in a sample (Aldridge & Levine, 2001:5) and in a standardized manner, usually by means of questionnaires or interviews (Kelley *et al.*, 2003:261). The ultimate objective of survey research is to add to theory development (Malhotra & Grovera, 1998:410).

Backstrom and Hursch-Cesar (1981, in Chiware, 2008:67-68) describes the following central characteristics of survey research:

- Systematic: survey research follow a particular set of rules, a formal and systematic logic of operation;
- Impartial: survey research is not prejudiced or biased in selecting units of the population;
- Representative: survey research consist of units that are jointly representative of the identified problem and the population affected by it;
- Theory based: applicable principles of human behaviour and mathematical laws of probability direct the operation of survey research;
- Quantitative: in survey research numerical values are assigned to non-numerical qualities of human behaviour so as to interpret such qualities in a uniform manner; and
- Self-monitoring: the procedure of survey research can be assigned in a manner that expose any unintentional and unwanted distortions that may come about.

Surveys may be utilized for exploratory and explanatory purposes (Babbie & Mouton, 2001:232). In the context of the current study, exploratory survey research was conducted since the aim of the study is to develop and evaluate a measure of graduate employability based on a theoretical

conceptualisation of the construct. Exploratory survey research comes about during the early stages of research into an occurrence with the aim to obtain initial insight into a topic. Exploratory survey research can reveal or offer preliminary evidence of relationships among concepts and provides the foundation for a more in-depth survey (Forza, 2002:155).

#### **4.2.1.1 Advantages of survey research**

According to Kelley *et al.* (2003:262), the advantages of using survey research are that (i) the research generates empirical data, that is, data founded on real-world observations; (ii) since the span of the research covers many people or phenomena, it is more apt than a number of other approaches to gather data from a representative sample and can consequently be generalized to the broader population; and (iii) surveys generate a large amount of data in a relatively short time-frame and are cost-effective. Salkind (2006:191) adds that if survey research is done appropriately with minimal sampling error, it can generate surprisingly accurate results. With regards to the latter, it is possible to obtain high measurement reliability if questionnaires are properly designed and construct validity with the implementation of proper controls (Mouton, 2001:153). Moreover, according to Babbie and Mouton (2001:263), surveys allow the researcher to develop operational definitions based on concrete observations. Saunders *et al.* (2000:94) contend that surveys are seen as authoritative in general due to the ease of understanding survey research. It is therefore apparent that survey research is the most appropriate for the purposes of this study. Survey research, however, is not without its limitations. These are discussed next.

#### **4.2.1.2 Disadvantages of survey research**

Survey research has a number of limitations that should be taken into account when designing research. A key limitation of survey research is that the generated data are apt to suffer from a lack of depth or detail on the topic being investigated (Kelley *et al.*, 2003:262; Mouton, 2001:153). Surveys moreover may not effectively cover complex topics, and can rarely deal with the context of social life as the researcher seldom develops the same holistic “feel” for the life situation in which research subjects are thinking and acting as a participant observer for instance. Survey research is also limited to the collection of self-report data of recalled past events or of prospective or hypothetical action and consequently can not measure social action (Babbie & Mouton, 2001:263). Another major limitation of survey research is that bias can arise when respondents provide socially acceptable responses (Salkind, 2006:191). People may also not respond to surveys and non-responders may in fact

comprise a qualitatively distinct group from those that did respond to the survey questionnaires (Kelly *et al.*, 2003:262; Salkind, 2006:191). Saunders *et al.* (2000:94) additionally point out that the design and piloting of the questionnaire and analysis of data can be very time consuming, and there is a limit to the number of questions that any questionnaire can contain. Lastly, Babbie and Mouton (2001:264) point out that survey research is generally weak on validity and strong on reliability.

In light of these limitations, the research aimed to minimize some of the disadvantages of survey research by planning for and conducting the study with the necessary rigour and quality as discussed below. The study moreover made use of a mixed-mode survey, that is, an electronic survey in combination with telephonic survey methodology. The reason for using a mixed mode survey was to obtain higher response rates. In a study conducted by Dillman, Phelps, Tortora, Swift, Kohrell, Berck and Messer (2009), switching to a second mode of gathering data is valuable in improving responses, but not in reducing non-response error.

#### **4.2.1.3 Electronic survey methodology**

The research made use of electronic survey methodology; more specifically, questionnaires were distributed via email to respondents. In an email survey, questionnaires are disseminated and returned electronically. According to Aldridge and Levine (2001:56), the advantages of the approach are:

- the order of questions can be pre-programmed so that respondents advance through the questionnaire in the desired sequence;
- the program can prompt respondents or make them aware that they have made a mistake or skipped a question;
- data are available immediately for analysis; and
- questionnaires can be returned immediately and no intermediaries are necessary to intervene in the process of distribution and return.

Aldridge and Levine (2001:57), however, warn that the approach has major limitations that should also be taken into consideration:

- there is a sampling bias towards individuals that are young, affluent and well-educated that have access to the internet;
- respondents need to be familiar with and have access to a computer that has the required software;

- respondents may not be confident in the security of data sent over the internet and its storage on a remote computer or server; and
- anonymity cannot be compellingly guaranteed.

Some of the above limitations were minimized in the current research as the sample comprised undergraduates and graduates enrolled at a distance education institution, so the entire sample was therefore of a given level of education and had access to computers and the internet.

#### **4.2.1.4 Telephonic survey methodology**

In addition to the electronic survey, a telephonic survey was held to increase the response rate. In the case of telephonic questionnaires, the researcher and respondent are able to communicate about the contents of the questionnaire, while being removed from each other. The response rate is high because respondents are not likely to refuse to take part in the survey. Since the researcher and respondent do not engage face to face, there is also a lower chance of interviewer bias affecting individuals' responses. The disadvantages are that telephone interviewers need training, particularly regarding attaining cooperation from respondents after they have answered the phone. In this regard, the telephonic survey for this research was conducted by using professionally trained field-workers.. (Delpont, 2002:173; Whitley, 2002:380).

#### **4.2.1.5 Errors and quality criteria in survey design**

According to Umbach (2005). every survey has error associated with it. These errors can take place at almost each stage of the survey life cycle and can be divided into observational (deviations in research subjects' responses from their true values on a measure) and non-observational categories (occurs when measurements are not taken on part of a population) (Groves in Umbach, 2005:93). The author outlines the various types of error associated with each category and offers suggestions for reducing the error. A summary of the ways to reduce error in survey research is provided in Table 4.3 below.

**Table 4.3: Ways to reduce error in survey research**

	Type of error	Definition	Suggestions for reduction
<b>Observational error</b>	Measurement error	When respondents' answers are inaccurate; the result of poor wording of questions and construction of questionnaires (Umbach, 2005:93)	<ul style="list-style-type: none"> <li>- Have a defined objective</li> <li>- Pay close attention to question wording</li> <li>- Evaluate your survey questions by convening focus groups, consulting with experts, conducting cognitive interviews, and pre-testing your questionnaire</li> </ul>
	Processing error	Introduced after data are collected but before it is analysed; most common sources are coding, data entry and outliers; can often not be avoided (Umbach, 2005:95)	<ul style="list-style-type: none"> <li>- Try to avoid open-ended questions</li> <li>- Search for outliers</li> </ul>
<b>Non-observational error</b>	Coverage error	When there is a mismatch between sampling frame and population as some members of population did not have a chance to be included in the sample (Umbach, 2005:96)	<ul style="list-style-type: none"> <li>- Maintain good data (e.g. compile and maintain good email addresses on individuals in target population)</li> <li>- Be careful in your selection of mode of collection</li> </ul>
	Sampling error	When the sample does not match the sample frame; present in each sample survey as statistics calculated on data are only a subset of population (Umbach, 2005:96-97)	<ul style="list-style-type: none"> <li>- Determine the appropriate sample size</li> <li>- Report confidence intervals</li> <li>- Consider stratified random sampling</li> </ul>
	Non-response error	Consists of unit non-response and item non-response. Unit non-response ensues when a member of the sample does not respond to the survey. Item non-response occur when a respondent does not answer one or more survey questions (Umbach, 2006:97)	<ul style="list-style-type: none"> <li>- Use multiple contacts</li> <li>- Keep the questionnaire brief</li> <li>- Draw a sample</li> <li>- Know your population</li> <li>- Check to make sure your respondents match your population</li> </ul>
	Adjustment error	Occur as a result of attempts to reduce errors of non-observation (coverage, sampling, non-response); similar to processing error in some ways (Umbach, 2006:98)	<ul style="list-style-type: none"> <li>- Consider use of weights</li> <li>- Be thoughtful in how you handle missing data</li> </ul>

Source: Adapted from Umbach (2005:94)

With regards to measurement error, the Graduate Employability Measure was developed by consulting experts in the field and carefully constructing the questionnaire with its intended purpose in mind. In terms of coverage error, the electronic survey design by nature excludes those without access to internet and email capabilities. The graduates in the sample, however, all study at a long distance learning university which necessitates making use of the internet and email. The electronic survey design was moreover supported by a telephonic survey using professionally trained field workers. Sampling error was minimized by drawing a random sample of 3000 students from a total

population of 150 000 students, although non-response error was a limiting factor as only 272 useable questionnaires were returned. With regard to the latter, it may be that the questionnaire was not brief enough, although the long questionnaire was thought to be justified in order to obtain a more useful data. The follow-up of the electronic survey with a telephonic survey moreover limited non-response error to a larger extent. With regards to processing error, it was limited by only making use of closed-ended questions, and by having an expert statisticians analyse the data for outliers and other sources of error.

Malhotra and Grover (1998:414) add internal validity error to sources of error in survey design. Internal validity relates to whether differences in the dependent variable are caused by the independent variable or by confounding variables. Extraneous effects on the dependent variable in experimental designs can be controlled by making use of experimental controls or making use of homogenous sample groups. In the absence of experimental designs, internal validity should be defensible through, for example, discussing why causality exists or why alternative explanations are not likely. The authors also discuss statistical conclusion error, which relates to the statistical power of tests. Low statistical power results in incorrect conclusions (leading to type 2 errors, that is, incorrectly upholding the null hypothesis), whereas greater statistical power suggests a greater probability of uncovering statistical associations among variables. The authors contend that the primary factor in ascertaining satisfactory power for a test is sample size. Regarding the latter, it is suggested that sample sizes of 100 at a minimum are desirable (Malhotra & Grover, 1998:414). In this research, a sample of 272 was collected to ensure greater rigour and to allow for better statistical analyses. Internal validity error was moreover limited by a thorough discussion of each step in the research process and of the results obtained.

### **4.3 DETERMINATION AND DESCRIPTION OF THE SAMPLE**

This section describes the considerations taken into account in sampling respondents, including the sampling method, how the sample size was determined, and the sampling procedure followed. The composition of the sample is additionally described in terms of gender, age, race, marital status, employment status, job level and qualification level.

#### **4.3.1 SAMPLING**

When collecting primary data for quantitative studies it is impractical or impossible to assess all individuals, or the population, in the particular category signified by the research project. A sample of

the population therefore needs to be selected (Saunders *et al.*, 2000:151; Struwig & Stead, 2001:109). With a sample, time, money and effort can be focused to generate higher quality research (Strydom & Venter, 2002:199). Sampling can therefore be defined as “the process of choosing in a systematic fashion a sub-set of cases from which data will be collected from the pool of all those potentially relevant to the research being conducted. The sub-set selected is the sample, and the pool is the target population” (Aldridge & Levine, 2001:61). A population consequently refers to the complete set of cases from which a sample is taken (Saunders *et al.*, 2000:150). It is a group of potential participants to whom the researcher desires to generalize the results of the study (Babbie, 2005:196; Salkind, 2006:85).

There are two types of sampling techniques, that is, probability or representative sampling and non-probability or judgmental sampling (Saunders *et al.*, 2000:152). In probability sampling every member of the population under study has a known probability of being selected for the research sample (Whitley, 2002:390). This implies that one can answer research questions and achieve objectives requiring the statistical estimation of the characteristics of the population from the sample, so probability sampling is frequently associated with survey and experimental research (Saunders *et al.*, 2000:152). In non-probability sampling the probability of an individual being chosen for the research sample is unknown.

In this study, the probability technique of simple random sampling was used, which relates to drawing a sample from a population where each individual has an equal probability of being selected (Whitley, 2002:391). Random sampling is the best method to generalise from a sample to a population. Random sampling, however, may fail to produce a truly representative sample as it may be difficult to actually obtain a random sample. This is because it may not be possible to identify all of the members of the larger population from which the sample is to be drawn, or some of those who are selected to be in the sample are likely to decline to take part (Eysenck, 2000:836). In the present research, the researcher had access to the contact details of the entire population of registered students, although there was a poor response rate, as described elsewhere, which is a limitation of the study. Due to the exploratory nature of the research, the main aim is not to generalise the results and it is not necessary to the interpretation of the results.

The determination of the sample size needed to carry out a study effectively can be complex and is influenced by various factors. Strydom and Venter (2002:200) contend that the researcher must always be aware of the effect of sample size on the statistical test as it makes it either insensitive (at

small sample sizes) or overly sensitive (at very large sample sizes). Drawing on the work of others, the authors add that the size of the sample will also be influenced by the relative homogeneity or heterogeneity of the population and the degree of desired reliability for the purposes of the study. Singleton, Straits, Straits and McAllister (in Strydom & Venter, 2002:200) assert that there are a number of factors that influence the sample size, including the heterogeneity of the population, the required degree of exactness, the type of sample, the available resources, and the number of variables in which the collected data is grouped. Field (2005:640), with other authors, contends that a sample of 300 or more will be sufficient for factor analysis. Tabachnick and Fidell (2001) similarly state that about 300 cases for factor analysis is comforting. This was the sample size that was accordingly aimed for in the current research.

In this research the total population consisted of students at a third year level and post graduate level (consisting of Honours, Masters and Doctorate students) from the College of Economic and Management Sciences of a large distance learning higher education institution. Permission to conduct the survey was obtained from the Research Ethics Committee of the institution. Participation was voluntary and permission to use the results for research purposes only was obtained from the participants. In all the stages of the data collection and analyses process, anonymity and confidentiality were honoured. From a total population of 150 000 students, a random sample of 3000 students were drawn. Of the sample of 3000, 272 usable questionnaires were obtained. This amounts to a response rate of 9% which is poor given the total population. The data was collected in two stages. The first stage consisted of a web-based survey (responses: n=66) and the second stage consisted of a telephonic survey using professionally trained field workers (responses: n=206). Random quality checks were done on the telephonic surveys to ensure data integrity and reliability.

The poor response rate may be largely due to the length of the survey. The Graduate Employability Measure was added to a larger “graduateness” project by means of an additional questionnaire, which could have had an effect on respondents’ motivation to complete the survey. However, the current study serves as a pilot study and issues such as high non-response rates can therefore be addressed during later investigations. In a pilot study the researcher may in fact conclude that the non-response factor is too high and may decide to modify his or her strategy. The effectiveness of the different ways for reducing the non-response rate can then be compared with each other and different timely alterations can be made to the strategy of the project (Strydom, 2002:218). Future research using the GEM may investigate alternative strategies to encourage respondents to complete the questionnaire.

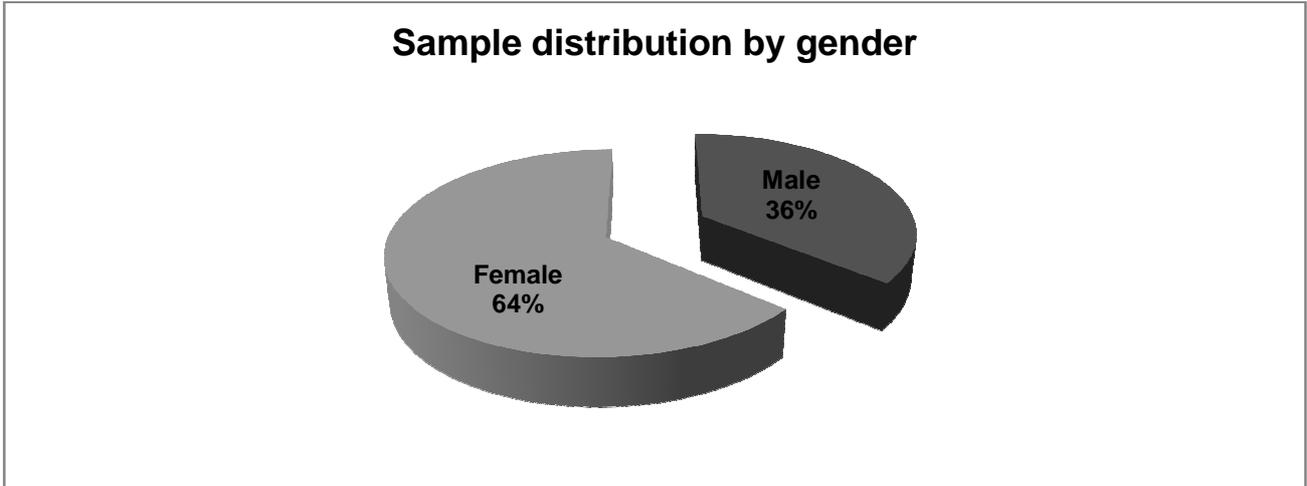
#### 4.3.2 BIOGRAPHICAL COMPOSITION OF SAMPLE

The Graduate Employability Measure included a series of self-report questions so as to attain biographical data with regard to gender, age, race, marital status, employment status, job level and qualification level. The biographical data were used to examine differences between groups on the employability variables. Frequency distributions of the sample in terms of the biographical data are indicated below. Missing cases indicate the number of individuals that did not supply information for that variable. The valid percentage excludes missing cases and is calculated from the total cases that supplied information regarding the variable. The cumulative percentage is calculated in terms of the valid percentage.

Out of a total of 272 respondents that completed the Graduate Employability Measure, 269 indicated their gender. The sample consisted of 63.9% females and 36.1% males, as presented in Table 4.4. The fact that the majority of respondents were females may imply that the findings should be limited to females. Figure 4.1 depicts the gender distribution of the sample graphically.

**Table 4.4: Gender distribution of sample**

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Female	172	63.2%	63.9%	63.9%
Male	97	35.7%	36.1%	100.0%
<b>Total</b>	269	98.9%	100.0%	
Missing	3	1.1%		
<b>Total</b>	<b>272</b>	100.0%		

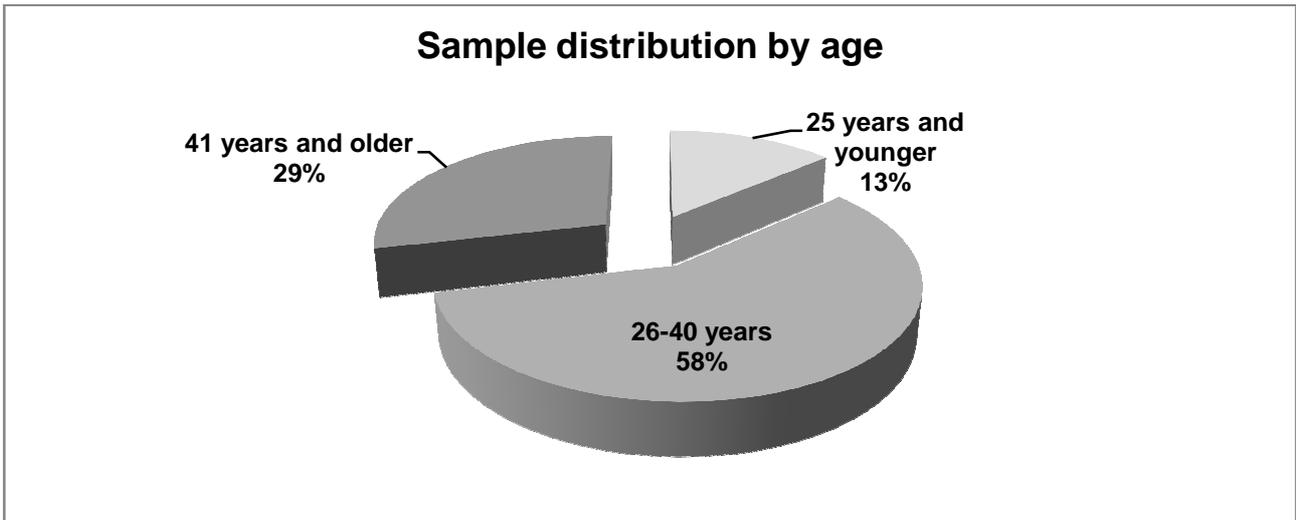


**Figure 4.1: Gender group distribution of sample**

Although the age distribution consisted of four age categories, the category of 56 and older only had 0.4% representation and was consequently collapsed with the 41 to 55 year age group to form the category 46 years and older. Out of a sample of 272, all participants indicated their age. The sample consisted of 13.6% respondents that were 25 years and younger, 57.7% respondents between the ages of 26 and 40 years, and 28.7% respondents that were 46 years and older, as presented in Table 4.5. From the results, it can be seen that the majority of the respondents fell within the age group of 26 to 40 years, which represents individuals within the early adulthood life stage (Super, 1992). Figure 4.2 depicts the age group distribution of the sample in graphic format.

**Table 4.5: Age group distribution of sample**

Age groups	Frequency	Percent	Valid percent	Cumulative percent
25 years and younger	37	13.6%	13.6%	13.6%
26-40 years	157	57.7%	57.7%	71.3%
41 years and older	78	28.7%	28.7%	100.0%
<b>Total</b>	<b>272</b>	<b>100.0%</b>	<b>100.0%</b>	

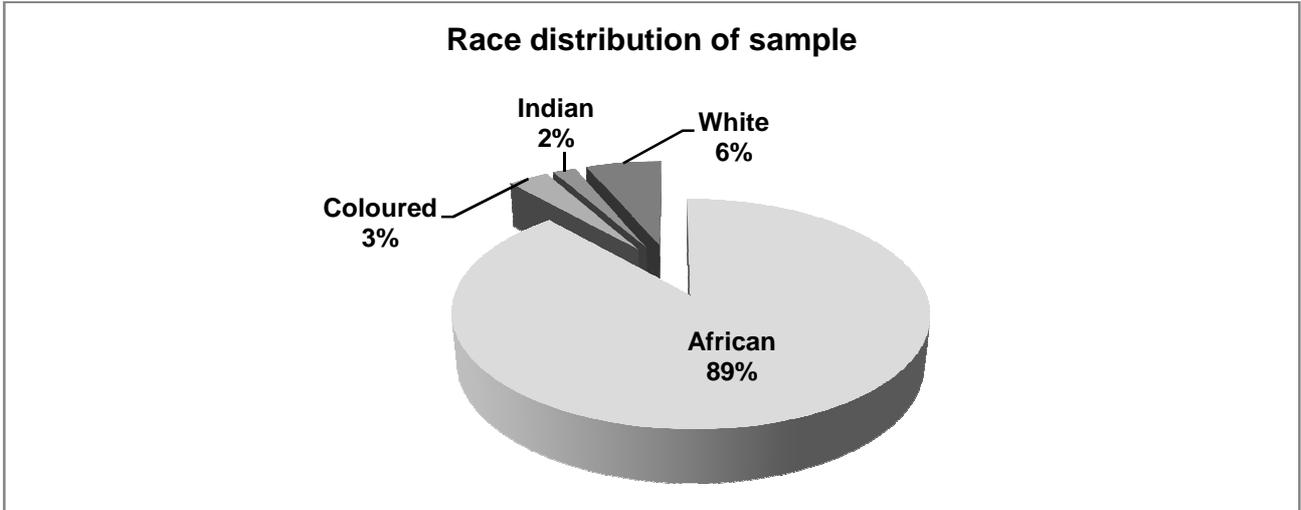


**Figure 4.2: Age group distribution of sample**

In terms of race, out of a total of 272 respondents that completed the GEM, 271 indicated their race on the questionnaire. The sample consequently consisted of 88.6% African respondents, 3.3% Coloured respondents, 1.8% Indian respondents and 6.3% White respondents. As can be seen from the results presented in Table 4.6 and depicted in Figure 4.3, the majority of respondents were African. This may imply that the results can only be applicable to this specific race group.

**Table 4.6: Race distribution of sample**

Race groups	Frequency	Percent	Valid percent	Cumulative percent
African	240	88.2%	88.6%	88.6%
Coloured	9	3.3%	3.3%	91.9%
Indian	5	1.8%	1.8%	93.7%
White	17	6.3%	6.3%	100.0%
<b>Total</b>	<b>271</b>	<b>99.6%</b>	<b>100.0%</b>	
Missing	1	0.4%		
<b>Total</b>	<b>272</b>	<b>100.0%</b>		

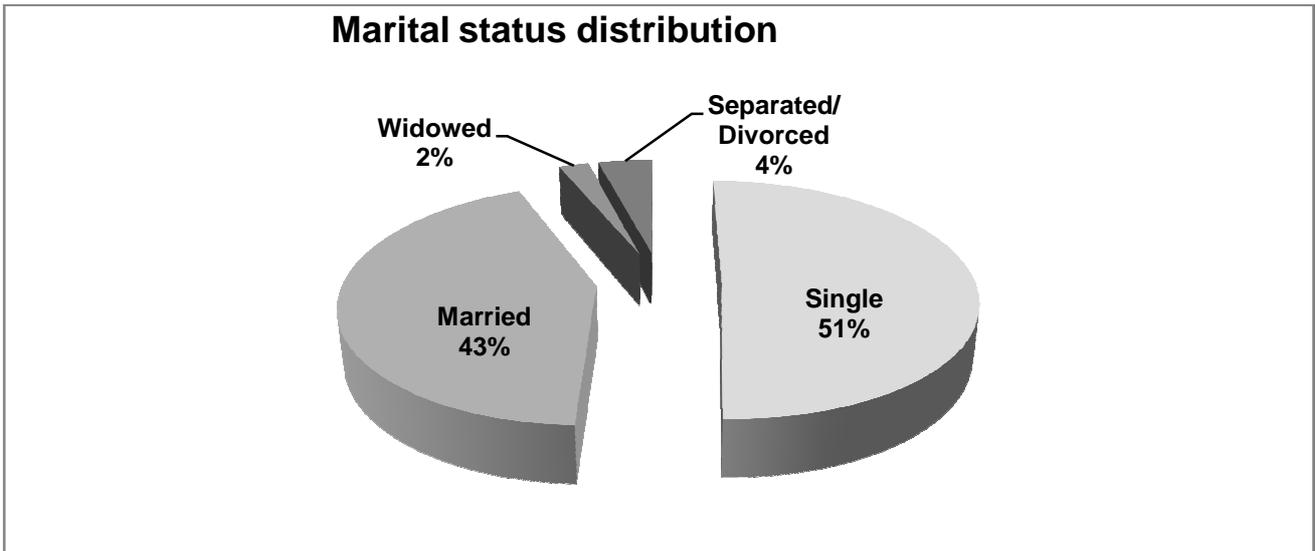


**Figure 4.3: Race distribution of sample**

Table 4.7 presents the distribution of the sample by marital status. Out of a total sample of 272 respondents who completed the GEM, 271 indicated their marital status. The sample consisted of individuals of whom 50.6% were single, 43.2% were married, 2.2% were widowed, and 4.1% were separated or divorced. The majority of the sample therefore consisted of single people. Figure 4.4 graphically represents the marital status distribution of the sample.

**Table 4.7: Marital status distribution of sample**

Marital status	Frequency	Percent	Valid percent	Cumulative percent
Single	137	50.4%	50.6%	50.6%
Married	117	43.0%	43.2%	93.7%
Widowed	6	2.2%	2.2%	95.9%
Separated/Divorced	11	4.0%	4.1%	100.0%
<b>Total</b>	<b>271</b>	<b>99.6%</b>	<b>100.0%</b>	
Missing	1	0.4%		
<b>Total</b>	<b>272</b>	<b>100.0%</b>		

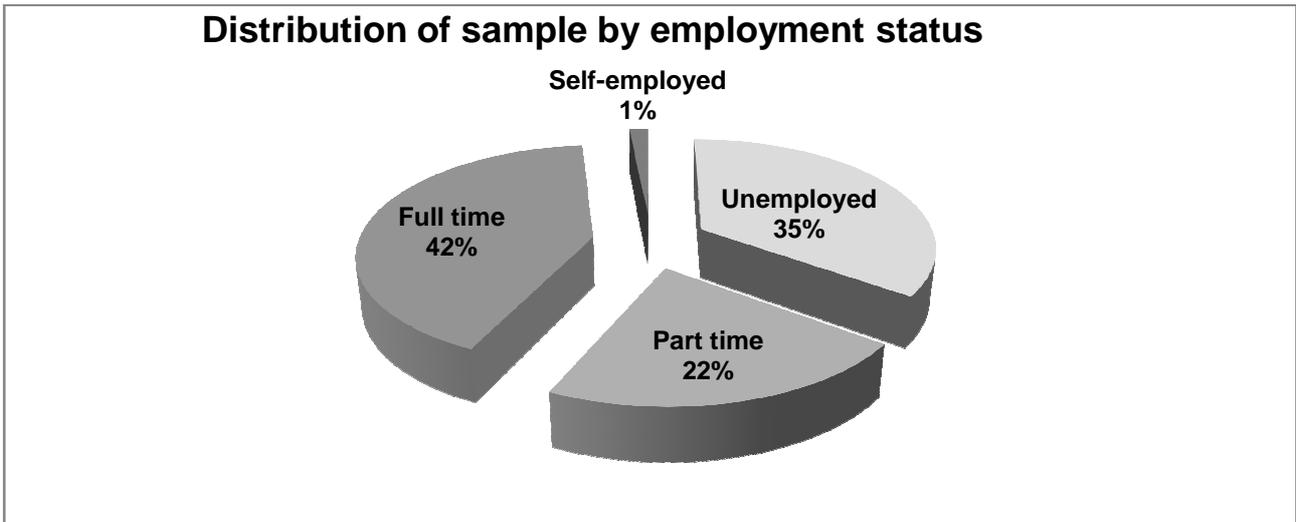


**Figure 4.4: Marital status distribution of sample**

Out of the total sample of 272 that completed the GEM, 271 respondents indicated their employment status. From Table 4.8 it can be seen that 35.1% of the sample were unemployed, 21.8% worked part time, 41.7% worked full time and 1.5% were self-employed. The majority of individuals in the sample therefore worked full time. Figure 4.5 depicts the results graphically.

**Table 4.8: Distribution of sample by employment status**

Employment status	Frequency	Percent	Valid percent	Cumulative percent
Unemployed	95	34.9%	35.1%	35.1%
Part time	59	21.7%	21.8%	56.8%
Full time	113	41.5%	41.7%	98.5%
Self-employed	4	1.5%	1.5%	100.0%
<b>Total</b>	271	99.6%	100.0%	
Missing	1	0.4%		
<b>Total</b>	<b>272</b>	<b>100.0%</b>		

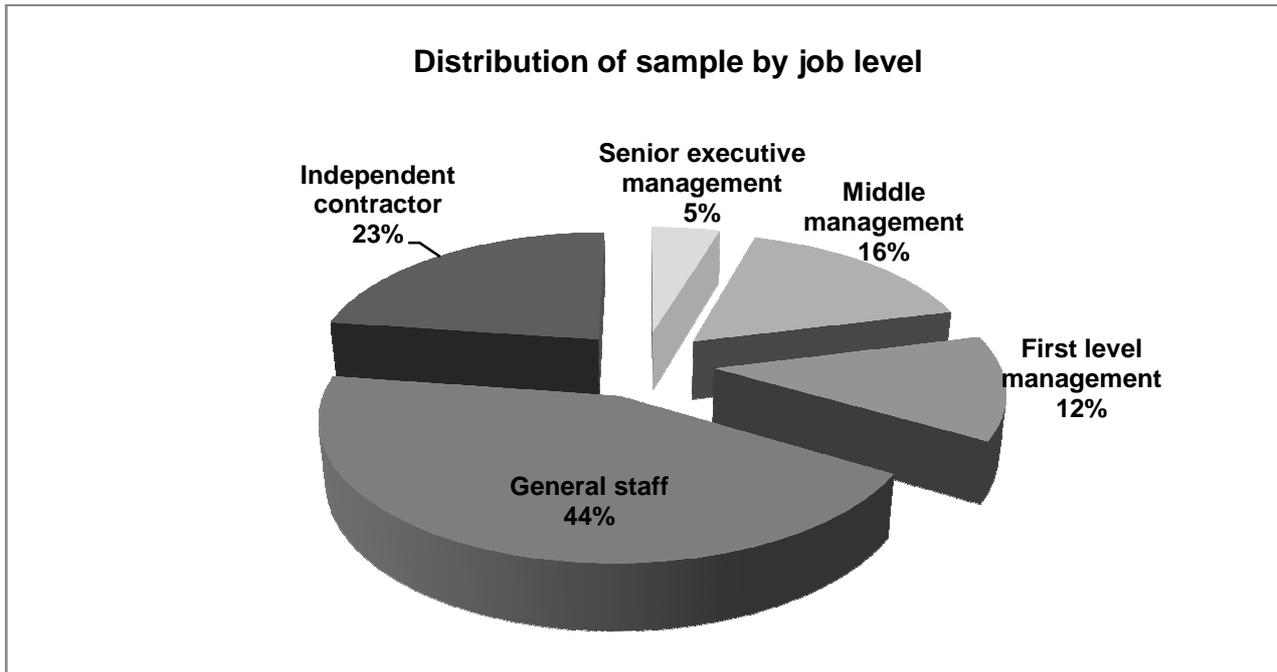


**Figure 4.5: Distribution of sample by employment status**

An investigation of the distribution of the sample by job level, as presented in Table 4.9, showed that out of the 176 individuals that were employed, 4.5% were in a senior executive management position, 16.5% were in a middle management position, 12.5% were in a first level management position, 43.8% were employed as general staff, and 22.7% were independent contractors. The majority of the sample was therefore employed in a general staff capacity, which and may imply that the results are only applicable to this particular job level. Figure 4.6 depicts the sample distribution by job level.

**Table 4.9: Distribution of sample by job level**

Job level	Frequency	Percent	Valid percent	Cumulative percent
Senior executive management	8	2.9%	4.5%	5.4%
Middle management	29	10.7%	16.5%	21.0%
First level management	22	8.1%	12.5%	33.5%
General staff	77	28.3%	43.8%	77.3%
Independent contractor	40	14.7%	22.7%	100.0%
<b>Total</b>	176	64.7%	100.0%	
Missing	96	35.3%		
<b>Total</b>	<b>272</b>	<b>100.0%</b>		

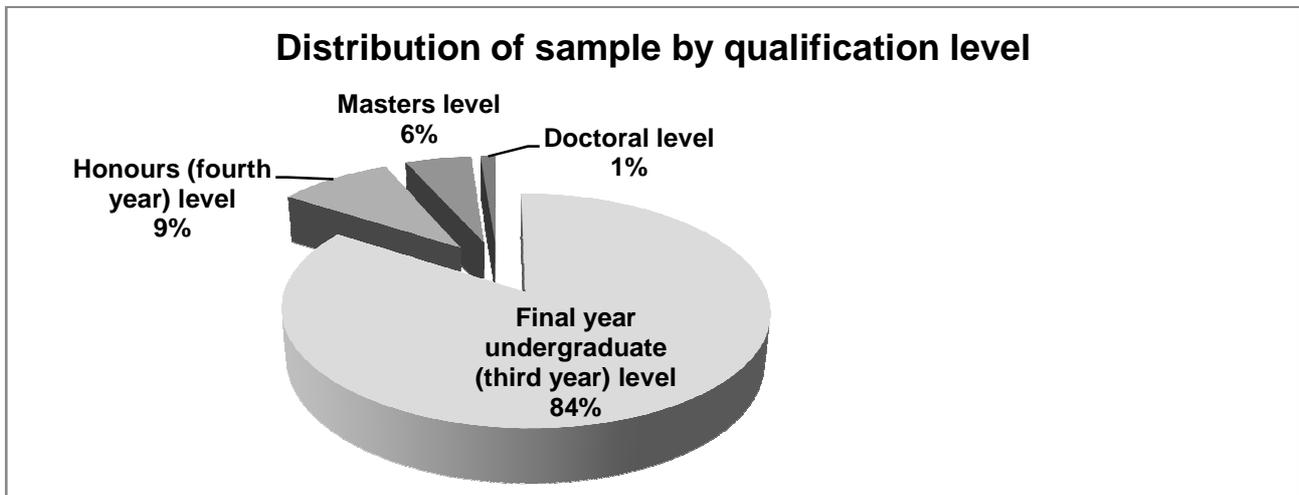


**Figure 4.6: Distribution of sample by job level**

Table 4.10 presents the distribution of the sample in terms of qualification level. Out of a sample of 272 that completed the GEM, 260 respondents indicated their current level of academic study. When taking the sample as a whole, 84.2% individuals were qualified at final year undergraduate (third year) level, 9.2% at Honours (fourth year) level, 5.4% at Masters level and 1.2% at Doctoral level. The majority of respondents were therefore qualified at a third year or final year undergraduate level. Figure 4.7 depicts the distribution of the sample per qualification level graphically.

**Table 4.10: Distribution of sample by qualification level**

Job level	Frequency	Percent	Valid percent	Cumulative percent
Final year undergraduate (third year) level	219	80.5%	84.2%	84.2%
Honours (fourth year) level	24	8.8%	9.2%	93.5%
Masters level	14	5.1%	5.4%	98.8%
Doctoral level	3	1.1%	1.2%	100.0%
<b>Total</b>	260	95.6%	100.0%	
Missing	12	4.4%		
<b>Total</b>	<b>272</b>	<b>100.0%</b>		



**Figure 4.7: Distribution of sample by qualification level**

From the above it is clear that the sample consisted predominantly out of single African females in the age category of 26 to 40 years that are employed full-time as general staff and are enrolled as third or final year undergraduates at the College of Economic and Management Sciences of a distance learning higher education institution.

#### **4.4 THE MEASURING INSTRUMENT**

The study did not make use of an existing data collection instrument to measure employability as no measures of graduate employability in the South African context could be found, although the Psychological Resources Inventory of Coetzee (2008) can be related to *general employability* in the South African environment. As such, the purpose of the study was to develop an employability questionnaire that can specifically be applied to graduates in South Africa. The Graduate Employability Measure was consequently developed specifically for the study.

A questionnaire is a general term that includes all techniques of data collection in which each individual is requested to answer the same set of questions in a predetermined order (de Vaus, in Saunders *et al.*, 2000:278). It is a document that contains questions and other types of items intended to solicit data suitable for analysis (Babbie, 2005:253). Self-administered questionnaires are completed by respondents and can be delivered and returned personally, electronically using either email or the internet, or by mail. In this study, questionnaires were sent electronically via email to

respondents. This method was deemed appropriate given the short time it takes to complete the data collection, its cost-effectiveness, the elimination of the need for assistants, and the ease of automating the data entry (Saunders *et al.*, 2000:280,283; Sternberg, 2001:45). It should, however, be kept in mind that while electronic surveys might be instantaneously transmitted which saves time for the delivery of completed questionnaires, contacting and following up respondents takes the same amount of time, which means that electronic surveys may only save part of the total survey fielding time compared to for example mail surveys (Fricker & Schonlau, 2002:9). Self-report questionnaires are moreover useful in providing data on people's perceptions of work (Spector, 1994:386). Since the purpose of the research was to develop a measure of graduate employability, a self-report questionnaire was considered suitable given that graduates may be in the best position to rate their own employability. Self-administered questionnaires were moreover appropriate as the population of students were adequately literate (Babbie & Mouton, 2001:258).

A potential limitation of this approach, however, is that it does not allow for definite causal conclusions (Spector, 1994:390) Other disadvantages include the following: particularly careful questionnaire design is required, open questions are generally not practical, and the researcher is not at hand to exercise quality control relating to meeting the objectives of questions, or the quality of the responses offered (Fowler, 1988:71). It is also not possible to prompt and explore issues in further detail (Saunders *et al.*, 2000:284). It should moreover be kept in mind that questionnaires can only be used if respondents can read, are motivated to read the questions accurately and respond truthfully, and if the respondents have knowledge regarding the issues dealt with in the questionnaire (Delpont, 2002:175). These limitations were accounted for in this research by the fact that the study was exploratory in nature and its purpose was not to make causal conclusions, all the recommendations for good questionnaire design were taken into account and the questionnaire was reviewed by an expert panel, and the participants were adequately literate and had knowledge of the topic at hand.

In the next section, the development of the GEM will be discussed, followed by a discussion around its rationale and purpose, its dimensions, administration, and interpretation, and issues around reliability and validity.

#### **4.4.1 DEVELOPMENT OF THE GRADUATE EMPLOYABILITY MEASURE**

According to DeVellis (1991:6), the phenomenon that is measured in social science research frequently originates from theory and theory consequently plays a significant role in how measurement

problems are conceptualised. Therefore, “[t]he more researchers know about the phenomena in which they are interested, the abstract relationships that exist among hypothetical constructs, and the quantitative tools available to them, the better equipped they are to develop reliable, valid, and usable scales” (DeVellis, 1991: 7). The literature review was therefore undertaken with a view to finding the most important variables related to employability and how they may be related to one another.

Measurement is one of the best techniques to improve the professional knowledge base with the empirical evidence that is required (Delpont, 2002:166). Measurement is fundamentally concerned with the methods employed to provide quantitative descriptions of the degree to which individuals manifest particular characteristics (Ghiselli, Campbell & Zedeck, 1981:2). Stated differently, it is the assignment of numbers to individuals in a systematic fashion as a manner of representing properties of the individuals (Allen & Yen, 2002:2). Assigning numbers to such properties must be made in accordance with particular rules, the adequacy of which will have an influence on the adequacy of the scores attained (Delpont, 2002:166). According to Crocker and Angina (1986:45), “the development of systematic rules and meaningful units of measurement for quantifying empirical observation is known as *scaling*”. This section will consequently describe the process of scale development. Within the social or behavioural sciences, psychometrics has evolved as a sub-discipline concerned with the measurement of psychological and social occurrences, and the typical measurement procedure used is the questionnaire (DeVellis, 1991:3). As previously stated, this research made use of a questionnaire to measure the attributes of graduates that make them employable.

The process of scale development can be a complex endeavour. Briefly, careful planning needs to go into the measure, items should be written and reviewed, and the preliminary version must be administered in order to establish the effectiveness of the items. Thereafter, the final items should be selected and the measure is administered to a representative sample in order to establish its validity and reliability. Lastly, guidelines for administration, scoring, and interpretation of scores are developed (Crocker & Algina, 1986:66; Foxcroft & Roodt, 2005:46-47). For the purposes of this research, the guidelines for developing measurement scales proposed by DeVellis (1991) were followed. The author describes eight steps to developing scales, which can be linked with discussions by Clark and Watson (1995), Crocker and Algina (1986), Delpont (2002), Foxcroft and Roodt (2005), Hensley (1999), and Rossiter (2002). These steps (DeVellis, 1991:51-90) and their application in this research are now described.

#### **4.4.1.1 Determine what is to be measured**

During this step, the construct should be defined in a tangible and distinct manner by making use of both existing and new theory so as to generate a sound conceptual basis. It requires researchers to clearly define the attributes of constructs that are abstract so as to ensure the inclusion of appropriate items important to the content domain (Worthington & Whittaker, 2006:813).

***Theory as an aid to clarity*** The construct to be measured should be rooted in substantive theories and the boundaries of the construct should be acknowledged so as to ensure that the content of the scale remains within the intended domain. If there are no theories that can be utilized as a framework in the research, a conceptual formulation must be outlined by the researcher before operationalizing the construct. Specifying a tentative theoretical model will serve as a guide to scale development (DeVellis, 1991). In this research, the Graduate Employability Model was developed based on extensive literature surrounding the employability construct.

***Specificity as an aid to clarity*** A scale may be set to relate to specific behaviours or constructs or to more general and global aspects. In other words, scales can be developed broadly or narrow relating to the situation to which they are relevant. The level of specificity or generality at which the construct will be measured should therefore be determined beforehand. The specificity of scales can differ along a variety of dimensions such as content domains (such as anxiety versus broad psychological adjustment), setting (such as questionnaires designed for certain work environments) or population (such as children versus adults) (DeVellis, 1991). In this research, the Graduate Employability Measure relates specifically to the graduate population in terms of the attributes extracted, but includes broad attributes (for example resilience) that can be relevant to the general population, both employed or unemployed.

***Being clear about what to include in a measure*** It should be clarified whether the construct to be measured is distinct from other constructs. The researcher should therefore determine what constructs or elements of the construct should be included and excluded in the measure, based on the purpose and goals of the measurement (DeVellis, 1991). There is very little evidence of measures of graduate employability, particularly in South Africa. The Graduate Employability Measure is based on a model that is distinct from the employability models of for example Van der Heijde and Van der Heijden (2006), as their model focus specifically on work-related constructs such as occupational

expertise, while the Graduate Employability Model and the resulting measure can be related to both working and non-working individuals.

#### **4.4.1.2 Generate an item pool**

The researcher should subsequently generate a large item pool for measuring the construct that is eventually decided upon. The ultimate aim is to obtain a pool of items that distinctly represent the construct in order for factor-analytic, data-reduction methods to provide a stable set of underlying factors which correctly reflect the construct of interest (Worthington & Whittaker, 2006:813). In this regard, items related to each dimension of the Graduate Employability Model were derived, when possible, from existing scales used in related research. Items were however modified to reflect the conceptual purpose of graduate employability within the career context. Items that are contextualised in this manner increases their predictive power (Fugate & Kinicki, 2008:509).

***Choose items that reflect the scale's purpose*** An item pool should be selected or created with reference to the scale's purpose. These items should be selected randomly from the universe of items pertaining to the construct. All the items that comprise a homogenous scale should reflect the underlying latent variable. According to DeVellis (1991:12) the latent variable refers to the underlying construct that a scale is planned to reflect, in this case graduate employability. It is latent as it is not directly observable, and it is variable since some aspect of it, for example its strength or magnitude, changes over time, place or people. In other words, the content of each item should principally reflect the construct of interest to the researcher. In this research, the contents of each item chosen to be included in the scale represent the underlying construct of graduate employability.

***Redundancy*** The researcher should rather be over-inclusive when generating the items of the scale as the researcher is endeavouring to reflect the underlying construct by developing a set of items that reveal the construct in various ways (DeVellis, 1991). The GEM questionnaire items were generated using this principle, as described in the paragraph below.

***Number of items*** It is standard to include more items in the initial pool than will be included in the final scale. Having many items, in fact, act as a type of insurance against poor internal consistency. A researcher can start with a pool of items that is three or four times as large as the items to be included in the final scale. When research reveals that many items are not necessary to obtain satisfactory internal consistency, the initial item pool may be as small as just twice the size of the final scale

(DeVellis, 1991). Faul and Hudson (in Delpont, 2002:194) assert that many authors contend that as scale length increases, so does the reliability of the scale. The authors warn, however, that the law of diminishing returns is applicable in that the gain in reliability is greater when one moves from one to ten items than when one moves from eleven to twenty items, and so forth. The authors suggest that unidimensional scales should not exceed forty items. In this research, the initial item pool consisted of 132 items, which were reduced to 56 items in the final questionnaire. These items measure multi-dimensional constructs.

**Characteristics of good and bad items** Researchers should avoid exceptionally lengthy items, consider the reading difficulty level, avoid double-barrelled questions and questions that use multiple negatives, and avoid ambiguous pronoun references (DeVellis, 1991). According to Delpont (2002:176) there are specific basic principles for formulating the questions of a questionnaire. These are: (a) sentences must be clear and brief and respondents must understand the vocabulary and style of the questions; (b) questions and response options must be clear and free from researcher bias; (c) every question must contain only one thought; (d) each question must relate to the purpose of the questionnaire; (e) the researcher must not assume that respondents will have knowledge about a subject and avoid abstract questions not applicable to the respondents' background; and (f) the sequence of questioning must be that of general, non-threatening questions first, and more sensitive, personal questions later. In this research, all the principles of good questionnaire design were taken into consideration when designing the final questionnaire.

**Positively and negatively worded items** Researchers have to decide how the items will be worded. Negatively worded items are items that signify low levels or even the absence of the construct to be measured, while positively worded items signify the presence of the construct. The aim of wording items both positively and negatively is generally to avoid acquiescence, affirmation or agreement bias but researchers should be aware of the disadvantages of this approach (DeVellis, 1991). It has been argued that the use of reverse-scored items may in fact reduce response bias (Price & Mueller, 1986). In the present research, all items were positively worded and a six-point Likert-type scale was used, which forces respondents to choose a specific option.

#### **4.4.1.3 Determine the format for measurement**

Babbie and Mouton (2001:239) assert that the format of a questionnaire, and the nature and wording of the questions asked, are equally important. The authors furthermore state as a general rule that the

questionnaire should be spread out and uncluttered. There are a great variety of formats for questions. This step should take place concurrently with item generation to ensure their compatibility. There are various types of scaling, including Thurstone scaling, Guttman scaling and Likert-type scales. According to DeVellis (1991:68), a Likert scale is one of the most generally used item formats; it entails items being presented in a declarative sentence followed by response options in which respondents must indicate their degree of agreement with the statement. Because scaled-response questions generate ordinal data it is preferable to other forms of questions such as open-ended questions, dichotomous questions and multiple-choice questions. A Likert-type scale is usually linked to a number of statements to measure attitudes or perceptions and researcher frequently use 5-point or 7-point scales (Struwig & Stead, 2001:94-95). A possible disadvantage of scaled questions is that it is difficult to get intervals exactly equal and individuals do not all assess the degree of difference between categories in a similar manner (Delpont, 2002:182).

In a study on the optimal number of response categories in rating scales, Preston and Colman (2000) found that on a number of indicators of reliability, validity and discriminating power, the two-point, three-point and four-point scales performed relatively inadequately, and indicators were significantly higher for scales with more categories (up to around seven categories). The authors moreover found that the internal consistency between the scales did not differ significantly, although test-retest reliability was apt to decrease for scales with more than ten response categories. Interestingly, respondents showed the highest preference for the ten-point scale, closely followed by the seven-point and nine-point scales (Preston & Colman, 2000:1).

There is some conflicting evidence on which type of Likert scale to use. Although the seven-point scales continues to be popular in light of research concluding that test-retest reliability and inter-item consistency is maximized with seven-point scales (Finn, 1972; Nunally, 1967; Ramsay, 1973), different findings have indicated that five-point scales have higher reliabilities (Jenkins & Taber, 1977; Lissitz & Green, 1975; McKelvie, 1978; Remmers & Ewart, 1941 in Preston & Colman, 2000). A major aspect to consider is whether to allow for a neutral opinion. Generally speaking, odd-numbered scales provide a neutral option, whereas even-numbered scales offer forced choice options for respondents.

In the current research, there was no interest in the neutral option and use was made of a six-point scale where respondents were forced to indicate the extent of their agreement or disagreement with the statements, with 1 representing *Never true for me* and 6 representing *Always true for me*. A six-point scale may compensate for central tendency as respondents are forced to make a choice one

way or the other. Moreover other researchers in the employability literature have made use of six-point scales (for example Van der Heijde and Van der Heijden, 2006). The choice of a six-point scale is also justified in light of a study comparing the quality of psychology test between five- and six-point Likert scales, where it was found that, as a whole, the six-point Likert had a greater trend of discrimination and reliability than the 5 point Likert scale (Chomeya, 2010).

#### **4.4.1.4 Have experts review the initial item pool**

The next step in the scale development process is to have the initial item pool reviewed by individuals who are knowledgeable in the content area and can assess item quality on a variety of dimensions. These experts can rate how applicable each item is to the construct to be measured, evaluate the clarity and conciseness of the items, and point out ways of tapping the construct that the researcher has not included, thereby maximizing the content validity of the scale (DeVellis, 1991). Grant and Davis (1997:269) contend that content validity is in fact a vital factor in instrument development as it focuses on whether items on an instrument satisfactorily measure a desired content domain. Worthington and Whittaker (2006:814) add that experts can also evaluate items for grammar, reading level, face validity and redundancy as well as offer suggestions for adding new items to the instrument and commenting on the the length of the instrument.

Drawing on the work of others, Grant and Davis (1997:269) propose that content validation is a thorough assessment involving a two-stage process, namely development and judgement-quantification. The former involves domain identification, item generation and instrument construction, whereas the latter involves asking a certain number of experts to evaluate the validity of items individually in addition to the instrument as a whole. The development stage has already been discussed. In selecting a panel of content experts it is important to consider relevant training, experience and qualifications.

After reviewing the various methods of eliciting content expert judgements, an approach based on Lawshe's (1975) quantitative approach to the content validity of items was chosen for the study. During this procedure each member of a content evaluation panel was presented with a set of test items and then had to specify independently whether the aspect measured by each item is essential, useful but not essential, or not necessary to measure the construct under investigation. The approach did not, however, pool the responses from the expert panel to establish a number demonstrating the "essential" for each item as Lawshe's (1975) approach specifies. Therefore no Content Validity Index

(CVI) was established. Instead, items were reviewed through a two-stage process. In the first stage, the relevance of the questionnaire was reviewed by a panel of four experts for initial validation. The questionnaire contained 131 items grouped under eight dimensions and the judges had to indicate whether each item was (a) essential, (b) useful but not essential, or (c) not necessary, and also whether it was (d) clear, or (e) unclear. Based on the responses indicating which items were not clear, which items could be discarded and which items should be rewritten, another (more refined) version of the questionnaire was sent to two experts for additional content evaluation. This more sophisticated questionnaire consisted of 64 items and the judges were again asked to indicate whether items were essential, or useful but not essential, and whether the item was clear or unclear. Based on this second review, items were rewritten and refined, and a total of 56 items were kept for inclusion in the final Graduate Employability Measure. The final Relevance Assessment Questionnaire that was presented to the two content experts is shown in Appendix A.

#### **4.4.1.5 Consider inclusion of validation items**

It might be necessary to include additional items in the questionnaire that will help in determining the validity of the final scale. The researcher might for example include a social desirability scale to detect tendencies to respond in an undesirable manner, or the researcher might decide to include items pertaining to the construct validity of the scale (DeVellis, 1991). Worthington and Whittaker (2006:814) contend that while it is possible to incorporate additional scales that might provide data about convergent and discriminant validity, it is recommended that researchers limit such endeavours at this stage of scale development, mainly to keep the questionnaire as short as is possible, in order to motivate participants to complete the questionnaire, and because of the possibility that items from other measures may affect participant responses and consequently obstruct the scale development process. The authors suggest that, while assessing convergent and discriminant validity is significant, it should occur later in the scale development process. Consequently no validation items were included in this exploratory study.

#### **4.4.1.6 Administer items to a development sample**

Following the decision regarding which construct-related and validity items to include in the questionnaire (including new items), the questionnaire should be administered to a large sample of subjects. It is important not to use a sample that is too small to avoid unstable patterns of covariation among items, and a sample that does not represent the population for which the scale is meant.

Sample sizes of at least 300 are generally satisfactory in most cases (Clark & Watson, 1995; DeVellis, 1991:78; Field, 2005:640; Worthington & Whittaker, 2006). In the current study, the questionnaire was administered to a sample of 272 individuals, which is close to the desirable sample size of 300.

#### **4.4.1.7 Initial item reduction**

Items should subsequently be evaluated to determine their appropriateness for the scale. The first quality that the researcher seeks out in a set of scale items is that they be highly intercorrelated (DeVellis, 1991). This can be determined by examining the correlation matrix. In the current study, initial factor analysis revealed that fourteen items had factor loadings less than 0.32 (Worthington & Whittaker, 2006:823) and/or loaded on more than one factor. These items were accordingly eliminated from further analyses. An investigation into the items after a second round of factor analysis revealed items that were satisfactorily intercorrelated and no items that increased the reliability of the scale if they are deleted. There were 42 items that were consequently retained after item analysis.

The items were subsequently subjected to exploratory factor analysis (hereinafter referred to as EFA). EFA is an exploratory technique used to generate theory (Henson & Roberts, 2006:395). It can logically be used in the development of new measures (Byrne, 2005:17), as in the case of this study. EFA evaluates the construct validity of an instrument during its preliminary development. The researcher can apply EFA to study the underlying dimensionality of the item set after developing the preliminary set of items. A large item set can consequently be grouped into meaningful subsets that gauge different factors. The main reason for utilizing exploratory factor analysis is that it permits the items to be related to any of the factors that underlie the responses of the research subjects. It is therefore easy for the test developer to identify items that do not measure the intended factor or that concurrently measure multiple factors. These items can then be eliminated from further consideration because they are poor indicators of the desired construct. The researcher can therefore determine the number of factors present in the instrument, the items that relate to each factor and whether the factors are correlated or uncorrelated (Worthington & Whittaker, 2006:807-808). Exploratory factor analysis was used to group the items into three final dimensions that were satisfactorily reliable, as described in Chapter 5.

**Sample size** An important aspect to consider when using EFA is sample size. When samples do not satisfactorily represent the target population, the factor structure of stability and generalizability is affected. The researcher must therefore ensure that the development sample is of appropriate size

because when all subjects are drawn from a particular source that shares the same characteristics, such as racial and age groups, even large samples will not satisfactorily control for the systematic variance that such characteristics generate (Worthington & Whittaker, 2006:816). In the current research, a sample size of 272 was obtained.

***Selection of a factor extraction model*** Two of the most common factor-extraction models are common-factors analysis (hereinafter referred to as FA) and principal-components analysis (hereinafter referred to as PCA). FA aims to understand the latent or unobserved variables that account for relationships between measured variables, whereas PCA aims to reduce the number of variables by generating linear combinations that retain as much of the original measure's variance as it can. The disadvantage of using the latter method (PCA) is that conclusions are limited to the sample collected and generalisation of the results can only be made when different samples are analysed that reveals the same factor structure (Field, 2005:629). If the purpose of the researcher is to comprehend the latent structure of a set of variables, the use of a common factor model such as principle axis factoring is preferred (Conway & Huffcutt, 2003:150). Worthington and Wittaker (2006:819) similarly suggest FA for the development of new scales. Since the purpose of this research is to determine the underlying structure of observed variables by unearthing common factors that influence the measured variables (Park, Dailey & Lemus, 2002:563), FA was deemed appropriate. With PCA, there is no attempt to interpret the resulting variables in terms of underlying constructs (Conway & Huffcutt, 2003:149), and it would therefore not be a good method to achieve the major purpose of this research. Gorsuch (1990) moreover maintains that if common FA generates superior results some of the time, and essentially comparable results the remainder of the time, there is not much reason to use PCA.

#### **4.4.1.8 Optimise scale length**

During this stage the researcher should have an item pool exhibiting acceptable reliability. Issues to consider are the effect of scale length on reliability and the effects of dropping "bad" items (DeVellis, 1991). Item analysis revealed an item pool consisting of 42 inter-correlated items with acceptable reliability and no item that would increase overall reliability by being omitted.

#### **4.4.2 RATIONALE AND PURPOSE OF THE GEM**

The Graduate Employability Measure is a self-rating questionnaire that measures the multidimensional construct of employability in working and non-working individuals. Employability is seen as a form of

dynamic adaptability that helps individuals identify and realize career opportunities in a proactive manner. Someone high in employability is therefore expected to easily adapt to the constantly changing world of work and as a result achieve success in his or her career. The aspects that influence individuals' active adaptability in the context of their career include factors such as career self-management drive, cultural competence, and career resilience. The GEM can be used within a career counselling context to empower students by making them aware of and providing them with choices on how to improve their employability and prepare for future work opportunities. Working to improve their employability may accordingly help graduates to prepare for an uncertain future and lead them to become attractive to employers.

#### 4.4.3 DIMENSIONS OF THE GEM

The GEM in its final form after exploratory factor analysis comprises 42 items and measures employability on three dimensions. Table 4.11 presents the dimensions of the GEM, a description of each dimension, and the items that the dimensions consist of.

**Table 4.11: GEM scale descriptions**

<b>GEM Subscale</b>	<b>Description</b>	<b>Items in subscale</b>
<b>Career Self-Management Drive</b>	Career self-management drive refers to a tendency to proactively manage one's career and to believe in one's ability to cope with demands in various contexts by regularly collecting career-related information; recognizing, understanding and managing emotions in oneself and others; continuously seeking feedback from others and using networks to promote career growth; setting career goals and action plans; and a preference for innovation and taking risks in exploiting opportunities that exist in the career environment.	1, 3, 5, 6, 7, 8, 9, 11, 26, 27, 29, 31, 34, 35, 37, 38, 39, 44, 51, 52, 53
<b>Career Resilience</b>	Career resilience is a personal attribute that facilitates a high degree of adaptability, an ability to take advantage of change, self-confidence, openness to new opportunities and contacts, self-reliance, and a belief in one's control over events regardless of adverse career circumstances.	12, 20, 21, 22, 23, 24, 25, 41, 42, 43, 45, 46, 47, 48, 49, 50
<b>Cultural Competence</b>	Cultural competence refers to a person's effectiveness and motivation to gain knowledge about and successfully work with people across different cultural groups.	13, 14, 15, 16, 17

#### 4.4.4 ADMINISTRATION OF THE GEM

The GEM is a self-administered questionnaire that takes approximately 10 minutes to complete. Clear instructions on how to complete the questionnaire are provided. Respondents are required to indicate the extent of their agreement with the statements on a scale from 1 to 6, with 1 representing *Never true of me*, 2 and 3 representing *Occasionally true of me*, 4 and 5 representing *Often true of me*, and 6 representing *Always true of me*. The GEM is scored by obtaining the means across all items of each factor. The minimum and maximum scores for each subscale that a person completing the GEM can obtain are presented in Table 4.12.

**Table 4.12: Minimum and maximum scores on the GEM**

Factors	Number of items	Minimum	Maximum
Career self-management drive	21	21	126
Career resilience	16	16	96
Cultural competence	5	5	30
<b>Total GEM</b>	<b>42</b>	<b>42</b>	<b>252</b>

#### 4.4.5 INTERPRETATION OF THE GEM

The GEM indicates individuals' self-perceptions regarding the extent of their employability as measured on three dimensions. The mean scores of each dimension are compared. Those dimensions with higher mean scores signify a greater preference than those with a lower mean score. The greater the mean scores on the GEM, the more employable one perceives oneself to be. Higher scores are likely to indicate individuals who are confident in their qualities that make them employable. The more negative individuals perceive themselves in terms of career self-management drive, cultural competence and career resilience, the less employable they are likely to be. The mean scores of the sample can also be compared to indicate the highest and lowest employability preferences on each dimension for the sample as a whole. Future research can standardize the GEM so that individual scores can be compared to a norm group so as to aid interpretation. Feedback can subsequently be provided to individuals regarding their employability and how to improve it. Table 4.13 presents the interpretation of the GEM in terms of high and low scores obtained in each dimension.

**Table 4.13: Interpretation of high and low scores on each dimension of the GEM**

Dimensions	High scores on dimension	Low scores on dimension
<b>Career self-management drive</b>	<ul style="list-style-type: none"> <li>Engages in a high degree of exploration in terms of who aspects regarding one's identity, strengths and limitations, job and career opportunities in the environment</li> <li>Regularly seeks feedback from others and uses this to advance one's career</li> <li>Have clear knowledge of what one needs to be successful in one's career and have formulated career goals and action plans on how to achieve them</li> <li>Belief in one's ability to effectively carry out such tasks</li> <li>Regularly networks with people that can benefit one's career</li> <li>Highly adaptive use of emotions in being able to recognise, understand and manage emotions in oneself and others</li> <li>A high preference for creativity, innovation and taking risks in taking advantage of job and career opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Ignore examining oneself to determine who one is and makes limited effort in exploring the environment for job and career opportunities</li> <li>Makes limited use of opportunities to ask for feedback so as to improve one's career</li> <li>Have limited knowledge of what one truly needs in terms of skills, values and attributes to be successful in one's career</li> <li>Have no clearly formulated career goals and action plans on how to achieve them</li> <li>Somewhat unsure of one's ability to succeed</li> <li>Does not engage in networking actions by building formal or informal social contacts that can benefit one's career</li> <li>Limited ability to recognise, understand and manage emotions in self and/or others</li> <li>Uninventive, somewhat unimaginative and risk averse when attempting to make use of job or career opportunities</li> </ul>
<b>Career resilience</b>	<ul style="list-style-type: none"> <li>Highly open and attentive to new contacts and new opportunities such as new career opportunities</li> <li>High self-confidence and positive self-esteem</li> <li>Attempts to reach goals through one's own independent efforts and relying on oneself</li> <li>A high degree of perceived control over events, even in the face of difficult career circumstances</li> <li>A high degree of ease with ambiguous or unstructured situations</li> <li>A high ability to adapt and take advantage of change</li> </ul>	<ul style="list-style-type: none"> <li>Career vulnerability– psychological fragility when confronted with less desirable career circumstances (London, 1983)</li> <li>Inattentive to new opportunities</li> <li>Low self-confidence and self-esteem</li> <li>Reliance on others to reach goals</li> <li>External locus of control, i.e. attributes events happening to them to things such as luck or the actions of others</li> <li>A low tolerance for ambiguity</li> <li>May have some difficulty in adapting to and capitalizing on change</li> </ul>
<b>Cultural competence</b>	<ul style="list-style-type: none"> <li>A high degree of general knowledge and knowledge structure regarding culture such as values and traditions, or the economic, legal and social systems of different cultures</li> <li>A high willingness and motivation to gain knowledge about and work in cross-cultural circumstances</li> <li>Successfully initiating and maintaining successful inter-cultural relationships and enjoying engaging in such actions</li> </ul>	<ul style="list-style-type: none"> <li>Have limited knowledge and knowledge structures about different culture</li> <li>May not understand the values and traditions of different cultures</li> <li>Limited motivation to gain knowledge about and operate in cross-cultural circumstances such as international assignments</li> <li>Ineffective in engaging and maintaining inter-cultural relationships and may not enjoy working with different cultures</li> </ul>

#### 4.4.6 RELIABILITY AND VALIDITY OF THE GEM

It is important to report the extent to which instruments used in the study have reliable and valid scores and whether the research design is valid (Struwig & Stead, 2001:130). The whole research process should accordingly be transparent and accurately described to ensure that evidence of rigour is present – that the data produced by the researcher in fact reflects the truth – and that the research community can scrutinize the results for its accuracy and generalizability. As the main purpose of this research was to develop and evaluate a measure of graduate employability, this section describes the various aspects of reliability and validity that were taken into account in reaching the objectives of the study.

##### 4.4.6.1 Reliability

Reliability refers to the probability that a particular measurement procedure will generate the same results if applied repeatedly to the same object (Babbie & Mouton, 2001:125). In a similar fashion, Bergh and Theron (2003:37) describe reliability as a “process or measurement repeated in various situations or by different persons [that] will provide more or less the same measurement results”. It is mainly concerned “not with what is being measured, but with *how well* it is being measured” (Delport, 2002:169). With regards to scores, reliability relates to the degree to which test scores are consistent, accurate or stable. It is very important to determine a test score’s reliability before establishing its validity (Struwig & Stead, 2001:130), since reliability is a necessary but not sufficient condition of validity (Salkind, 2006:118). In other words, the scores on a measure can be reliable but invalid, but the scores on a measure cannot be valid without being reliable first. Inadequate reliability will therefore lead to poor validity. It should be kept in mind that reliability does not only concern the scores on the measurement instrument, but the whole research process, that is, any factor during the planning and execution of the study.

Reliability is expressed as a correlation coefficient ( $r$ ) to demonstrate the effectiveness of a measurement. The correlation coefficient may range from -1 (signifying a perfect negative correlation) to +1 (signifying a perfect positive correlation). The higher the value of the correlation coefficient, the greater the interrelationship among variables (Reber & Reber, 2001:159). The reliability coefficient presents an approximation of the proportion of total variance that is systematic or “true” variance. For example, a reliability coefficient of 0.90 shows that 90 per cent of the variance in measurement scores is the result of systematic variance in the characteristic measured, while only 10 per cent is the result

of error variance (Cascio & Aguinis, 2005:136). There are various recommendations in the literature on what is regarded as an adequate reliability coefficient, but a score of 0.70 or more is generally considered sufficient (Bergh & Theron, 2003:75; Pallant, 2005:90).

Internal consistency reliability was utilised to determine the reliability on each of the subscales and the total scale of the GEM. Internal consistency involves the analysis of item variances and specifies the extent to which the various items on a measure are intercorrelated (Cascio & Aguinis, 2005:139) and are related to construct validity. The Cronbach alpha coefficients of each subscale ranged from 0.82 to 0.93 for the sample (N=272), which can be considered as very good.

#### **4.4.6.2 Validity**

Validity refers to the degree to which an empirical measure adequately reflects the real meaning of the concept under investigation (Babbie & Mouton, 2001:122). It denotes the extent to which the evidence supports the conclusions that are made from the scores on a measure (Cascio & Aguinis, 2005:156), but also refers to the degree to which the broader research design is scientifically sound or satisfactorily conducted (Struwig & Stead, 2001:136). The validity of the results of a measure should be understood within the context of the purpose of the study (Salkind, 2006:114), as an instrument may have a number of purposes that differ in scope, number and kind (Delpont, 2002:166). According to Brink (2006:159), determining whether an instrument truthfully measures what it is supposed to measure, given the context of its application, is referred to as instrument validity. When researchers are not convinced of the instrument's validity, they cannot be sure about what the results signify. It is therefore important to demonstrate evidence from previous research that specify the validity of the test scores for the sample being tested as well as provide additional evidence to this effect (Struwig & Stead, 2001:139). Since the measure will be a newly developed one, there is no previous research regarding its validity. The procedures by means of which the validity of measures are assessed or evaluated are referred to as validation (Ghiselli *et al.*, 1981:266). Validity in this study was ensured in terms of the following procedures:

**Face validity** Face validity is generally not regarded as a technical form of validity as it relates to whether an instrument measures what it appears to measure (Brink, 2006:160; Delpont, 2002:167; Foxcroft & Roodt, 2005:33). It is, however, a desirable characteristic of an instrument. If a measurement instrument does not have face validity, the researcher may meet with resistance from respondents, for example they may not respond, or may respond dishonestly (Delpont, 2002:167;

Black, 1999:195). In this research, the instrument was structured in such a way so as not only to accurately measure graduate employability, but also to appear to do so. The instrument was subjected to intuitive judgments made by experts in the field, which was also useful with regard to determining clarity of content and readability of the instrument (Brink, 2006:160).

**Content validity** Content validity refers to the degree to which the items of the instrument represent the theoretical content domain of the construct to be measured (Struwig & Stead, 2001:139). It relates to a specific procedure in constructing an instrument rather than performing statistical measurements (Foxcroft & Roodt, 2005:33) or inferences regarding test scores (Cascio & Aguinis, 2005:159). According to Brink (2006:169), content validity is primarily used in constructing questionnaires and interview guides. In this research a literature review was conducted that demonstrated the main aspects of the variable to be incorporated in the content. The instrument was consequently presented to a panel of experts to judge the content validity of the instrument. In other words, the experts assessed each item of the instrument in terms of the extent to which the construct to be tested was represented and the instrument's general appropriateness for use. In this analysis the extent to which the instrument measures the employability construct was determined, as well as the extent to which it does not (Brink, 2006:160). The approach followed in this study was similar to Lawshe's (1975) quantitative approach to the content validity of items, described elsewhere in this chapter. It is additionally useful to evaluate the internal consistency reliability of the instrument since a higher internal consistency coefficient means that the items are measuring a specific construct, although it does not indicate whether the construct of interest is measured (Walsh & Betz, 1985 in Struwig & Stead, 2001:139). The internal consistency reliability was satisfactory as described above.

**Construct validity** Construct validity involves establishing the extent to which an instrument effectively measures the theoretical construct that it was intended to measure (Delport, 2002:167). This type of validity cannot be regarded as completely separate from the other procedures of establishing validity (content and criterion validity) but as being unified (Foxcroft & Roodt, 2005:36; Struwig & Stead, 2001:141). The process of establishing construct validity begins by understanding the meaning of the construct and hypothesising its relationship to other variables or constructs. An instrument portraying the construct is consequently developed and if the test's score is determined to be reliable, its association with other tests or variables is established (Struwig & Stead, 2001:141). It should be noted that the process of demonstrating construct validity of a measure is very complex and involves data from a variety of sources, and is not accomplished in a single study (Cascio & Aguinis, 2005:169). The establishment of construct validity is accordingly a dynamic process that is never

totally completed as new theories are developed and old ones discarded (Reber & Reber, 2001:781). There are various procedures for determining construct validity. For the purposes of this study, the procedures discussed above (that is, determining the internal consistency of the measurement procedure and expert judgement with regard to the content validity) will provide evidence of the construct validity of the instrument. In addition, factor analysis, more specifically exploratory factor analysis, was utilized to determine construct validity. Exploratory factor analysis is used to establish which variables are correlated with or independent from one another when it has not been decided a priori how many factors are present (Struwig & Stead, 2001:142). The results of the factor analysis revealed a sound measure of graduate employability that assesses respondents' employability perceptions on three dimensions. Exploratory factor analysis provided evidence of both construct and content validity.

Future research will need to explore the criterion-related validity of the GEM. Criterion validity entails multiple measurements and is ascertained by comparing scores on an instrument with an external criterion that is believed to measure the concept, trait or behaviour under investigation (Delpont, 2002:167). An instrument can accordingly be compared with another instrument that appears to be similar, or is known to be valid. The other measure is referred to as the 'criterion measure' (Brink, 2006:160-161; Struwig & Stead, 2001:139). Criterion validity was not established in this study as it was a pilot study and therefore comprised only the early phases of instrument development. A criterion measure that may be used to determine criterion validity in the future is the Psychological Career Resources Inventory of Coetzee (2008). Future research moreover has to investigate the discriminant validity of the GEM. Discriminant validity is established when an instrument measuring a particular construct has a low correlation with instruments that reflect different constructs (Struwig & Stead, 2001:142), on the grounds that measures of different constructs should produce differing results (Brink, 2006:162).

#### **4.5 DATA COLLECTION PROCEDURE**

The data collection procedure that was followed can be described as follows:

- An electronic questionnaire was sent out to a random sample of third year undergraduates and postgraduate which included information regarding the purpose of the study, instructions on how to complete the questionnaire, a biographical information section, and questions regarding their employability.

- The second phase of the data collection consisted of a telephonic survey in which professionally trained field workers asked respondents to respond to the questions verbally.
- Anonymity and confidentiality of all responses were ensured.
- Responses were gathered and captured using the BMDP (1993) Statistical Software and the SAS (2010) Statistical Package.

## **4.6 DATA ANALYSES**

All data collected from respondents were quantitative and were captured electronically from the returned emails and telephonic survey. A codebook was created, which is a document that describes the position of variables and records the code allocations of the attributes that make up the variables (Babbie, 2005:418). The codebook acted as a guide for locating variables and interpreting codes in the data file during data analysis (Babbie & Mouton, 2001:414). The responses of the participants were captured on an Excel spreadsheet which was exported to the SPSS program for data analysis. The questionnaires were scanned to determine whether they had been completed accurately and whether any questions were incomplete. Random quality checks were also done on the questionnaires completed through the telephonic survey to ensure data integrity and reliability. Data were screened for errors such as missing data, data entered incorrectly, asymmetrical distributions, and outliers (scores with extreme values) that may result in distorted statistics and incorrect conclusions) (Struwig & Stead, 2001:158). Data were screened by using the features of the SPSS program.

The study made use of quantitative data analysis, which can be defined as “the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect” (Babbie, 2005:414). The data were analysed by making use of exploratory factor analysis, descriptive statistics, and inferential statistics. This is described in more detail below.

### **4.6.1 EXPLORATORY FACTOR ANALYSIS**

Factor analysis refers to several statistical methods which identify a smaller number of dimensions, clusters, or factors in a greater set of independent variables or items (Reber & Reber, 2001:264). It is essentially a “data reduction” technique (Pallant, 2005:172) for identifying groups or clusters of variables. Factor analysis is used to understand the structure of a group of variables, to measure an

underlying variable by constructing a questionnaire, and to reduce a data set to a more convenient size while retaining as much of the original data as possible (DeVellis, 1991:92; Field, 2005:619). Factor analysis is used extensively by researchers that develop and evaluate tests and scales since a large quantity of individual scale items and questions can be reduced and refined to form a smaller number of sound subscales (Pallant, 2005:172). Factor analysis was deemed appropriate for the study as its purpose was to develop and assess a scale that measures the underlying construct of employability. More specifically, exploratory factor analysis (EFA) was used as the study explored the interrelationships among variables at the early stages of research into the topic.

#### **4.6.2 DESCRIPTIVE STATISTICS**

Descriptive statistics provide statistical summaries of data in order to provide a general, logical and straightforward picture of a large amount of data (Struwig & Stead, 2001:158). Prior to many of the statistical analyses such as correlations, it is important to determine whether any of the assumptions of these tests are not violated, which involves obtaining descriptive statistics on the variables, including the mean and the standard deviation (Pallant, 2005:49). In the current study the descriptive statistics used for biographical variables were frequencies. Frequencies indicate how many individuals gave each response, for example how many males and how many females (Pallant, 2005:49). Frequencies were used to indicate employment status, job level, race, age, gender, qualification level and marital status. The descriptive statistics used for the employability variables were the alpha correlation coefficients, the means and the standard deviations.

The reliability of the study's newly developed scale was assessed by investigating its internal consistency, or the degree to which the various items of the measure are intercorrelated (Cascio & Aguinis, 2005:139). This was done to ensure that the scale measures the intended construct of employability and is therefore a valid measure of employability, as well as to ensure that the study had generated results that are statistically and practically significant. (Thompson, 2003:5). The most frequently used estimate of internal consistency is Cronbach's alpha coefficient. The Cronbach alpha coefficient of a scale should ideally be above 0.7 (Pallant, 2005:90). Hensley (1999:351) contends that a cut-off of 0.60 is supported by research as satisfactory for new scale development attempts. Internal consistency estimates are advantageous at a practical level in that they require that only one measure is administered at one time (Thompson, 2003:10).

The scores for each factor were calculated by determining the mean across the scores of the individual items that make up each factor.

The relationship between the different factors of the GEM was investigated using the Pearson product-moment correlation coefficient, which indicates the strength and the direction of the relationship between different variables. These correlations specify the extent to which the different dimensions of the GEM are related, in other words, whether the factors are measuring a similar underlying construct.

#### **4.6.3 INFERENCE STATISTICS**

Inferential statistics are utilized to infer observations regarding a population from the sample that was drawn (Salkind, 2006:165). In other words, inferences can be made about the characteristics of the population, based on the sample that was drawn from that population. Inferential statistics can accordingly be used to generalise findings from the sample to the larger population (Struwig & Stead, 2001:159). Inferential statistics were used to compare different groups in terms of age, gender, race, marital status, job level, employment status and qualification level and their preferences on the GEM. Various studies have examined the relationship between socio-demographical variables and employability (for example McArdle *et al.*, 2007; Van der Heijden, De Lange, Demerouti & Van der Heijde, 2009; Van der Heijde & Van der Heijden, 2005). Comparisons between different groups on the employability variables were explored to provide the foundation for future studies.

Parametric statistics, specifically an analysis of variance (ANOVA), were used to determine whether there were significant differences between the age, race, marital status, educational, job level and employment status groups on their perceptions of employability.

#### **4.7 CHAPTER SUMMARY**

This chapter investigated the research paradigm, design and methodology. With regards to the latter, the discussion focused on the description and determination of the sample; the measurement instrument, including how it was developed, its rationale and purpose, its dimensions, administration and interpretation; the data collection procedure and; data analyses.

Chapter 5 reports, interprets and integrates the research findings of the study.

## CHAPTER 5: RESULTS AND DISCUSSION

The aim of this chapter is to report, integrate and interpret the empirical results of the research. Statistical analyses were carried out using the BMDP (1993) Statistical Software and the SAS (2010) Statistical Package. The results of the exploratory factor analysis and descriptive and inferential statistics are discussed in the sections that follow.

### 5.1 EXPLORATORY FACTOR ANALYSIS

In order to determine the factor structure of the Graduate Employability Measure, the 56 items of the GEM were subjected to Common Factor Analysis (hereinafter referred to as FA). As explained in Chapter 4, this method was chosen as the researcher was interested in understanding the underlying structure of a set of variables (Conway & Huffcutt, 2003:150) and it is regarded as preferable to PCA by many researchers (for example Costello & Osborne, 2005, Park *et al.*, 2002). More specifically, Maximum Likelihood (ML) factor analysis was performed with direct quartimin rotation.

There are various steps involved in FA, including assessing the suitability of the data for factor analysis, deciding on the number of factors to retain, and deciding which rotation method to use. These will be discussed next.

#### 5.1.1 SUITABILITY OF DATA FOR FACTOR ANALYSIS

Prior to performing FA, the suitability of data for factor analysis was assessed. An initial consideration that was taken into account for analysis purposes was sample size. The subject to variable ratio was 5:1, which is acceptable (Kass & Tinsley, 1979), while the sample size came close to the recommended 300 cases for factor analysis and all communalities exceeded 0.5, which indicated that the sample size was adequate (Tabachnick & Fidell, 2001:640; Worthington & Whittaker, 2006:817). The communality is a measure of the proportion of variance that is explained by the factors that are extracted (Field, 2005:630). The Kaiser-Meyer-Olkin measure of sampling adequacy (hereinafter referred to as KMO), which is the ratio of the squared correlation between variables to the squared partial correlation between variables, is another method of determining whether the sample size is sufficient. Values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are very good and values above 0.9 are superb (Kaiser, 1974). In the present study, the KMO statistic was 0.926 (superb). Bartlett's test of sphericity tests the null hypothesis that the original correlation matrix is an identity matrix. Factor analysis requires some relationships

between variables and if the R-matrix was an identity matrix then all correlation coefficients would be zero. Bartlett's test should therefore be significant ( $p < 0.05$ ) to indicate that there is some relationship between the variables. In this case, Bartlett's test of sphericity yielded a statistical approximate chi-square ( $p < .000$ ) and factor analysis is therefore appropriate (Field, 2005:652). The factorability of the correlation matrix is therefore supported. The KMO and Bartlett's Test results are presented in Table 5.1 below.

**Table 5.1: KMO and Bartlett's Test of Sphericity**

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</b>	0.926
<b>Bartlett's Test of Sphericity:</b>	
Approx. Chi-Square	6546.066
Degrees of Freedom	861
Significance	0.000

Factor analysis moreover necessitates variables that correlate fairly well, but not perfectly. Any variables that do not correlate with any other variables or that correlate very highly with other variables ( $R > 0.8$ ) should be eliminated (Field, 2005:641). Tabachnick and Fidell (2001) moreover recommend that if few correlations above 0.3 are found, factor analysis may not be appropriate. The Correlation Matrix (or R-Matrix) was investigated and revealed many correlations above 0.3. All questions moreover correlated fairly well with all other questions and none of the correlation coefficients were perfectly correlated, indicating that multicollinearity was not a problem.

An investigation of the frequency of responses on each item indicated that the sample tended to respond by choosing the highest extreme (i.e. option 6) on most items and this may have an influence on the items' groupings on the factors. It may be that the sample was motivated to give what they perceived as the best answers, given that this study was part of a larger 'graduateness' study. Future research may obtain different frequencies of responses from another sample.

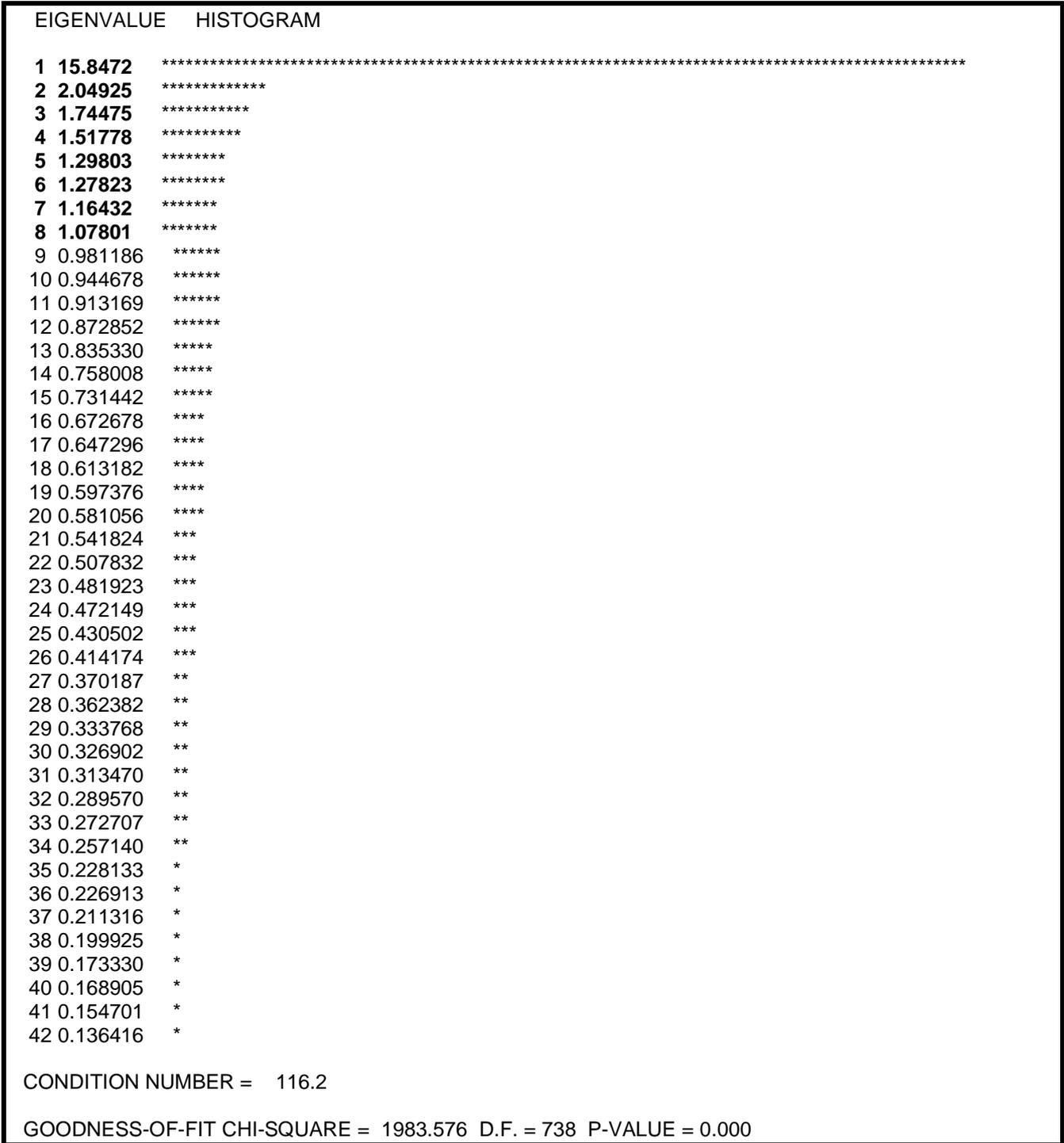
### 5.1.2 FACTOR RETENTION

Conway and Huffcut (2003:151) suggest that available options for factor retention include Kaiser's (1974) rule, which stipulates that factors with eigenvalues greater than one should be retained; the scree test (Cattell, 1966); parallel analysis; a priori theory; and retaining the number of factors that provide a high proportion of variance accounted for or that give a solution that is the most

interpretable. It is suggested that a combination of techniques be used since no particular technique has been revealed to be highly accurate over an extensive range of conditions in pinpointing the number of factors to retain (Conway & Huffcut, 2003:152).

Principal Factor Analysis revealed the presence of thirteen factors with eigenvalues greater than one. The histogram of eigenvalues of the unaltered correlation matrix for the first round of exploratory factor analysis is presented in Figure 5.1. Even though the Kaiser criterion is one of the most commonly used methods to decide on how many factors to retain, there are some problems associated with this method. Drawing on the work of others, Hayton, Allen and Scarpello (2004:193) put forth that the Kaiser rule is intended as an upper bound for the number of factors to be retained, although in practice it is frequently used as the standard to decide on the precise number of factors. The criterion may furthermore overestimate the number of factors, and the rule may be somewhat arbitrary because it divides factors with eigenvalues just above and just below one. The thirteen factors with eigenvalues greater than one did not provide a meaningful solution as some factors only contained one or two items, and the groupings did not make theoretical sense. According to Costello and Osborne (2005:5), a factor with less than three items is generally weak and unstable, while five or more strongly loading items are desirable and indicate a solid factor. Other methods of determining factor retention were therefore also explored.

The scree test involves examining the graph of the eigenvalues and searching for the natural break in the data where the curve evens out (Costello & Osborne, 2005:3). Catell (1966) recommends retaining factors above the break as these factors contribute the most to the explanation of the variance in the data set (Pallant, 2005:175). An examination of the histogram in Figure 5.1 reveals a break after the fourth factor and therefore indicates that four factors should be retained.



**Figure 5.1: Histogram of eigenvalues after exploratory factor analysis**

Another method to decide on how many factors to retain is parallel analysis, which involves comparing the size of the eigenvalues with those obtained from a randomly generated set of the same size (Pallant, 2005:175). Parallel analysis entails constructing a number of correlation matrices of random variables derived from the same sample size and number of variables in the real data set. The first observed eigenvalue is compared to the first random eigenvalue, the second observed eigenvalue is compared to the second random eigenvalue and so forth (Hayton *et al.*, 2004:194). Only those eigenvalues that exceed the corresponding values from the random data set are retained (Pallant, 2005:175). For this purpose, the Monte Carlo program for Parallel Analysis was used (Watkins, 2000). Table 5.3 presents the systematic comparison between the eigenvalues obtained from factor analysis with the corresponding values from the random results generated by parallel analysis. Values larger than the criterion value from parallel analyses are retained, while those values less than the criterion value are rejected. As can be seen from the table below, this approach indicated three factors with eigenvalues greater than the corresponding criterion values for a randomly generated data matrix of the same size (56 variables X 272 respondents). It should be noted that aspects such as an increase in sample size, loadings, and the number of variables associated with a factor tend to improve the performance of parallel analysis (Crawford, Green, Levy, Lo, Scott, Svetina & Thompson, 2010:888).

**Table 5.2: Comparison of eigenvalues from factor analysis and corresponding criterion values obtained from parallel analysis**

Factor number	Actual eigenvalue from FA	Criterion value from parallel analysis	Decision
1	15.8472	2.0223	Accept
2	2.0493	1.9184	Accept
3	1.7448	1.8509	Accept
4	1.5178	1.7884	Reject
5	1.2980	1.7288	Reject
6	1.2782	1.6749	Reject
7	1.1643	1.6291	Reject
8	1.0780	1.5771	Reject

Based on the above, a decision was made to retain three factors. This was largely based on evidence in the literature indicating that parallel analysis is the most accurate method for determining the number of factors to retain (for example Zwick & Velicer, 1986) and the fact that three factors provided the most theoretically meaningful dimensions.

### 5.1.3 FACTOR ROTATION

In order to aid in the interpretation of the components, Direct Quartimin rotation, which is an oblique rotational method, was performed. In factor analysis there are two types of rotation methods, that is, orthogonal and oblique rotation. Orthogonal rotation is used when the set of factors that underlie a particular item set are known or assumed to be uncorrelated, whereas oblique rotations are used when the factors are known or assumed to be correlated (Worthington & Whittaker, 2006:819-820). The choice of rotation depends on whether there is a good theoretical reason to assume that the factors should be independent or related and also how the variables cluster on the factors before rotation (Field, 2005:636). It is proposed that oblique rotation should theoretically deliver a more precise and possibly more reproducible solution (Costello & Osborne, 2005:3). In fact, research by Fabrigar, Wegener, MacCallum and Strahan (1999) revealed that an oblique rotation resulted in a better-quality simple structure and consequently produced fewer cross-loadings than did varimax rotation for the same data. Conway and Huffcutt (2003:153) consequently argue that if oblique rotations at times generate superior solutions (as in when the constructs are in reality correlated), and the rest of the time generate basically equivalent solutions then there appears to be no reason not to use oblique rotation.

Oblique rotation, Direct Quartimin, was therefore chosen as it can be assumed that the factors are correlated when examining the Graduate Employability Model (e.g. proactivity can have an influence on career self-management and so forth), and it is a high-quality method to use. Three factors were specified and an initial inspection of the item loadings on each factor indicated that fourteen items, that is, items 1, 4, 10, 18, 19, 28, 30, 32, 33, 36, 40, 54, 55 and 56, had factor loadings of less than 0.32 (Worthington & Whittaker, 2006) and/or loaded highly on more than one factor. These items were accordingly eliminated from further analysis. A final round of factor analysis was conducted on the 42 remaining items and the results are presented in Table 5.3.

**Table 5.3: Final factor structure of the Graduate Employability Measure (N=272)**

Items	Factor 1	Factor 2	Factor 3
Q2: I know what skills I need to be successful in my career	<b>0.548</b>	-0.004	0.090
Q3: I regularly seek information regarding what a specific career involves	<b>0.641</b>	0.029	0.100
Q5: I actively seek feedback from others to make progress in my career	<b>0.378</b>	0.224	-0.020
Q6: I have clearly formulated career goals and action plans on how to achieve them	<b>0.539</b>	0.170	0.057
Q7: I know what I must do to make a success of my career	<b>0.577</b>	-0.021	0.192
Q8: I know what I want to accomplish in my career	<b>0.640</b>	-0.008	0.018
Q9: I can easily establish and maintain interpersonal relationships	<b>0.379</b>	0.170	0.002
Q11: I have built a network of friendships with people that can advance my career	<b>0.474</b>	0.145	0.161
Q26: I am confident that I can successfully carry out my plans	<b>0.667</b>	-0.064	0.026
Q27: I generally persist in a difficult task and do not easily give up	<b>0.869</b>	-0.170	-0.045
Q29: I generally know what emotions I am feeling	<b>0.583</b>	0.054	0.086
Q31: I can easily understand why I feel a certain way	<b>0.373</b>	0.167	0.147
Q34: I know how to control my own emotions	<b>0.554</b>	0.029	0.127
Q35: I find it easy to disarm an emotionally explosive situation	<b>0.371</b>	0.146	0.164
Q37: I enjoy discovering original solutions to tasks	<b>0.334</b>	0.212	0.168
Q38: It is essential to regularly seek out new ways of doing things in my career	<b>0.747</b>	-0.094	0.043
Q39: I am generally willing to take risks	<b>0.435</b>	0.143	-0.003
Q44: I continuously look into new business opportunities	<b>0.386</b>	0.242	0.210
Q51: I continuously seek out improved ways of doing things	<b>0.567</b>	0.171	-0.003
Q52: I pay a great deal of attention to regularly develop myself	<b>0.736</b>	0.137	-0.129
Q53: I regularly keep up with the latest development concerning my type of job or career	<b>0.605</b>	0.230	-0.128
Q12: I can use my networks to find new job opportunities	0.145	<b>0.273</b>	0.191
Q20: I am capable and worthy compared to others	0.034	<b>0.605</b>	0.030
Q21: I have many good qualities	-0.015	<b>0.817</b>	-0.090
Q22: I take responsibility for my decisions	-0.043	<b>0.675</b>	-0.030
Q23: I am responsible for my own successes and failures in my career	0.212	<b>0.397</b>	-0.095
Q24: When I achieve something, it is because of my own effort	0.147	<b>0.499</b>	-0.089
Q25: When I attempt something I am usually successful	-0.060	<b>0.371</b>	0.118
Q41: I enjoy working independently to reach my goals	0.158	<b>0.556</b>	-0.087
Q42: I am comfortable in uncertain situations	-0.131	<b>0.600</b>	0.213
Q43: I like to make my own decisions	0.100	<b>0.489</b>	-0.002

Q45: I adapt easily to changes in my environment	0.164	<b>0.458</b>	0.180
Q46: I anticipate and take advantage of changes in my career environment	0.168	<b>0.483</b>	0.113
Q47: I am able to adapt to changing circumstances in my career	-0.009	<b>0.594</b>	0.163
Q48: I am able to persevere even in the face of difficult career circumstances	0.068	<b>0.433</b>	0.170
Q49: I can generally identify a good opportunity before other people can	0.163	<b>0.573</b>	0.136
Q50: I spend a lot of time enhancing my knowledge and skills to benefit my career	0.267	<b>0.451</b>	0.162
Q13: I know the customs of other cultures	0.005	0.140	<b>0.560</b>
Q14: I am confident in my ability to communicate inter-culturally	0.188	0.068	<b>0.553</b>
Q15: I understand the values and beliefs of other cultures	0.032	0.039	<b>0.721</b>
Q16: I can easily initiate and maintain relationships with people from different culture	0.166	-0.010	<b>0.719</b>
Q17: I enjoy working with people from different cultures	0.255	0.033	<b>0.391</b>
<b>Factor Statistics</b>			
<b>Eigenvalue</b>	15.847	2.049	1.745
<b>Total Variance Explained</b>	36.42	3.50	2.97
<b>Cumulative</b>	36.42	39.92	42.87
<b>Factor correlation matrix</b>			
<b>Factor 1</b>	1		
<b>Factor 2</b>	0.78	1	
<b>Factor 3</b>	0.639	0.626	1

As can be seen from the table, the final rotation accounted for 36.42% of the variance in factor one, 3.5% of the variance in factor two, and 2.97% of the variance in factor three. The three factors explain 42.87% of the total variance of the measure. The factors presented in Table 5.3 are based on the final rotated pattern matrix for the sample.

In terms of Factor one, 21 items were empirically confirmed as loading onto a single factor with factor loadings ranging from 0.33 to 0.87 and a mean loading of 0.54, which can be considered good. The original items intended to measure career self-management drive were largely retained, but it seems that the items underlying career self-management drive expands to include not only self-, environmental and job opportunity exploration, feedback-seeking, and career goal and action plan formulation, but also sociability, self-efficacy, emotional literacy, entrepreneurial orientation and

proactivity. It also includes the concept of career identity in trying to understand who one is, including one's hopes, personality traits and values. Factor one accordingly includes the following elements:

- Self-, environmental and job opportunity exploration
- Feedback-seeking
- Career goals and action plan formulation
- Sociability
- Generalized self-efficacy
- Emotional literacy
- Entrepreneurial orientation
- Proactivity

Career self-management drive can consequently be described as follows: *Career self-management drive refers to a tendency to proactively manage one's career and to believe in one's ability to cope with demands in various contexts by regularly collecting career-related information; recognizing, understanding and managing emotions in oneself and others; continuously seeking feedback from others and using networks to promote career growth; setting career goals and action plans; and a preference for innovation and taking risks in exploiting opportunities that exist in the career environment.*

With regard to Factor two, 16 items empirically loaded onto a single factor, with factor loadings ranging from 0.37 to 0.82. Item 12, however, had a loading of 0.27 but was retained because of its theoretical contribution to the underlying construct of career resilience. The mean factor loading was 0.52, which can be considered as good. Factor two measured a single factor consisting of various components of the original employability model. The factor includes the following elements:

- Being open to using different contacts to the advantage of one's career
- Positive self-esteem and self-confidence
- Internal locus of control
- Attempting to reach goals through one's own independent efforts (self-reliance)
- Being comfortable working in uncertain or unstructured situations; not seeing ambiguous events as a source of threat
- The ability to adapt to and take advantage of change
- Being open and attentive to new opportunities, such as a new career opportunity

Career resilience can accordingly be defined as: *a personal attribute that facilitates a high degree of adaptability, an ability to take advantage of change, self-confidence, openness to new opportunities and contacts, self-reliance, and a belief in one's control over events regardless of adverse career circumstances.*

With regard to Factor three, five items empirically loaded onto a single factor with factor loadings ranging from 0.39 to 0.72 and a mean factor loading of 0.59, which can be considered good. The items measuring this underlying construct are the same as originally intended in the theoretical model. Cultural competence accordingly consists of the following elements:

- General knowledge and knowledge structures regarding different cultures such as traditions and values
- The willingness to gain knowledge about and operate in cross-cultural circumstances
- Initiating and maintaining effective inter-cultural relationships

Cultural competence therefore refers to *a person's effectiveness and motivation to gain knowledge about and successfully work with people across different cultural groups.*

The factor correlation matrix indicated strong positive relationships between the different dimensions. The Pearson product-moment correlation coefficient specifies the extent to which the different dimensions of the GEM are related, in other words, whether the factors are measuring a similar underlying construct. As can be seen in Table 5.3, the correlations ranged from  $0.62 \geq r \geq 0.78$ . The mutually highly intercorrelated factors accordingly suggest that all the factors share common variance and may therefore measure a similar underlying construct, namely, employability. Future studies can analyse the discriminant validity of the GEM to explore the theoretical independence of the three dimensions. Discriminant validity analysis will determine whether the latent dimensions have enough uniqueness to make them independent indicators of employability.

From the above, it is clear that graduate employability consists of career self-management drive, career resilience, and cultural competence. The interpretability of the three-factor structure accordingly provides evidence of factorial validity.

## 5.2 DESCRIPTIVE STATISTICS

Descriptive statistics provide statistical summaries of data in order to provide a general, logical and straightforward picture of a large amount of data (Struwig & Stead, 2001:158). This section therefore describes the basic characteristics of the data in the study. Reliability analysis of the scales was conducted to determine whether the scale consistently reflects the construct that it purports to measure, in other words, to investigate its internal consistency. The results of the reliability and item analysis of the GEM are reported and interpreted in this section in addition to a description and interpretation of the means and standard deviations of the scales.

### 5.2.1 RELIABILITY AND ITEM ANALYSIS

Reliability analysis was conducted on each of the subscales and the total scale of the GEM in order to determine the reliability of the construct. One of the most commonly used indicators of internal consistency is Cronbach's alpha coefficient (Pallant, 2005:90). Alpha is a function of the mean correlation of all the items with each other and can be construed as a correlation coefficient (Whitley, 2002:127). DeVellis (1991:85) suggests alpha values of between 0.65 and 0.70 to be minimally acceptable, between 0.70 and 0.80 respectable and between 0.80 and 0.90 to be very good. Hair, Black, Babin, Anderson and Tatham (2006) similarly suggest that items with an alpha correlation of 0.70 and higher is adequate, although alpha correlations of 0.60 may also be acceptable in exploratory research. The Cronbach alpha values for each of the scales are indicated in Table 5.4

**Table 5.4: Reliability analysis for the GEM**

Factors	Cronbach alpha	Number of items in scale
Factor 1: Career Self-Management Drive	0.934	21
Factor 2: Career Resilience	0.900	16
Factor 3: Cultural competence	0.819	5

As can be seen from the table, the Cronbach alpha coefficients ranged from 0.82 to 0.93 for the sample (N=272) and can be considered very good. The item statistics for the GEM are presented in Table 5.5.

Table 5.5: Item statistics for the GEM (N=272)

Dimension	Item	Mean	Std Deviation	Item-total correlation	Corrected item-total correlation
Career Self-Management Drive	2	5.566	0.878	0.561	0.567
	3	5.445	1.008	0.685	0.689
	5	5.368	1.112	0.520	0.516
	6	5.456	1.019	0.681	0.678
	7	5.507	0.983	0.643	0.645
	8	5.540	0.967	0.618	0.621
	9	5.386	1.140	0.490	0.488
	11	5.283	1.192	0.653	0.655
	26	5.643	0.802	0.595	0.598
	27	5.548	0.866	0.675	0.680
	29	5.397	1.051	0.652	0.651
	31	5.500	0.905	0.559	0.563
	34	5.220	0.901	0.623	0.625
	35	5.353	1.097	0.554	0.557
	37	5.415	1.073	0.565	0.565
	38	5.423	1.035	0.670	0.672
	39	5.169	1.337	0.511	0.509
	44	5.404	1.123	0.674	0.670
	51	5.482	0.960	0.670	0.669
52	5.445	0.989	0.720	0.722	
53	5.382	1.097	0.662	0.657	
Career Resilience	12	5.055	1.407	0.440	0.440
	20	5.357	1.063	0.604	0.608
	21	5.537	0.932	0.710	0.720
	22	5.706	0.725	0.572	0.585
	23	5.665	0.816	0.464	0.471
	24	5.445	1.112	0.524	0.527
	25	5.408	0.975	0.375	0.378
	41	5.349	1.202	0.573	0.570
	42	5.129	1.309	0.603	0.596
	43	5.415	1.153	0.534	0.530

	45	5.434	1.029	0.659	0.652
	46	5.434	1.071	0.623	0.626
	47	5.467	1.027	0.655	0.657
	48	5.504	0.994	0.542	0.550
	49	5.401	1.026	0.723	0.724
	50	5.618	0.806	0.694	0.691
<b>Cultural Competence</b>	13	4.904	1.419	0.565	0.560
	14	5.357	1.039	0.629	0.634
	15	5.235	1.160	0.678	0.675
	16	5.404	0.994	0.735	0.744
	17	5.544	0.928	0.514	0.524

The item means ranged from 4.9 to 5.71, while the item-total correlations ranged from 0.38 to 0.74, which is highly acceptable. No items could be identified that would result in a significant increase in reliability should the item be deleted. The item analysis therefore implies that all items can be retained. All the subscales accordingly have adequate reliability and it can thus be said that the factors conform to the criteria for reliability.

### 5.2.2 DESCRIPTIVE STATISTICS FOR EACH FACTOR

The GEM scale requires respondents to mark their answers on a six point Likert-type scale, with 1 indicating that the statement is never true of the respondent, and 6 indicating that the statement is always true of the respondent. The GEM is scored by obtaining the means across all items of each factor. The means and standard deviations of the total scales are presented in Table 5.6. As can be seen from the table, career self-management drive obtained the highest mean ( $M=5.44$ ,  $SD=0.68$ ), followed by career resilience ( $M=5.43$ ,  $SD=0.67$ ) and cultural competence ( $M=5.29$ ,  $SD=0.85$ ).

**Table 5.6: Scale statistics for the GEM (N=272)**

GEM Dimensions	No of items	Mean	SD	Sum
Career Self-management Drive	21	5.44	0.677	1480
Career Resilience	16	5.433	0.668	1478
Cultural Competence	5	5.289	0.854	1439

The results accordingly suggest that career self-management drive was indicated as the total sample's dominant employability preference, while the sample obtained the lowest scores on cultural competence. The high mean scores as well as high reliability coefficient obtained on the career self-management drive factor suggests that the respondents in the sample perceive themselves as proactively managing their careers and believing in their own ability to cope with demands in a number of contexts. The lower scores on cultural competence suggests that the respondents in the sample are to a lesser extent motivated to gain knowledge about, initiate and maintain relationships with, and successfully work with people from different cultural groups than they are driven to manage their own careers and to be career resilient.

### **5.3 INFERENTIAL STATISTICS: TESTS FOR SIGNIFICANT MEAN DIFFERENCES**

Inferential statistics are utilized to infer observations regarding a population from the sample that was drawn (Salkind, 2006:165) and can be used to generalise findings from the sample to the larger population (Struwig & Stead, 2001:159). Inferential statistics can furthermore be divided into parametric and non-parametric statistics. Parametric statistics is a broad label for statistical procedures that calls for the sample data being analysed to be drawn from a population with a recognized form, usually the normal distribution. Parametric techniques also require that various assumptions be met before they may be used. Non-parametric statistics, on the other hand, are a class of statistical procedures for establishing relationships between variables without making assumptions regarding specific distributions or parameters, although each specific procedure is dependent on particular criteria. Parametric procedures are favoured over non-parametric statistics as they have more statistical power and are more apt to detect statistically significant effects (Reber & Reber, 2001:470,508-509).

A secondary objective of this study was to determine whether there are statistically significant differences in the means of the different subgroups of the sample regarding their employability preferences and gender, age, race, marital status, employment status, job level and qualification level. In order to determine whether there were any significant differences between the independent biographical variables and the dependent GEM dimensions, a between-groups analysis of variance (hereinafter referred to as ANOVA) was conducted. ANOVA compares the variance between the different groups due to the independent variable with the variance within each of the groups due to chance. An F-ratio is computed that signifies the variance between the groups divided by the variance within the groups, and a significant F test suggests that the null hypothesis can be rejected which

indicates that the population means are equal (Pallant, 2005:214). ANOVA was deemed appropriate as it reduces the probability of a type-I error since multiple comparisons increase the probability of rejecting the null hypothesis when it is actually true. The data was accordingly analysed by means of the SAS statistical programme (2010).

The number of respondents within each category of biographical variables was inadequate in some instances for meaningful data analyses to be conducted and the categories were accordingly collapsed. With regard to employment status, the category of self-employment was collapsed with the full-time employed category to form three categories (unemployed, part-time employed and full-time employed). With regard to job level, the senior executive management, middle management and first level management categories were collapsed to form the category of 'management' and a category 'no job level indicated' was created so as not to lose valuable data in the analyses. With regard to race, the Coloured, Indian and White race groups were collapsed to form an 'other' race group. With regards to marital status, the single, widowed and the separated/divorced category was collapsed to form a new 'single' category. Lastly, with regard to qualification level, the honours, master's and doctoral level categories were collapsed to form the 'postgraduate' category.

In order for the data to comply with the ANOVA assumptions for normality and homogeneity of variance, a normal Blom transformation (SAS, 2010) was conducted. The descriptive statistics and comparisons between the biographical variables of gender, age, employment status, job level, race, marital status and qualification level and the GEM dimensions are presented in Table 5.7. In order to determine whether the differences between groups were significant at the 0.05 level, ANOVA was conducted and the results are presented in Table 5.8. With regard to the first dimension, there was a statistically significant difference at the  $p < 0.001$  level between the career self-management drive scores for males ( $M=5.17$ ,  $SD=0.73$ ) and females ( $M=5.61$ ,  $SD=0.59$ ) [ $F(1,253)=12.96$ ,  $p=0.00$ ]. The effect size, calculated by means of eta squared, was 0.05, which can be considered a small effect size (Cohen, 1988). There was also a statistically significant difference at the  $p < 0.05$  level between the career self-management drive scores for the two qualification groups [ $F(1, 253)=5.30$ ,  $p=0.02$ ] with final year undergraduates ( $M=5.51$ ,  $SD=0.67$ ) obtaining higher mean scores than postgraduates ( $M=5.13$ ,  $SD=0.66$ ). The effect size was 0.02 indicating a small effect (Cohen, 1988).

**Table 5.7: Descriptive statistics of the biographical variables and the GEM dimensions (N=254)**

Biographical variable	n	Career Self-management Drive		Career Resilience		Cultural Competence	
		Mean	SD	Mean	SD	Mean	SD
<b>Gender:</b>							
Female	159	5.610	0.589	5.593	0.606	5.414	0.83
Male	95	5.168	0.723	5.211	0.694	5.135	0.843
<b>Age:</b>							
25 years and younger	32	5.503	0.589	5.375	0.651	5.294	0.772
26-40 years	150	5.424	0.692	5.422	0.683	5.377	0.788
41 years and older	72	5.467	0.687	5.543	0.631	5.178	0.974
<b>Employment status:</b>							
Unemployed	84	5.582	0.630	5.49	0.738	5.383	0.875
Part-time employed	57	5.619	0.631	5.656	0.531	5.481	0.758
Full-time employed	113	5.258	0.69	5.317	0.643	5.168	0.846
<b>Job level:</b>							
Management	59	5.115	0.675	5.156	0.637	5.044	0.827
General Staff	72	5.413	0.71	5.468	0.619	5.314	0.8
Independent contractor	38	5.749	0.462	5.821	0.317	5.595	0.752
No job level indicated	85	5.568	0.640	5.474	0.748	5.362	0.891
<b>Race:</b>							
African	224	5.484	0.666	5.476	0.668	5.347	0.834
Other	30	5.160	0.697	5.254	0.620	5.027	0.882
<b>Marital status:</b>							
Single	140	5.482	0.696	5.451	0.687	5.357	0.850
Married	114	5.401	0.652	5.448	0.639	5.251	0.837
<b>Qualification level:</b>							
Final year undergraduate	214	5.506	0.665	5.529	0.629	5.404	0.810
Postgraduate	40	5.126	0.657	5.028	0.704	4.805	0.853

**Table 5.8: ANOVA results of the biographical variables and GEM dimensions (N=254)**

Variable	DF	F Value	Sig.	Partial Eta Square
<b>Factor 1: Career Self-management Drive</b>				
Gender	1	12.96	0.000	0.051
Age	2	0.61	0.544	0.005
Employment status	2	0.46	0.631	0.004
Job level	3	0.61	0.611	0.008
Race	1	1.84	0.177	0.008
Marital status	1	0.00	0.98	0.000
Qualification level	1	5.30	0.022	0.021
<b>Factor 2: Career Resilience</b>				
Gender	1	16.71	0.000	0.065
Age	2	0.37	0.689	0.003
Employment status	2	0.51	0.602	0.004
Job level	3	1.37	0.254	0.017
Race	1	0.00	0.973	0.000
Marital status	1	0.45	0.501	0.002
Qualification level	1	10.98	0.001	0.043
<b>Factor 3: Cultural Competence</b>				
Gender	1	4.19	0.0418	0.017
Age	2	1.14	0.3201	0.009
Employment status	2	1.01	0.3673	0.008
Job level	3	0.68	0.5677	0.008
Race	1	0.10	0.7538	0.000
Marital status	1	0.18	0.6739	0.001
Qualification level	1	8.64	0.0036	0.035

With regard to the second dimension, there was a statistically significant difference at the  $p \leq 0.001$  level in the career resilience scores for gender [ $F(1,253)=16.71$ ,  $p=0.00$ ], with females ( $M=5.59$ ,  $SD=0.61$ ) obtaining higher mean scores than males ( $M=5.21$ ,  $SD=0.69$ ). The effect size was 0.06, indicating a medium effect size. There was also a statistically significant difference in the career resilience scores for the two qualification groups [ $F(1,253)=10.98$ ,  $p=0.001$ ], with final-year undergraduates ( $M=5.53$ ,  $SD=0.63$ ) obtaining higher mean scores than postgraduates ( $M=5.03$ ,  $SD=0.70$ ). The effect size was 0.04 indicating a small effect (Cohen, 1988).

With regard to the third dimension, there was a statistically significant difference at the  $p < 0.05$  level in cultural competence scores for gender [ $F(1, 253) = 4.19, p = 0.04$ ], with females ( $M = 5.41, SD = 0.83$ ) obtaining higher mean scores than males ( $M = 5.14, SD = 0.84$ ). The effect size was 0.02, indicating a small effect (Cohen, 1988). There was also a statistically significant difference in cultural competence scores for qualification level [ $F(1, 253) = 8.64, p = 0.004$ ], with final year undergraduates ( $M = 5.40, SD = 0.81$ ) obtaining higher mean scores than postgraduates ( $M = 4.81, SD = 0.85$ ). The effect size was 0.04, indicating a small effect (Cohen, 1988).

Based on the above, the results suggest that women, to a larger extent than men, tend to be proactively involved in career management activities such as determining the skills needed to be effective in various careers, seeking feedback from others, and formulating career goals and action plans and also believe in their abilities to successfully carry out such plans. These self-management activities extend to being entrepreneurially orientated in their preference for innovation and taking risks to identify opportunities in their career contexts, as well as recognising, understanding and managing emotions in themselves. The women in the sample also reported higher career resilience than men. More specifically, the women tended to have higher self-confidence and positive self-esteem, internal locus of control, a greater reliance on themselves, openness to new contacts and new opportunities to advance their career, as well as being comfortable in uncertain situations that would assist them to adapt to changing and/or difficult career circumstances. In addition, the women seemed to be better aware of and welcoming towards cultural differences between themselves and individuals from different cultures than the men in the sample. This usually comes about by interacting socially with different cultures and requires knowledge of cultural differences, the context of cultural interactions and being open to different behaviour (Thomas, 2006:90).

The results also indicated that the final-year undergraduates were more inclined to have a career self-management drive than postgraduates. The undergraduates additionally reported a higher tendency to be career resilient than postgraduates. Lastly the undergraduates reported a higher effectiveness and motivation to gain knowledge about different cultures and their values and traditions, as well as to successfully initiate and maintain effective inter-cultural relationships and to operate in cross-cultural circumstances.

## 5.4 SUMMARY OF RESEARCH FINDINGS

The main empirical objective of this study was to develop a measure of graduate employability within the South African context. A secondary aim was to investigate broad trends on differences between respondents with regard to the biographical variables of gender, age, race, marital status, employment status, job level and qualification level and respondents' perceptions of employability.

The exploratory factor analysis revealed a three-factor model, explaining 36.42%, 3.5% and 2.97% of the variance respectively. The final factor structure indicated some changes to the model as originally conceptualised. The following dimensions emerged after common factor analysis with direct quartimin rotation: career self-management drive, career resilience, and cultural competence. Overall, the GEM indicated satisfactory psychometric characteristics for the scale dimensions. Reliability analysis of the subscales of the GEM indicated very satisfactory alpha values, which implies that the scale dimensions of the GEM have satisfactory internal consistency and measure the same underlying construct, i.e. employability. Strong, positive correlations between all the factors of the GEM suggest that all the factors share common variance, although future studies have to investigate discriminant validity among the dimensions to exclude the possibility of undue overlapping content. An examination of the mean item scores on each factor indicated that career self-management drive was the total sample's dominant employability preference, while the total sample scored the lowest on cultural competence.

With regard to inferential statistics, analysis of variance was used to determine whether there were any significant differences between the independent biographical variables and the dependent GEM factors. It should be noted that the sample consisted predominantly out of single African females in the age category of 26 to 40 years that are employed full-time as general staff in the business management industry and are final-year undergraduates.

In terms of the biographical variable of gender, there were statistically significant differences between males and females on all the GEM subscales, with females scoring higher on all the dimensions.

A comparison of preferences on the GEM and qualification level indicated statistically significant differences between final-year undergraduates and postgraduates, with final-year undergraduates scoring higher on all the GEM dimensions.

A comparison of age groups, race, marital status, employment status, and job level on the GEM dimensions indicated no statistically significant differences

## **5.5 CHAPTER SUMMARY**

This chapter reported and interpreted the findings of the development and evaluation of a measure of graduate employability and the investigation of differences between respondents with regards to biographical variables and their perceptions of employability. Results of exploratory factor analysis and comparisons between groups were presented, discussed and integrated.

Chapter 6 discusses the conclusions and limitations of the research, the implications of the research and recommendations for future research.

## CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The aim of this concluding chapter is to contextualise the research within the literature review and to draw final conclusions regarding the theoretical and empirical objectives of the study. The implications of the research for the academic community, industrial psychology, organisations and higher education are discussed, followed by the limitations of the research. Recommendations are accordingly made with regards to future studies on the topic and the chapter concludes with closing remarks regarding the research findings.

### 6.1 INTRODUCTION

Incessant changes in the organisational and work environment have had major implications for the way individuals have to work and the qualities that they need to possess in order to survive in the new volatile career context. It has increasingly become important for individuals to take on a highly flexible, adaptable and proactive approach towards managing their careers, and by implication, their employability. Being employable is especially relevant to people studying for degrees and graduates as employers seek graduates that display qualities that will enable them to 'hit the ground running' in delivering value to the company and to stay abreast of the latest development in the career environment. Despite the obvious significance of employability and widespread interest in the topic, it remains conceptually ambiguous (Harvey, 2001; McQuaid & Lindsay, 2005) and there is a lack of empirical studies that explain its foundation (Fugate *et al.*, 2004:16). Moreover, relatively few studies have attempted to construct a measure explicitly measuring employability and fewer still have focused on developing accurate measures to assess the employability of graduates in particular.

Given the importance of the construct to employees in general, and graduates in particular, the overall purpose of the study was to develop a measure of employability for graduates in the context of the new world of work. In order to develop such a measure, a conceptual model was constructed where an in-depth literature review provided direction in determining the variables that employability consists of. The principles of scale development were consequently applied in developing the measure, whereafter it was pilot tested. A secondary aim of the research was to investigate broad trends on how various groups differed on the employability dimensions according to the biographical variables of age, race, gender, marital status, educational level, job level, and employment status.

The final chapter of this study consequently draws conclusions regarding the achievement of the objectives of the study, the implications of the findings, the limitations of the research and recommendations for future research.

## **6.2 ACHIEVEMENT OF THE STUDY OBJECTIVES**

This section describes conclusions regarding the achievement of the study objectives. Conclusions will be drawn regarding the literature review, the empirical study and the thesis statement.

### **6.2.1 CONCLUSIONS REGARDING THE THEORETICAL RESEARCH QUESTIONS**

The theoretical aim of the study was to conceptualise employability, and particularly graduate employability, based on the implications of the new world of work. Discussions in Chapter 2 centred on trends in the contemporary world of work and the impact they have on individuals' careers. Secondly, the attributes needed to thrive in a changing career landscape were identified. Chapter 3 provided a discussion on the constructs that define and influence employability and specifically graduate employability. Lastly, graduate employability was conceptualised in a theoretical model.

With regards to the new world of work, various changes in the contemporary workplace were identified, including a large number of job losses, increased globalisation, technological advances, changes in organisational structures and designs, an increasingly diverse workforce, a higher focus on work–life balance and increased changes in the nature of work itself. With regard to the latter, the changing nature of work requires individuals to be particularly responsive to change, to be adaptable, to be entrepreneurial, to believe in their own capabilities and to have the capacity to interact with individuals from various functional areas and cultural groups.

The movement from traditional career paths towards non-traditional career paths has led to various emerging models of careers, such as the protean career and boundaryless career. These contemporary career models have their own requirements; for example the protean career requires individuals to be self-directed and values driven amongst others, while the boundaryless career requires individuals to generate and maintain relationships beyond the boundary of an individual organisation. These career models have a direct bearing on employability, as shown in Chapter 2.

Various qualities were consequently identified that will help individuals survive in the turbulent and unstable work and career environment. Aspects identified in Chapter 2 and Chapter 3 are a high need to be adaptable; to be self-aware; self-management actions such as goal setting and feedback seeking; to socialise and network with people that can expose them to job opportunities and advance their career; to be proactive by anticipating change; to be career resilient and consequently demonstrate a high degree of flexibility, adaptability and competence even in the face of adverse career situations; emotional intelligence; self-confidence; optimism; high self-esteem; internal locus of control and self-efficacy; cultural competence; and to be entrepreneurial. It was shown that individuals with these attributes are expected to proactively adapt and even capitalize on change and volatility and to be highly employable.

Chapter 3 provided a discussion on the employability construct, including its origin and development, its conceptual foundation, graduate employability, and various employability models. Many of the attributes that individuals need to possess to be employable were also emphasised in discussions of employability models. The Graduate Employability Model was conceptualised based on an extensive literature review. Employability within this context was defined as a psycho-social construct representing a combination of attributes (dispositions, values, attitudes and skills) that promote proactive adaptability in changing environments and enhance an individual's suitability for employment and the likelihood of obtaining career success. Adaptability is viewed as a key competency for career success (O'Connell *et al.*, 2008:248) and was viewed as the foundation of employability as conceptualised in this study. The criteria used to identify dimensions of employability, similar to the work of Fugate *et al.* (2004), were that it had to be supported by previous research associated with adaptability and it had to relate to the career context and career success. The Graduate Employability Model was consequently conceptualised as consisting of the following dimensions: (a) career self-management drive; (b) sociability; (c) cultural competence; and (d) personal dispositions for employability consisting of (i) career-related core self-evaluations, (ii) entrepreneurial orientation, (iii) career resilience, (iv) proactivity, and (v) openness to change.

## **6.2.2 CONCLUSIONS REGARDING THE EMPIRICAL RESEARCH QUESTIONS**

An empirical aim of the study was to develop a measure of employability, and specifically graduate employability, based on the theoretical conceptualisation of the construct. The guidelines for developing measurement scales as proposed by DeVellis (1991) were followed and after subjecting the questionnaire to subject-matter experts for review, 56 items were retained in the final

questionnaire. The items were based on previous research using similar constructs but adapted for use within the context of this study. The questionnaire was subsequently administered to a development sample so as to collect preliminary evidence of its psychometric properties. The data were collected by means of an electronic survey that was sent to a random sample of university students. The second phase of the data collection consisted of a telephonic survey in which professionally trained fieldworkers asked respondents to respond to the questions verbally. The final sample consisted of 272 respondents. Statistical analyses of the data involved exploratory factor analysis and comparisons between the biographical variables of the GEM by means of analysis of variance. Conclusions drawn in this respect are discussed next.

#### **6.2.2.1 Conclusions regarding exploratory factor analysis**

With regard to the exploratory factor analysis, the aims of the study were to determine how well the measurement items assessed the construct of employability and to determine the factor structure of the Graduate Employability Measure. Using common factor analysis and direct quartimin rotation, a three-factor model emerged. An investigation showed that 14 items had factor loadings lower than 0.32 (Worthington & Wittaker, 2006) or loaded highly on more than one factor, and these items were eliminated from further analyses. A final round of factor analysis was conducted on the 42 remaining items and revealed a structure with the first factor explaining 36.42% of the variance, the second factor explaining 3.5% of the variance and the third factor explaining 2.97% of the variance. The factors intercorrelated well and showed very good reliability. With regards to the latter, reliability analysis indicated Cronbach alpha coefficients that ranged from 0.82 to 0.93 for the sample (N=272), which can be considered very good. Item analysis indicated no items that improved the reliability of the scale should they be deleted. This all appears to indicate that the factors measure a similar underlying construct, that is, employability. The theoretical construct of graduate employability is compared to the empirical result after exploratory factor analysis in Table 6.1.

**Table 6.1: Comparison of the theoretical model and empirical result of the GEM**

Theoretical Model		Empirical Result	
GEM Subscale	Original description	GEM Subscale	New Description
<b>Career self-management drive</b>	Career self-management drive refers to a tendency to proactively manage one's career by regularly collecting career-related information so as to enhance knowledge of the self and the external environment, including the world of work.	<b>Career self-management drive</b>	Career self-management drive refers to a tendency to proactively manage one's career and to believe in one's ability to cope with demands in various contexts by regularly collecting career-related information; recognizing, understanding and managing emotions in oneself and others; continuously seeking feedback from others and using networks to promote career growth; setting career goals and action plans; and a preference for innovation and taking risks in exploiting opportunities that exist in the career environment.
<b>Cultural Competence</b>	Cultural competence refers to a person's effectiveness in understanding and effectively working with people across different groups.	<b>Cultural Competence</b>	Cultural Competence refers to a person's effectiveness and motivation to gain knowledge about and successfully work with people across different cultural groups.
<b>Personal disposition: Career Resilience</b>	Career resilience is a personal disposition that facilitates a high degree of adaptability, flexibility, self-confidence, and competence regardless of adverse career circumstances.	<b>Career Resilience</b>	Career resilience is a personal attribute that facilitates a high degree of adaptability, an ability to take advantage of change, self-confidence, openness to new opportunities and contacts, self-reliance, and a belief in one's control over events regardless of adverse career circumstances.
<b>Personal disposition: Openness to Change</b>	Openness to change refers to the extent to which individuals seek out new experiences and are willing to consider new ideas.		
<b>Personal disposition: Proactivity</b>	Proactivity refers to a person's disposition towards engaging in active role orientations and implies future orientated and self-initiated action to change and improve oneself or one's situation.		
<b>Personal disposition: Sociability</b>	Sociability refers to being open to establishing and maintaining social contacts and utilizing formal and informal networks to the advantage of one's career.		

<p><b>Personal disposition: Career Resilience</b></p>	<p>Career resilience is a personal disposition that facilitates a high degree of adaptability, flexibility, self-confidence, and competence regardless of adverse career circumstances.</p>
<p><b>Personal disposition: Entrepreneurial Orientation</b></p>	<p>Entrepreneurial orientation refers to a preference for innovation and creativity, a propensity to take risks, a need for achievement, tolerance for ambiguity, and a preference for autonomy in exploiting opportunities that exist in the career environment.</p>
<p><b>Personal disposition: Career-related core self-evaluations</b></p>	<p>Career-related core self-evaluations is a broad, higher-order trait consisting of (a) self-esteem, (b) locus of control, (c) generalized self-efficacy, and (d) emotional literacy, and relate to the basic evaluations that people make of themselves regarding their self-worth within the career context.</p> <p>Emotional literacy in this context is the adaptive use of emotions and refers to the extent to which individuals perceive themselves as able to recognize, understand and manage emotions in themselves and in other people.</p>

As can be seen from Table 6.1, there is a change from nine dimensions in the theoretical model to three dimensions in the empirical results after exploratory factor analyses. With regards to career self-management drive, the empirical results include the originally conceptualised concepts of self-, environmental and job opportunity exploration, feedback-seeking and career goal and action plan formulation, but also extend to include the concepts of generalized self-efficacy, sociability, emotional literacy, entrepreneurial orientation and proactivity. This is in line with the discussion of career self-management by Schreuder and Coetzee (2006:63), who describe career self-management as the ability to adapt to the speed at which change occurs and to prepare for the future through continuous learning and career planning, as well as to identify and obtain new skills and competencies that will permit one to capitalize on new career opportunities.

The inclusion of sociability within career self-management drive accordingly makes theoretical sense as it forms part of using networks to gain access to career opportunities (or social capital) and has been related to career-building skills (Bridgstock, 2009:38). With regard to emotional literacy, the inclusion of the concept within the employability model is in line with previous research that identified emotional literacy (Coetzee, 2008) and emotional intelligence (Pool & Sewell, 2007) as critical for individuals in order to reach their true potential to become employable. More specifically, emotional literacy can also directly be associated with career self-management as it has been associated with aspects such as career decision-making (Emmerling & Cherniss, 2003). Self-efficacy has been linked to exploration of the self and the environment (Taylor & Popma, 1990), applied to the process of

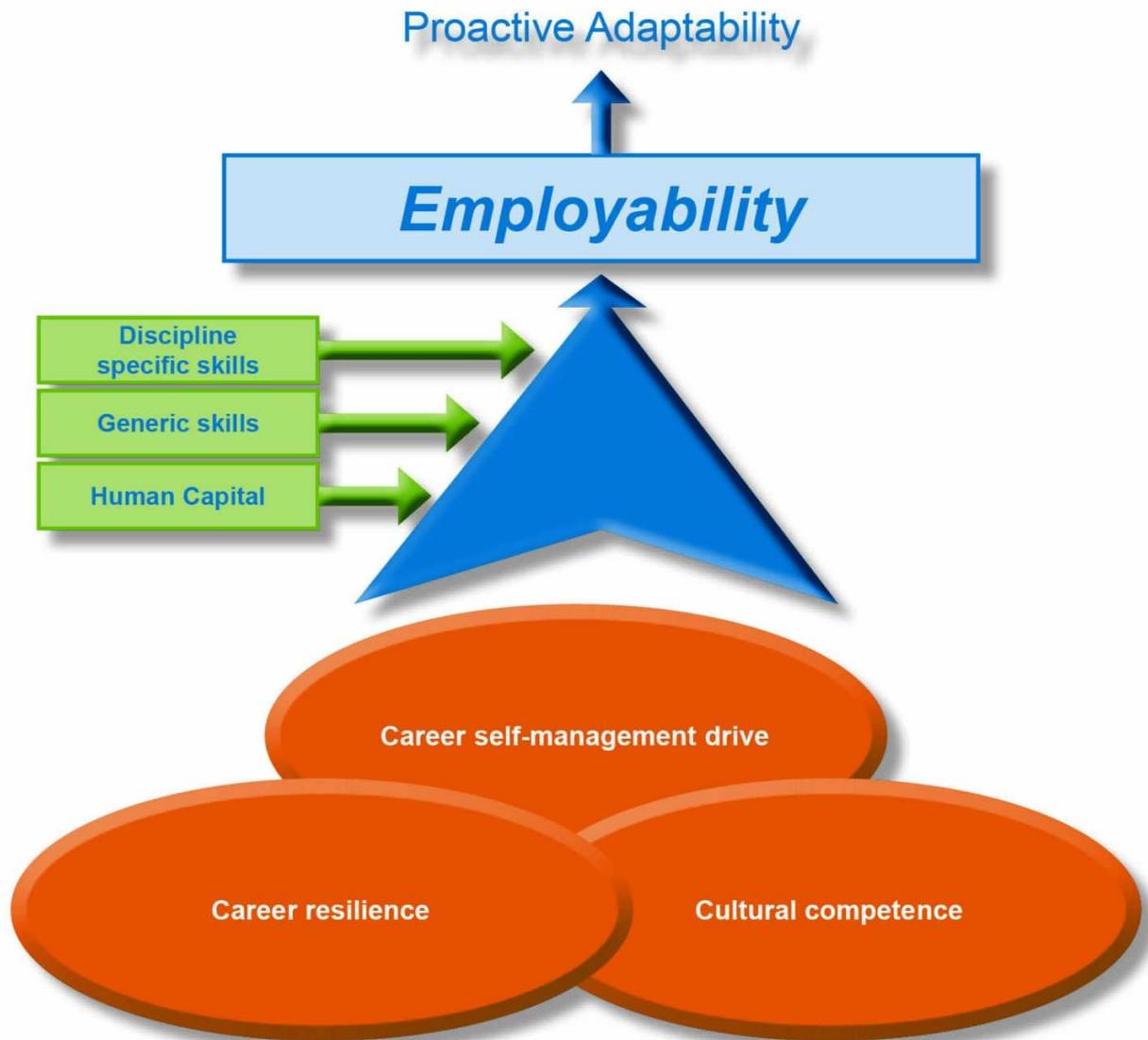
career decision-making (Betz, 2000), and found to be related to career development (Hackett & Betz, 1981) and accordingly forms an important part of career self-management drive. Crant (2000) has related proactivity to feedback-seeking, entrepreneurship, career management and career success, which emphasises its fit within the career self-management drive construct. This is supported by research that found proactive personality positively related to employability, networking and career-planning. With regard to entrepreneurial orientation, the concept of the entrepreneurial career itself relates to specifically choosing self-employment as a career option (Schreuder & Coetzee, 2006:349) thereby indicating a form of career self-management. Entrepreneurial orientation has moreover been associated with self-efficacy (Florin *et al.*, 2007), originality and innovation, feedback-seeking, long-term planning (McClelland, 1961), and proactively exploring the business environment for business opportunities (Chell, Haworth & Brearley, 1991), thereby indicating its association with career self-management drive.

The career resilience dimension extended to include not only self-confidence, adaptability and flexibility regardless of adverse career circumstances, but also positive self-esteem, internal locus of control, self-reliance (or attempting to reach goals through one's own independent actions), being open to new opportunities and contacts, being comfortable with ambiguous events, and being able to adapt to and take advantage of changes in the career environment. The inclusion of self-esteem within the career resilience factor is not surprising, given that resilient individuals have positive self-evaluations and are optimistic, show confidence in their capacity to handle challenges and have positive expectations about future events (Fugate & Kinicki, 2008:57). Career resilient individuals are moreover recognized by their self-confident behaviour (De Bruin & Lew, 2000:67), and amongst others are able to adapt to change, are positive about changing circumstances and are comfortable working with new and different people (London, in Van Vuuren & Fourie, 2000:15). Fourie and Van Vuuren (1998) also conceptualised career resilience as consisting of (a) belief in oneself, which incorporates the notion of internal locus of control towards managing the self and career, (b) a disregard for traditional sources of career success, (c) self-reliance, and (d) receptivity to change. This is to a large extent in line with the aspects that career resilience consists of within the context of this study.

With regard to the cultural competence dimension, the construct and items that it consists of as originally conceptualised remained unchanged after the empirical study.

The final model after exploratory factor analyses is depicted in Figure 6.1. Graduate employability accordingly consists of three broad factors, which represent a combination of attributes that combine

to promote proactive adaptability in changing environments and enhance an individual's suitability for employment and the likelihood of obtaining career success.



**Figure 6.1: The Graduate Employability Model after empirical results**

With regard to the descriptive statistics of each factor, career self-management drive obtained the highest mean ( $M=5.44$ ,  $SD=0.68$ ), followed by career resilience ( $M=5.43$ ,  $SD=0.67$ ) and cultural competence ( $M=5.29$ ,  $SD=0.85$ ). This suggests that the respondents in the sample perceive themselves as proactively managing their careers and believe in their own ability to cope with

demands in a number of contexts by collecting career-related information, continuously seeking feedback from others and formulating career goals and action plans, managing their own and others' emotions, as well as a tendency to be innovative and willing to take risks in taking advantage of new business opportunities that they may come across. The lower scores on cultural competence suggest that the respondents in the sample are less motivated to gain knowledge about, initiate and maintain relationships with, and successfully work with people from different cultural groups than they are driven to manage their own careers and to be career resilient.

The final conclusion that can therefore be drawn from the development and evaluation of the GEM is that the GEM is a holistic measure of the multidimensional construct of graduate employability comprising a three-factor model that has been proven to be a reliable and valid measure of graduate employability during the exploratory phase of its construction.

#### **6.2.2.2 Conclusions regarding comparisons of groups**

A secondary aim of the research was to investigate whether the biographical variables of gender, race, age, marital status, qualification level, educational level and employment status impact on employability preferences. Analysis of variance was conducted and the results indicated statistically significant differences between males and females and between qualification levels on all of the GEM dimensions. With regard to gender, the females in the study obtained higher mean scores than the males on all the dimensions of the GEM. These results are discussed next.

With regard to career self-management drive, the results suggest that women, to a larger extent than men, tended to be proactively involved in career management activities such as determining the skills needed to be effective in various careers, seeking feedback from others and establishing relationships that can advance their careers, formulating career goals and action plans, and also to believe in their abilities to successfully carry out such plans. These self-management activities extended to include being entrepreneurially orientated in their preference for innovation and taking risks to identify opportunities in their career contexts, as well as recognising, understanding and managing emotions in themselves and others.

These results are contrary to findings such as those of Rothwell, Jewell and Hardie (2009), who found no significant differences between self-perceived employability and gender, and findings by Sturges, Conway and Liefoghe (2010), who found no direct relationship between gender and any type of

career self-management activities. Women that want to progress in their careers are, however, expected to exercise a greater amount of effort to obtain similar career outcomes than their male counterparts, such as increasing their visibility at work, due to the fact that the career environment still favours male professionals to a large extent (Forret & Dougherty, 2004). Emmerik, Euwema, Geschiere and Schouten (2006) in fact found that women engaged in more formal and informal networking than men, while Coetzee (2008) found significant differences on the dimensions of social connectivity and emotional literacy of the Psychological Career Resources Inventory (PCRI), with women obtaining higher mean scores than men. The fact that women obtained higher scores may be attributed to factors such as having the necessary personal attributes that facilitate effective self-management as well as the motivation to engage in self-management activities to obtain similar career outcomes than men.

Drawing on the work of others, Leung and Clegg (2001:14) assert that the literature on gender differences and career resilience has emphasised lower adjustment for women due to factors such as lower self-efficacy and lower competitive achievement styles. The authors found a lower reported career resilience amongst female executives working in the public sector, although its importance was very clear to respondents, particularly for the younger executives. Coetzee and Schreuder (2008) moreover found that females seem to favour more secure and predictable work environments that value steady performance and employment. This is in contrast to the findings of this study, where the females in the sample reported a higher inclination towards career resilience than the males. More specifically, the female respondents in this study tended to have higher self-confidence and positive self-esteem, internal locus of control, a greater reliance on themselves, openness to new contacts and new opportunities to advance their career, as well as being comfortable in uncertain situations that would assist them to adapt to changing and/or difficult career circumstances. In line with this, Woodd (2000) argues that women tend to follow a career pattern characterised by flexibility, change, transferable skills and working in a part-time and temporary capacity. With regard to self-esteem and adaptability, the findings of this study correspond to those of Ferreira (2010), who found significant differences between females and males on the self-esteem and adaptability subcomponents of the PCRI, with females obtaining higher mean scores than males. This suggests that women with high self-esteem and a positive attitude towards adapting to changes in the environment are apt to better cope with difficult career circumstances and will be more open to new opportunities to advance their career.

The women in this study seemed to be better aware of and welcoming towards cultural differences between themselves and individuals from different cultures than the men. This usually comes about by interacting socially with different cultures and requires knowledge of cultural differences, the context of cultural interactions and being open to different behaviour (Thomas, 2006:90). In a study on the effectiveness of incorporating cultural competency training into undergraduate medical education, it was found that women were more apt to see the value of recognizing the patient's perspective for providing first class health care both before and after the intervention (Crosson, Deng, Brazeau, Boyd & Soto-Greene, 2004). These findings are additionally in line with those of Altshuler, Sussman and Kachur (2003), who found females to exhibit more intercultural sensitivity than males. It may be that women are more sensitive to view things from the perspective of a person from a different culture and to become involved in gathering knowledge about different cultures in an attempt to establish and maintain cross-cultural interpersonal relationships.

With regard to the differences between qualification levels on all the GEM dimensions, it was found that the final-year undergraduates obtained higher mean scores than the postgraduates. These results are discussed next.

The findings indicated that the third-year undergraduates were more inclined to have a career self-management drive than the postgraduates. These findings are to an extent in line with those of Coetzee and Schreuder (2008:60), who found that respondents at a first-year degree level showed a significantly higher preference for the career anchor of entrepreneurial creativity and accordingly seemed to be more achievement orientated than those with a degree and postgraduate level qualification. The authors attributed this to the fact that such individuals may be attracted to careers that offer them the prospect of challenging opportunities to develop and apply their creative abilities, such as creating new products. These first-year degree level individuals additionally appeared to be more conscious of and focused on the skills that they need in order to be successful at work. It is therefore possible that undergraduates are to a greater extent involved in career self-management activities as they are highly motivated to still develop their skills and talents in the workplace and set time aside to engage in activities such as discovering who they are and what they value.

It seems as though education is a necessary first step in career mobility and a willingness to transition and to effect change. This is supported by the findings of Perosa and Perosa (1983), who found that of those respondents in their sample who were in the process of transitioning, 80% had furthered their education, and of those respondents who had in actual fact produced a change, 50% had furthered

their education before doing so. The extent of education and qualification needed to adapt to change is however called into question, as the current study found that undergraduates reported a higher tendency to be career resilient than postgraduates. In other words, undergraduates reported a higher tendency to be open to using different contacts and new opportunities to advance their career, to have positive self-esteem, self-confidence and a belief in their control over events, a higher tendency to attempt to reach goals through their own efforts, to be at ease in uncertain and unstructured situations, and the ability to adapt and to take advantage of change. These findings may also fit in with those of Coetzee and Schreuder (2008), who found that those at a first year degree level are more likely to prefer challenges, risks and opportunities for innovativeness than those with degrees and postgraduate level qualifications. These findings may extend to include the notion of motivation and belief in one's own capability to deal with and capitalize on change and to cope with adverse career events.

Bridges (1994) asserted more than a decade ago that individuals have to examine their own attitude, and replace old rules – such as ‘the best jobs go to individuals with the best or highest qualifications’ – with new rules. According to the author the concept of a qualification is changing; where it used to denote degrees and formal certification, the new qualification is that individuals really have a desire to do the work, that they have the ability to do what the work requires, that they have the correct temperament for the kind of situation, and that they have any other resources and assets that the work requires. These, according to the author, are the most important qualifications in a rapidly changing work and career environment. Even though these assertions may overlook the continuing importance of education, which may in fact facilitate these other attributes, particularly when taking cognisance of the importance of the notion of continuous learning, it would seem that having a higher postgraduate qualification does not necessarily make individuals more resilient in their careers.

Lastly, final-year undergraduates within this study reported a higher motivation to gain knowledge about different cultures and their values and traditions, as well as to successfully initiate and maintain effective inter-cultural relationships and to operate in cross-cultural circumstances. This finding is in contrast to the finding by Holcomb-McCoy and Myers (1999), who found no statistically significant results between self-perceived multicultural competence and education level. The results of this study may relate to the finding that undergraduates are more career resilient than postgraduates and more likely to seek out challenges and entrepreneurial ventures. This may result in final year undergraduates being more motivated to investigate the economic, legal, and social systems of different cultures so as to explore the possibility of international assignments, for example. It may also

be that they are more open to new experiences and contacts and embracing change, which may increase their motivation and willingness to learn about and engage with individuals from different cultures.

Taking the above into consideration, it can be said that for this sample, female third year undergraduates were the most employable.

### **6.2.2.3 Conclusions regarding the thesis statement**

The thesis statement that sociability, career self-management drive, cultural competence, entrepreneurial orientation, proactivity, career resilience, openness to change and career-related core self-evaluations significantly reflect the construct of employability can partially be accepted, as the constructs and the items that they were composed of (except for openness to change) were represented within three main factors. A possible reason for the fact that all the openness to change items were eliminated is that the concept is already represented by items within the career resilience dimension and consequently loaded highly on more than one dimension.

## **6.3 IMPLICATIONS OF THE FINDINGS**

This research provides valuable insight into the attributes that individuals need in order to survive in the new world of work, and more specifically, the attributes needed to be employable. These results help to inform the conceptualisation of a largely theoretically ambiguous construct and moreover aid in developing a measure of employability that focuses on attributes that are applicable to a wide range of contexts. The development and evaluation of a measure of graduate employability is valuable in the South African context as few empirical studies have attempted to gauge employability. The results obtained from the Graduate Employability Measure established the existence of employability as a three-factor construct with satisfactory reliability and validity.

From an academic perspective, the elements that the final three GEM dimensions consist of provide a new perspective on what should be included in a measure of career self-management drive and career resilience in particular. For example, career self-management not only includes activities such as gaining awareness of one's strengths and limitations, gathering career information and formulating career goals and action plans, but also includes the attributes of emotional literacy, proactivity, entrepreneurial orientation and sociability.

From a career counselling and guidance perspective, the GEM can be used to empower graduates and employees by making them aware of the attributes that are important to be employable and the focus areas for increasing their employability. This will help them to adapt to an uncertain career environment and prepare for future work opportunities. The GEM moreover has the potential to be useful within an organisational setting as a means to select individuals that have well-developed career self-management drive, career resilience and cultural competence and who can 'hit the ground running' within the organisational setting. It may also provide insight into the developmental needs of employees that may be to the advantage not only of the company but, more importantly, of the individual. The concepts included within the GEM may also prove useful in selecting individuals for international assignments and cross-cultural projects, given that the elements needed to be successful in such activities are incorporated within the GEM.

The findings of the study also have implications for higher education. In particular the significant differences found between the biographical variables of gender and qualification level on all the GEM dimensions provide new insights into the educational approach that should be taken to improve graduate employability. Perhaps a more aggressive strategy will have to be adopted to instil the need for and advantages of employability in males, as the males in this study scored lower than the females on all the employability dimensions. There may also be a need to focus to a greater extent on employability not only in the undergraduate curriculum, but to maintain a commitment to enhance employability within postgraduate education as well. With regard to the finding that the women scored higher than the men on the career self-management drive dimension of the GEM, it is interesting to note that women may still feel that they need to work harder than men on aspects such as networking, determining their strengths and weaknesses and seeking out new opportunities to achieve similar career outcomes. Organisations and educational institutions could investigate the reasons behind such perceptions and ensure that all employees have equal opportunities to advance in their careers. Universities can moreover seek to improve the attributes of career self-management drive, career resilience and cultural competence to the advantage of all its students and thus contribute to becoming or remaining high quality institutions.

#### **6.4 LIMITATIONS OF THE STUDY**

The findings of this study are limited to the context of students at a third-year undergraduate and postgraduate level who are predominantly employed as general staff in the business management

industry. The findings moreover do not allow for definite causal conclusions due to the survey design methodology utilized and the exploratory nature of the study. The factor analyses findings as well as the comparison of biographical variables across the GEM dimensions are therefore only applicable to the sample used in this research and the study therefore needs to be repeated using a different sample that includes individuals from diverse occupational industries and socio-demographic backgrounds across South Africa.

Another limitation relates to the original data collection process, which yielded a low response rate. This may largely be due to the questionnaire being too long and to it being part of a larger 'graduateness' study in the form of an additional questionnaire. Those that responded may therefore comprise a qualitatively distinct group from those that did not respond to the survey questionnaire (Kelly *et al.*, 2003:262; Salkind, 2006:191). Another limitation of survey research is bias, which can arise when respondents provide socially acceptable responses (Salkind, 2006:191). Although an attempt was made to reduce central tendency by making use of a six-point Likert-type scale, the participants in this study consistently responded by choosing the response category of 6 (always true for the respondent). This may have resulted in agreement bias amongst respondents and had the effect of items loading very highly on one factor. It may be that the sample was highly motivated to provide socially desirable answers, especially as the study was carried out as part of a larger 'graduateness' study which gauged university-related attitudes. Future research can consider including reverse-scoring questions to attempt to reduce response bias.

Lastly, the number of respondents within each category of the biographical variables was not adequate in all instances for meaningful data analyses to be conducted and the affected categories were accordingly collapsed. Unequal group sizes within the different categories moreover resulted in data that initially violated the assumptions for normality and homogeneity of variance. A larger sample size that consists of more or less equal distributions across categories is more desirable for determining differences among groups. This limitation is, however, defensible in light of the fact that the main focus of the study was not to determine differences amongst groups.

## **6.5 RECOMMENDATIONS FOR FUTURE RESEARCH**

Future research could explore the validity and reliability of the Graduate Employability Measure across different contexts in order to gather information regarding its psychometric properties, increase its

external validity, and further refine the questionnaire. Confirmatory factor analyses could also be conducted to verify the factor structure of the GEM found in this study.

Further, future studies could analyse the discriminant validity of the GEM to explore the theoretical independence of the three factors and to determine whether the latent dimensions have enough uniqueness to make them independent indicators of employability. Discriminant validity is established when a test measuring a specific construct has a low correlation with a measure that reflects a different construct (Struwig & Stead, 2001:142). Criterion validity could also be established for the GEM by comparing scores on the GEM with an external criterion that is believed to measure the same construct under investigation (Delpont, 2002:167).

With regard to the low response rate obtained in this study, future research could investigate ways in which the non-response rate may be reduced, such as shortening the questionnaire and administering it in a pen and paper format. The final GEM could have fewer items and this might result in higher response rates.

Lastly, the scores of the GEM could be standardized across different groups and used to compare and interpret an individual's score against the norm group, so as to provide valuable individual feedback to individuals that have completed the GEM.

## **6.6 CONCLUSION**

The overall purpose of this study was to develop and evaluate a measure of graduate employability in the context of the new world of work. A comprehensive literature review provided the context for highlighting the need for individuals to be employable against the backdrop of a turbulent work and career environment. The employability construct was accordingly conceptualised in a model and the Graduate Employability Measure was developed as an instrument to gauge graduate employability. Exploratory factor analyses revealed a three-factor model consisting of career self-management drive, career resilience and cultural competence, which indicated satisfactory reliability and validity. As a secondary objective of the study, the various biographical groups were subjected to analysis of variance to determine whether there were significant differences between the various gender, race, age, marital status, qualification level, educational level and employment status groups on the GEM dimensions. The results revealed that females as well as final-year undergraduates reported higher

levels of employability on all the GEM dimensions. Implications of these findings were accordingly discussed as well as the limitations of the study and recommendations for future research.

The results of this study have therefore made a contribution to the academic community, higher education and industrial psychology practice by providing valuable insight into the conceptualisation and effective measurement of employability, a construct that has become not just important but indeed imperative in a continuously shifting work and career space.

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