THE RELATIONSHIP BETWEEN ADULT LEARNER SELF-DIRECTEDNESS AND EMPLOYABILITY ATTRIBUTES - AN OPEN DISTANCE LEARNING PERSPECTIVE

JO-ANNE BOTHA

Submitted in fulfillment of the requirements

for the degree of

MASTER OF COMMERCE

in the subject

HUMAN RESOURCE MANAGEMENT

at the

UNIVERSITY OF SOUTH AFRICA

Supervisors:

Prof Melinde Coetzee

Prof Mariette Coetzee

January 2014

DECLARATION

I, JO-ANNE BOTHA, student number 07722168, declare that this dissertation, entitled **"The relationship between adult learner self-directedness and employability attributes: an open distance learning perspective",** is my own work, and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

_____

JO-ANNE BOTHA

30 JANUARY 2014

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

CHAPTER 1: SCIENTIFIC ORIENTATION TO THE RESEARCH

CHAPTER 2: ADULT LEARNER SELF-DIRECTEDNESS IN AN OPEN DISTANCE LEARNING CONTEXT

CHAPTER 3: EMPLOYABILITY ATTRIBUTES

CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

APPENDIX A: ALSDS QUESTIONNAIRE

REFERENCES

LIST OF FIGURES

LIST OF TABLES

SUMMARY

THE RELATIONSHIP BETWEEN ADULT LEARNER SELF-DIRECTEDNESS AND EMPLOYABILITY ATTRIBUTES – AN OPEN DISTANCE LEARNING PERSPECTIVE

BY

JO-ANNE BOTHA

SUPERVISORS	Prof Melinde Coetzee	Prof Mariëtte Coetzee
DEPARTMENT	Industrial and organisational psychology	Human resource management
DEGREE	M Com Human Resource Management	

This study investigated the relationship between the self-directedness (as measured by the Adult Learner Self-Directedness Scale) and employability attributes (as measured by the Student Employablity Attributes Scale) of adult learners enrolled at a South African distance learning higher education institution. Correlational and inferential statistical analyses were carried out in order to realise the research objective. A stratified random sample of 1 102 mainly black and female participants participated in the study. The research indicated self-directedness to be a significant positive predictor of employability attributes and also revealed significant differences between the gender, race and age groups regarding these variables. Recommendations are suggested for use by university lecturers and human resource development professionals.

KEY TERMS

Adult student self-directedness, self-directed learning, employability, workplace learning, open distance learning

CHAPTER 1

SCIENTIFIC ORIENTATION TO THE RESEARCH

This study focuses on the relationship between the self-directedness and employability attributes of adult learners enrolled at an open distance learning higher education institution in South Africa. This chapter outlines the background to and motivation for the research topic; formulates the problem statement and research questions; states both the general and the specific theoretical and empirical objectives; discusses the paradigm perspective which guides the boundaries of the study, describes the research design and research methodology, and concludes with an outline of the proposed study.

1.1 BACKGROUND TO AND MOTIVATION FOR THE STUDY

The context of the study is the employability of individuals in the 21st century world of work. More specifically, the study focuses on the employability attributes of adult learners and their self-directedness from an open distance learning perspective. South Africa is facing a dichotomy in the skilled labour markets where significant skills gaps exist but where the level of graduate unemployment is fairly high and growing. In certain labour markets the unemployment rate of graduates may be as high as 24% (Pauw, Oosthuizen & Van der Westhuizen, 2008). Although this statistic is contested by Altbeker and Storme (2013) they did find that younger, inexperienced graduates are more likely to be unemployed than older, more experienced graduates. They found that, while 11% of graduates between 20 and 29 years of age may be unemployed, only 2% of graduates between 40 and 65 years of age were likely to be unemployed. However, the issue of graduate unemployment is not a challenge to South Africa alone. In countries, such as Australia and the United Kingdom, graduate unemployment has been the subject of investigation for a number of years with these studies generating an interest in the employability of the products of higher education, namely, graduate learners (Dias de Oliveira & de Castro Guimaraes, 2010; Moreau & Leathwood, 2006). Universities are under ever increasing pressure to ensure that they deliver employable graduates (De Bruin, 2007; Dias de Oliveira & De Castro Guimaraes, 2010; Karakas & Manisaligil, 2012; Mason, Williams, & Cranmer, 2009; Moreau & Leathwood, 2006). This focus on employability has made the principle of lifelong learning in the workplace increasingly significant. Both employed and unemployed adults are regarded as learners who may realise the importance of furthering their

growth, development and employability by formal education, training and development (Coetzee, Botha, Kiley, Truman, & Tshilongamulenzhe, 2013).

Nielsen (1993) defines employability in terms of the similarity between the prospective employee's knowledge, skills and experience and the requirements of the specific job and/or employer (Beukes, 2010; Knight & Yorke, 2003; Pool & Sewell, 2007). Will it be possible for the individual to find employment, given his or her existing competence? De Grip, Van Loo and Sanders (2004) define employability more comprehensively as the ability and willingness of employees to proactively enhance their knowledge, skills and experience by utilising all the development opportunities that are accessible to them, in order to ensure that their competencies remain current and in demand by employers. Other definitions of employability focus only on specific skills that prospective employees need in order to cope with the current work environment, such as communication, numeracy and information technology skills, as well as indications of the ability to understand the business world (Beukes, 2010; Glover, Law, & Youngman, 2002).

The employability of employees in the 21st century is determined by their unique attributes, knowledge, experience and transferable skills (Coetzee, 2009). In an ever faster changing and more competitive global economic climate, a qualification, per se, no longer ensures that the graduate in question will easily find and secure employment (Pauw, *et al.*, 2008). It is, thus, essential that both employees and prospective employees ensure that they are and remain employable. In the context of the business organisation, employability refers to the individual's ability to gain access to the workplace and to be continuously effective and productive within the organisation by optimally utilising their occupation-related and career meta-competencies (Beukes, 2010; Coetzee, 2009). Career meta-competencies include behavioural adaptability, identity awareness, sense of purpose, self-esteem and emotional intelligence (Beukes, 2010.) Employability attributes (as a set of essential career meta-competencies) augment the fit between an adult learner's subject-related knowledge and skills and the demands made in the working world (Coetzee, 2011). Career meta-competencies empower employees to be self-directed, lifelong learners who proactively manage their own careers by acquiring either different or more career specific competencies. In this way, employees continuously create their own employability security as they are aware that they possess the competencies and expertise that are both sought after and highly valued in the labour market (Beukes, 2010; Brown, Hesketh, & Williams, 2003, Coetzee, 2009).

The employability attributes which are the focus of this study are derived from the employability attributes framework which was developed by Bezuidenhout and Coetzee (2010). This framework was designed specifically for adult learners and explains the following eight essential employability attributes: (1) career self-management; (2) cultural competence; (3) self-efficacy; (4) career resilience; (5) sociability; (6) entrepreneurial orientation; (7) proactivity, and (8) emotional literacy (Coetzee, 2011).

Career self-management relates to the capacity to use lifelong learning practices as well as career planning and management strategies to ensure continued employment, while cultural competence refers to the possession of the reflexive thinking skills that enable adult learners to work cooperatively and without difficulty in diverse cultural settings. Self-efficacy denotes the personal belief of an adult learner in his/her ability to generally handle difficult tasks or situations successfully. Career resilience is a personal disposition that makes it possible for an adult learner to display agility in uncertain, shifting situations. Self-confidence and risk-seeking attitudes are both elements of career resilience. Sociability describes the ability to establish and sustain social interactions and form both formal and informal associations while entrepreneurial orientation indicates an inclination towards innovative and creative endeavours. This type of orientation includes a risk-seeking, autonomous disposition. Proactivity indicates a personal preference for active engagement in self-initiated self-improvement activities while emotional literacy relates to an individual's talent for correctly interpreting and controlling his/her own, or another's, emotions (Coetzee, 2011).

The dichotomous situation facing South Africa – that of rising graduate unemployment (Pauw, *et al.*, 2008) coupled with a lack of industry-specific skills (World Competitiveness Online, 2010) – necessitates an investigation into the concept of employability. Employers view employability as an indication of their ability to match the supply of and demand for specific skills within an evolving organisation (Coetzee, 2009). The following question then arises: If employers need to appoint suitable candidates but are, apparently, not able to find them, and there are suitable candidates available, but who, apparently, are not able to connect with the relevant employers, what is the reason? Investigations into the reasons for both youth and graduate unemployment in South Africa have yielded results related to level of education, years of experience, race, gender and location (Altbeker & Storme, 2013; Burger & Woolard, 2005; Mlatsheni & Rosbabe, 2002). Other reasons appear to include a lack of labour market information and a lack of job

seeking skills. These issues are not addressed in the tuition programmes of diplomas and degrees and, yet, they seem to be important factors with regard to bridging the gap between being unemployed and being employed (Burger & Woolard, 2005; Mlatsheni & Rosbabe, 2002; Subotzky & Prinsloo, 2011). South Africa is aiming to address the current skills shortages by means of the occupational learning system and by focusing on occupationally relevant learning. This approach aims to develop not only the skills of employees, but also their employability as well as opportunities for further learning (Coetzee, 2009). During their academic careers learners acquire both subject- or domain-specific competencies and employability skills. However, while employers may be content with the subject-or domain-specific skills that their employees acquire during tertiary education, there are indications of increased dissatisfaction with the employability skills of employees and job candidates (Cassidy, 2006; Griesel & Parker, 2007; Markes, 2006; Potgieter, Coetzee, & Masenge, 2012).

In the South African situation, with its highly regulated workplace learning environment, employee skill development focuses on developing applied practical competence in order to provide employees with skills that are occupationally relevant. In this way, the occupational learning system will eventually facilitate the realisation of South Africa's economic and developmental goals (Coetzee, 2009). The occupational learning system utilises the workplace as an important learning environment in the development of occupational competence. An organisation may utilise its training and development function to improve job and organisational performance, to prepare staff for future promotion and to develop new skills sets in a changing environment (Coetzee & Schreuder, 2010). It is, thus essential that an organisation invest in the training and development of its staff in order to enable the organisation not only to remain operational but also to improve and become an innovative market leader (Nikolova, Van Ruysseveldt, De Witte, & Syriot, 2014; Swanson & Holton, 2008).

One of the ways which both employers and employees may utilise to improve their work performance skills is by the acquisition of new knowledge and skills through further education. Working adults often engage in distance learning further education because of the many demands on their time. They are usually employed in full time and demanding positions, while also having family responsibilities and commitments which do not allow for full time study at a residential university (Unisa Disa, 2011). They may also specifically choose the distance learning environment because they are highly intrinsically motivated and highly autonomous in their attitude to life, they are able to self-regulate their learning and set their own goals, while

they have a mastery orientation to their learning and aim to improve their employability by obtaining a tertiary education (Boeren, 2011; Stevens & Switzer, 2006).

The distance learning environment is particularly challenging for its learners, who are adult learners, because learners and lecturers are geographically dispersed as well as often dispersed in terms of time. This leads to a loss in interaction between student and lecturer (Dzakira & Idrus, 2003; Subotzky & Prinsloo, 2011). This situation may be compounded by the fact that the lecturers' experience of learning – usually at a residential university where there is direct and daily contact with the students – often results in a lack of sympathy for the distance learning student's difficulties (Dzakira & Idrus, 2003; Subotzky & Prinsloo, 2011). The student profile at the University of South Africa, the largest distance education institution in South Africa, indicates that the majority of learners work full time and, therefore, they study at night and during week-ends (Unisa Disa, 2011). This seems to be the case in distance education throughout the world (Magagule & Ngwenya, 2004; Stevens & Switzer, 2006; Subotzky & Prinsloo, 2011; Tucker, 2003). The learning process is more complex for distance learners than those at contact institutions because they face diverse challenges. As learners in distance education adult learners may feel isolated, they may struggle with technology, they may experience a lack of support from their lecturers and, as stated earlier, they may experience difficulty in interacting with the lecturers and fellow learners. These challenges may lead to frustration which may, in turn, influence the motivation levels of these learners (Dzakira & Idrus, 2003; Subotzky & Prinsloo, 2011). Distance education learners also experience external pressures from, inter alia, job and family responsibilities and expectations, financial constraints, language difficulties and a lack of adequate primary education. These factors may all affect their ability to study in a motivated and goal-directed way (Prinsloo, 2009; Subotzky & Prinsloo, 2011).

The concept of adult learning was first described by Knowles (cited in Coetzee et al., 2012). Adult learners have the following needs: They need to know and understand why they need to learn something, they need to be treated as people who are capable of self-direction and they need to learn in real-life situations. Adults learners may also contribute the following to the learning experience: an ability to take responsibility for their own learning, life experiences that may be utilised effectively in the learning environment; a problem orientation to learning, a desire to apply their newly acquired knowledge and skills, a readiness to learn that is fuelled by their need to solve a problem or accomplish a goal and an internal motivation to solve their

problems or attain their goals. Self-directedness in adult learners is related to the adult learner's life roles of planning and managing the different facets of life, including learning opportunities and career progression (Knowles, 1984, Coetzee & Botha, 2013). From a training and development perspective, self-directedness is an important characteristic of the employee when significant behaviours such as remaining employable through the adult learner's life, and employability attributes such as lifelong learning and active career management may increase employability.

In learning situations the teachers, lecturers or learning facilitators usually decide where and when learning will take place, what will be learnt and how it will be learnt. However, in self-directed learning, the learner is no longer a passive recipient of learning but rather an active participant, sharing control and decision-making with the facilitator of the learning (Coetzee & Botha, 2013; Hammond & Collins, 1991). However, despite the theoretical discussions on self-directed learning, the concept remains indistinct (Botha, 2012; Long, 1990). The descriptions of self-directed learning include the autonomous learner who establishes his/her own learning area, limitations and activities in a non-educational setting (the "teacherless learner"), the solitary learner who studies a specific curriculum in isolation, via an open distance learning institution and the learners who determine their own learning outcomes, learning pace and learning resources, while the process is facilitated by an expert in the field (facilitated approach) (Botha, 2012; Coetzee & Botha, 2013; Hammond & Collins, 1991; Long, 1989).

The common factor in these descriptions of self-directed learning is the ability, skill, preference or psychological predisposition of the learner to take and maintain control of his or her own thinking and learning process. It would appear that the autonomy of the adult learner is synonymous with the concept of self-directedness. Autonomy in self-direction includes both the ability to make independent decisions about what to achieve and how to achieve it, and the ability to adopt and utilise suitable learning strategies (Botha, 2012; Straka, 1997). Thus, learner self-directedness indicates not only self-management, autonomy and the ability to make decisions, but also self-monitoring and flexibility in learning (Botha, 2012; Straka, 1997). Meta-cognition – the ability to think about one's own learning – forms the foundation of the self-regulation or self-directedness in learning. Meta-cognition include the following behaviours: planning learning activities, selecting important information, relating new information to existing information, adjusting new information after it has been practised, and assessing progress in or the results of the learning activity (Billet, 2010(b); Keirns, 1999).

The ability of employees to ensure their own employability through conscious efforts to develop their own knowledge and skills by utilising lifelong learning strategies is being increasingly emphasised by both employers and governments (Billett, 2010(b)). Continuously improving the capabilities of workers is essential for the improvement of both national and business performance (Billet, 2010(b)). Employees, as adult learners, engage in lifelong learning for various and divergent reasons (Billet, 2010(b)). Although work has conflicting and different meanings for individuals, it is increasingly essential for employees to engage positively with and become embedded in the efficient performance of work (Coetzee & Schreuder, 2010). In carrying out their everyday tasks, workers not only learn, but also adapt their tasks and routines to the changing environments (Billet, 2010). The ability to do this successfully and without distress is essential in the 21st century workplace (Billet, 2010; Coetzee, 2011). Both governments and employers are emphasising that it is incumbent on employees to take responsibility for their own development. The ability of the individual to develop a sound sense of self through acting decisively, not only in order to realise personal goals, but also as regards being self-reflexive and entrepreneurial and, lastly, to engage meaningfully with societal norms and expectations in the process of developing a sense of self is becoming increasingly important for the lifelong learner (Billett, 2010). When describing the individual's self-concept as enterprising and agentic, Billet (2010) appears to be describing one of the characteristics of the adult learner, namely, that of self-directedness. Self-directedness has been described as the ability to take responsibility for one's life (Botha, 2012; Knowles, 1984).

In short, it would appear from the preceding literature review that investigating the sense of self-directedness of individuals may deepen the understanding of their employability attributes, or of the way in which individuals' self-directedness may influence their employability attributes by assessing how their self-directedness relates to their employability attributes. In South Africa, as in many other countries, skills development is recognised as being critical to economic growth and job creation in the fight against poverty (Coetzee et al. 2012; Dias de Oliveira & De Castro Guimaraes, 2010; Moreau & Leathwood, 2006). However, employers and educators should not assume that the skills and attributes required of employees have been identified and are well understood and unchanging as, in the post-millennium world of work, knowledge, skills and attributes requirements may change as rapidly as the environment changes (Coetzee, 2009; Coetzee & Botha, 2013). Therefore, the skills and attributes that should be cultivated through tertiary education should not only focus on the acquisition of academic knowledge, but also on the skills and attributes required to be an employable, effective and productive employee

(Coetzee, 2009, Coetzee & Botha, 2013, Potgieter et al., 2012). In the 21st century employers value the ability of employees to adapt to changes quickly and easily and even to do so proactively by being continuously prepared for such changes. It is essential that prospective employees possess the ability to take responsibility for the development and management of their own careers by continuing to learn throughout their lives. In essence, it would appear that employers prefer employees who are self-directed lifelong learners (Ellinger, 2004, Ho, 2008; Potgieter et al., 2012) and who are able to transfer these competencies or skills to their workplace learning

1.2   RESEARCH PROBLEM

In the preceding background to the study, the importance of adult learners to be self-directed and demonstrate appropriate employability attributes was pointed out. However, there seems to be a paucity of research regarding the relationship between these two constructs, especially in the South African higher education distance learning context. Workplaces are also changing drastically in response to both global pressures and technological advances (Brewster, Cary, Grobler, Holland, & Warnich, 2008; Coetzee & Schreuder, 2010). The knowledge economy, rapid globalisation and increasing changes in communication technology require that, in order to survive, organisations be able to adapt quickly and with as little trauma as possible to economic and market changes (Coetzee et al., 2012; Coetzee & Schreuder, 2010). The rapid development of communication technologies has created a situation in which business organisations are often at the forefront of knowledge production and, as the economy has changed to an economy which focuses on knowledge as a competitive advantage, the organisation of the 21st century has also changed (Scarbrough, 2001). The superiority of knowledge workers is but one of the multitude of changes that are impacting on the world of work. In a knowledge-based economy, employees who possess the ability to develop, adapt and apply knowledge in unusual, creative and innovative ways increase their value to the organisation and also their own employability (Prinsloo, 2009; Potgieter et al., 2012; Stafford, 2001). Knowledge is, therefore, not only a pivotal resource for the organisation, but also for the employee (Boeren, 2011; Scarbrough, 2001, Stafford, 2001).

Further challenges faced by both organisations and their employees include the escalation of virtual organisations, function and activity outsourcing and the concomitant increase in the temporary workforce, greater employee autonomy and independent work, and the intensification

of workforce diversity (Brewster et al., 2008; Coetzee & Schreuder, 2010). The new millennium workforce will also comprise a mixture of learners from various generations, while this workforce may include employees from the silent generation, Baby Boomers, Generation X and Millennials (Generation Y). Each of these generations has specific preferences with regard to the mode of learning, learning materials and the type of facilitator preferred (Coetzee et al., 2012). It is, thus, important to understand the differences between and preferences of each generation in order to provide the kind of learning opportunities that most appeal to them and which will, therefore, have the greatest chance of ensuring learning that may later be applied fruitfully within the workplace.

Unfortunately, there is a paucity of research that focuses specifically on divergence in the workplace and on learner demographics such as race, gender, age and socio-economic background as well as on the way in which how these relate to the self-directedness and employability attributes of adult learners. Demographic indicators such as age, race and gender may all influence the success of higher education studies at an open distance learning institution (Du Plessis, Prinsloo, & Muller, 2005; Subotzky & Prinsloo, 2011; Walker, Matthew, & Black, 2004) and it is envisaged that this study will provide valuable information in this regard. Investigating the relationship between the self-directedness and employability attributes of adult learners and the way in which diverse groups of learners and employees differ regarding these variables will make an important contribution to the further education and skills development of adult learners in the South African context and, thus, help to ensure their continued employability. The ability of employees to learn and change creates a considerable competitive advantage for organisations (Ellinger, 2004; Karakas & Manisaligil, 2012). The ever-changing global environment of the new millennium requires that organisations respond more quickly to employee and organisational learning needs by implementing more limber workplace learning systems (Ellinger, 2004; Karakas & Manisaligil, 2012). This study will contribute research findings on a new way in which to assess a learner's self-directedness (a topic of research suggested by Ellinger (2004), which is a component of a lifelong learning orientation. Thus, the study will contribute to the existing body of knowledge on learner self-directedness.

The current literature on self-directed learning focuses on learners in a formalised educational situation. However, little current research exists on utilising this attribute of self-directed learning in the training and development field (De Bruin & De Bruin, 2011; Ellinger, 2004). The need to equip employees with the competencies necessary to continuously expand their knowledge and

skills calls for a greater understanding and utilisation of self-directed learning knowledge and practice in current work environments (De Bruin & De Bruin, 2011; Ellinger, 2004). It is known that the self-directed learning approach advocates a different level of involvement on the part of both the learner and the facilitator of the learning. This study will contribute guidelines on how workplace learning programmes may be developed utilising both the principles of self-directedness and of other principles of adult learning.

In view of the paucity of research on the relationship between the self-directedness and employability attributes of adult learners the following general research question is posed for the purpose of the study:

What is the relationship between the self-directedness and employability attributes of adult learners, and do learners differ significantly regarding these attributes in terms of the following socio-demographic variables, namely, gender, race and age?

The specific research questions for the study are formulated as follows:

1.2.1   Research questions with regard to the literature review

In terms of the literature study, the following specific research questions will be addressed in the study:

- How is adult learner self-directedness in an open distance learning context conceptualised in the literature?
- How are employability attributes conceptualised in the literature?
- Does a theoretical relationship exist between the self-directedness of adult learners and their employability attributes?
- What are the implications of the theoretical relationship between the self-directedness of learners and their employability attributes for both organisational training and development (T&D) and for educator teaching and learning practices in the open distance learning (ODL) context?

1.2.2   Research questions with regard to the empirical study

In terms of the empirical study, the following specific research questions will be addressed:

- Does a statistically significant relationship exist between the self-directedness of adult learners and their employability attributes as manifested in the sample of respondents

who are pursuing further higher education distance learning studies in the economic and management sciences in South Africa?

- Does the self-directedness of adult learners significantly and positively predict their employability attributes?
- Do individuals from different gender, race and age groups differ significantly regarding their self-directedness and employability attributes?
- Based on the findings of this study what recommendations may be formulated for both organisational training and development and ODL educator teaching and learning practices and also for further research?

1.3   RESEARCH OBJECTIVES

In general terms, this study aims to (1) investigate the link between the constructs of self-directedness and employability attributes in a sample of adult learners, and (2) determine whether adult learners differ significantly regarding their self-directedness and employability attributes in terms of their gender, race and age.

The results will be used to make recommendations based on the findings of the study for both organisational training and development and educator teaching and learning practices.

1.3.1   Specific objectives

In this section the specific objectives of both the literature review and the empirical study are discussed.

1.3.1.1   Literature review

The specific objectives of the literature review are to:

Research aim 1: Conceptualise adult learner self-directedness in an ODL context as discussed in the literature.

Research aim 2: Conceptualise the construct of employability attributes as discussed in the literature.

Research aim 3: Conceptualise the theoretical relationship between the self-directedness of adult learners and their employability attributes.

Research aim 4: Identify the implications of the theoretical relationship between adult learner self-directedness and employability attributes for both organisational training and development (T&D) and ODL educator teaching and learning practices.

1.3.1.2 Empirical study

The specific objectives of the empirical study are to:

Research aim 1: Investigate the statistical relationship between the self-directedness and employability attributes of adult learners as manifested in a sample of respondents who are pursuing further distance learning studies in the economic and management sciences field in South Africa.

Research aim 2: Assess whether the self-directedness of adult learners significantly and positively predicts their employability attributes

Research aim 3: Investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes

Research aim 4: Formulate recommendations regarding both organisational training and development (T&D) and ODL educator teaching and learning practices, and also indicate what further research may evolve from the findings of the study.

1.4   META-THEORETICAL FRAMEWORK OF THE RESEARCH STUDY

The meta-theoretical framework of this research is as follows:

1.4.1   Literature review

The meta-theoretical framework forms the definitive boundary of the research study and explains the particular approach that will be followed in the interpretation of the research results. The literature review in the study is presented from both the perspective of training and

development in the organisational context and from the perspective of open distance learning (ODL) in higher education.

Training and development refers to a number of deliberate and organised actions which are designed by an organisation to give the employees the opportunity, both reactively and proactively, to improve their competences and job performance and equip them with the ability to realise organisational goals (Coetzee et al., 2013; Noe, 2013; Swanson & Holton, 2008; Werner & De Simone, 2009). One of the major purposes of training and development is to pre-empt any concomitant competence improvement that may take place, thereby enabling employees to utilise their expertise for the benefit of the organisation (Coetzee et al., 2012; Swanson & Holton, 2008). Training and development comprises both training and development (T&D) with the training focusing on short-term endeavours to change job specific or operational competencies and development focusing on long-term opportunities to expand the competency and experience of employees in order to prepare them for more strategic life and business roles (Coetzee et al.., 2012; Coetzee & Schreuder, 2010). Training and development and, specifically, workplace learning and skills development have become increasingly important in South Africa and the South African government has formulated both a national training and development strategy as well as a national skills development strategy (Coetzee et al. 2007).

Current skills development legislation and the bodies created by such legislation aim to formalise and document the workplace training provided by employers (Coetzee et al., 2012). The national skills development strategy aims to develop, inter alia, the critical skills required for sustainable growth and make quality training available for all participants in the labour market, with a specific focus on previously disadvantaged employees and also prospective employees. The legislative framework is exerting pressure on employers to make training and skills development opportunities available to all employees and also to prospective employees, and to report on the provision of workplace training on an annual basis (Coetzee et al., 2012). At the same time, organisations are competing in global markets and they require employees who possess, at the least, the expertise to perform their jobs to the required standard (Karakas & Manisaligil, 2012; Swanson & Holton, 2008; Noe, 2013).

The provision of training and development opportunities aims to improve employee skills, and, in this way, improve employee job performance (Coetzee et al., 2012; Swanson & Holton, 2008). The knowledge economy demands of organisations that they recognise and utilise

knowledge as an essential component in the creation of goods and services (Boeren, 2011; Karakas & Manisaligil, 2012; Warhurst, 2008). Essentially, a new type of worker is required - one that is capable of using higher order cognitive abilities and conceptual skills to recognise and get to the bottom of organisational challenges (Botha, 2012; Warhurst, 2008).

In this changing workplace scenario it is essential that approaches to employee training and development be transformed in order to create learning environments that enhance the assimilation of individual and organisational learning and development (Billet, 2010(b); Fuller, Unwin, Felsted, Jewson, & Kakavelakis, 2007, Nikolova et al., 2013). Incidental, informal or unplanned learning and the significant role it plays in employee and organisational learning and development is now being recognised (Billet, 2010(b); Swanson & Holton, 2008). Organisations are providing powerful learning opportunities for those who possess the ability to discern what they may learn from each new situation to which they are exposed and then utilise this learning to manage their own careers and, thus, ensure their employability (Billet, 2010(a); Bridgstock, 2009). Employee training and development, higher educational intellectual development in the context of knowledge management and learning organisations, and the role of the constructs of self-directedness and employability attributes in these contexts will be discussed in chapters 3 and 4 respectively.

Open distance learning in higher education may be described, in its simplest form, as teaching and learning where the teacher and learner are separated in space and, probably, also in time (Prinsloo, 2009; Teaster & Blieszner, 1999). According to Greenberg (1998), distance learning is a deliberate teaching or learning occurrence where diverse technologies are utilised to make contact with learners who are geographically removed from the teacher, thereby encouraging contact with and between the learners. In the South African environment, open learning indicates that higher education is accessible to everyone (Coetzee et al., 2012).

1.4.2 Empirical study

The empirical study will be conducted within the ambit of the positivist research paradigm. The positivist approach is based in science and focuses on the measurement of independent facts about a single, comprehensible, reasonable certainty or truth (Krauss, 2005). The act of observation has no effect on the data observed. The goal is to describe the facts under observation while not participating in the world in which those facts exist (Krauss, 2005). The objective of this approach is to be able to understand the environment to the extent that it may

be foreseen and managed (Kim, 2003; Krauss, 2005). The positivist research paradigm postulates that common collective rules direct social experiences and interactions and that revealing these collective rules will facilitate the prediction and control of social phenomena (Kim, 2003; Krauss, 2005).

The empirical study will consist of a quantitative, cross-sectional survey which will focus on investigating the relationship dynamics between the variables of adult learner self-directedness and employability attributes. The study will, thus, provide quantitative measures of adult learner self-directedness and their employability attributes at a specific point in time and also of the way in which individuals from diverse socio-demographic backgrounds differ regarding these variables. The variables in question will have a concrete and tangible value through statistical science and techniques. The quantitative approach is perceived as objective and relating to phenomena or conditions which are independent of individual thought and also perceptible to all observers at a specific point in time (Leedy & Ormrod, 2005; Salkind, 2012).

1.5   RESEARCH DESIGN

This section outlines the research design used in the study.

1.5.1   Type of research

A quantitative, cross-sectional survey design with a focus on descriptive, correlational and inferential statistical analyses will be used to realise the empirical research objectives. A survey research design examines the potential relationships between two or more variables at a specific time (Kerlinger & Lee, 2000; Salkind, 2012). Surveys are administered to a sample of a population and, thus, the information obtained may be generalised to the whole population if a representative sample is involved. The data is self-reported by the respondents. This research design is well suited to the study of a large population (Leedy & Ormrod, 2005; Salkind, 2012).

The purpose of quantitative research is explanatory in that the research describes or explains a phenomenon (Coetzee & Schreuder, 2010; Salkind, 2012). The quantitative information provided by the surveys may be reviewed using statistical analysis (Leedy & Ormrod, 2005; Salkind, 2012). Standardised information that may be used to define or describe variables or to study the relationship between variables is an essential element of this research design. On the other hand correlational research studies the degree to which discrepancies in one variable

relate to discrepancies in one or more other variables (Leedy & Ormrod, 2005; Salkind, 2012). Both the nature of this study as well as the descriptive and predictive functions associated with correlational and inferential research indicated the use of a quantitative, cross-sectional survey design (Kerlinger & Lee, 2000; Salkind, 2012). No control group was used and all the variables were measured simultaneously.

Descriptive and explanatory research focuses on describing, summarising and explaining an existing situation, without any intention to change the situation (Leedy & Ormrod, 2005; Salkind, 2012). Thus, this is a quantitative research method that aims to identify the features of an observable fact or to explore the possible relationships between either one phenomenon or more than one phenomena (Leedy & Ormrod, 2005; Salkind, 2012). The data in this study is processed by means of descriptive, correlational and inferential statistics. Descriptive statistics describe and summarise the information received from a sample (Salkind, 2012; Welman & Kruger, 2001) While correlational statistics are used to determine and/or explain the association between two variables as well as the strength of the association. Inferential statistics are used in this study to analyse statistically based hypotheses by drawing inferences from the data obtained from the sample and, based on probabilities, generalising it for a specific population (Coetzee & Schreuder, 2012; Leedy & Ormrod, 2005; Salkind, 2012).

1.5.2   Research variables

The context of this research study is adult learners in an open distance learning, higher education institution. The dependent variables in the study are the employability attributes of adult learners while the independent variables are the self-directedness of adult learners and socio-demographic data. The research study will focus on determining whether a significant empirical relationship exists between these variables and whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes.

1.5.3   Methods used to ensure reliability and validity

There will be measures in place to ensure a valid and reliable research process:

1.5.3.1   *Validity*

The validity of a measuring instrument indicates how well the instrument measures the constructs it purports to measure (Leedy & Ormrod, 2005). Both internal and external validity are important and desirable for a research design. Ensuring internal and external validity

requires making a series of informed decisions about the purpose of the research, the theoretical paradigms that will be used in the research, the context within which the research will take place and the research techniques that will be used to collect and analyse the data.

Internal validity refers to the study generating accurate and valid findings in respect of a specific phenomenon (Salkind, 2011). Internal validity also refers to the extent to which the research results may be ascribed to the controlled, independent variable as opposed to uncontrolled, unrelated factors (Brink, 2006). For a research study to be internally valid the constructs must be measured in a suitable manner and the data measured must be both accurate and reliable. In addition, the data analysis should be relevant to the type of data collected while the final solutions must be adequately supported by the data. Internal validity also refers to whether variations in the dependent variables may be attributed to the independent variable and not to extraneous or confounding variables related to, for example, maturation, history, testing or instrumentation (Salkind, 2011). Thematically, this study focuses on the influencing role of gender, race and age as a set of control variables. For the purposes of the study internal validity will be ensured by means of the following:

- The models and theories chosen will be relevant to the research topic, problem statement and research aims.
- Measuring instruments will be chosen in a responsible and representative way and presented in a standardised manner.

External validity refers to the degree to which it is possible to generalise from the data gathered and the context of the research study to larger populations and the environments (Terre Blanche, Durrheim, & Painter, 2006; Salkind, 2012). External validity is also associated with the sampling procedures used, the time and place of the research, and the conditions under which the research is conducted (Salkind, 2012). In this study external validity will be ensured by the selection of a sample which is representative of the total population (Terre Blanche et al., 2006; Salkind, 2012) while design validity will be ensured by the identification of plausible rival research hypotheses and the elimination of their impact. External validity will further be ensured by the results being relevant to undergraduate ODL adult learners in the economic and management sciences field only. However, targeting the total population of undergraduate ODL adult learners in the economic and management sciences field at one ODL institution will help to increase the generalisability of the results to the target population. The research will be cross-sectional in nature and randomised, proportional stratified sampling will be used. Standard

instructions will be provided to all participants

The validity of the data gathering instruments will be ensured as follows:

- The constructs of this research study will be measured in a valid manner by the use of questionnaires that will have been tested in scientific research and accepted as suitable in terms of face validity, content validity and construct validity.
- Exploratory factor analysis and Cronbach's alpha coefficients will be used to ascertain the construct validity and internal consistency reliability of the newly developed Adult Learner Self-directedness Scale.
- Efforts will be made to ensure that the data collected is accurate and also that the data is accurately coded and appropriately analysed to ensure content validity. The processing of statistics will be carried out by an expert and by using the most recent and sophisticated computer packages.
- The researcher will ensure that the findings of this research study are based on the data analysed to ensure content validity. The reporting and interpreting of the results will be carried out according to standardised procedures
- The researcher will ensure that the final conclusions, implications and recommendations are based on the findings of the research.

1.5.3.2 Reliability

Reliability indicates how consistently a measuring instrument, when used repeatedly on the same group, yields the same result when the constructs being measured remain the same (Leedy & Ormrod, 2005; Salkind, 2012). The results of a study should be both generalisable and reliable (Salkind, 2012; Welman & Kruger, 2001) and it is, therefore, essential to obtain more than one comparable measurement for a sample to ensure that results are generalisable and, thus, reliable (Salkind, 2012; Welman & Kruger, 2001). Generalisable results are consistent, irrespective of the time frame involved in the use of an instrument, by whom the instrument was administered and/or the form in which it was used (Salkind, 2012; Welman & Kruger, 2001). In order to ensure the reliability of the measuring instruments Cronbach's alpha coefficients and inter-item correlation coefficients will be used (Salkind, 2012; Kerlinger & Lee, 2000). Correlation coefficients measure the extent to which an association exists between two variables (Salkind, 2012; Welman & Kruger, 2001).

1.5.4   Unit of analysis

The unit of analysis distinguishes between the characteristics, conditions, orientations and actions of individuals, groups, organisations and social artefacts (Mouton & Marais, 1994; Salkind, 2012). As regards individual measurement, the unit of analysis will be the individual. In addition, the analysis of data will also be represented by the group. For the purposes of this study the researcher will focus on the employability attributes and self-directedness of the individual while the aim of the study will be to determine whether there is a relationship between these variables. In terms of investigating the differences between socio-demographic groups, the unit of analysis will be the relevant sub-groups (Mouton & Marais, 1994, Salkind, 2012).

1.5.5   Methods to ensure adherence to ethical research principles

The ethical guidelines and standards will form the basis on which this research study will be conducted. The research will be conducted within the ambit of the ethical requirements and procedures of Unisa and, thus, the research ethics procedures of the institution will be followed at all times. These considerations will form part of every step of the research process to ensure that they guide the researcher and the study. Informed and voluntary consent will be obtained from all the relevant participants. All information, data and results will remain confidential. The research will be designed in such a way that individuals, organisations and the community will benefit from it while there will be no harm inflicted on any individual involved in the research process (Lefkovitz, 2008).The researcher will strive to remain objective and to conduct the research with integrity. The principles of ethics in research, as indicated in the institutional Research Ethics Policy (Unisa, 2007), are as follows:

- The fundamental right to academic freedom and freedom of scientific research
- Integrity in research that encompasses the competence and accountability of the researcher
- Acting responsibly and striving for excellence in research
- Not contravening the institutional Policy on Research Ethics
- Obtaining approval for research involving human participants
- Undertaking research that will benefit society
- Making the research findings available in the public domain
- Guiding against harmful or undesirable consequences of the research
- Honesty with regard to individual actions and responses to the actions of others
- Not committing plagiarism, piracy, falsification or fabrication of results
- Accurately and truthfully reporting the results of the research

- Reporting to the relevant Ethics Review Committee when requested to do so.

1.6   RESEARCH METHOD

The research method will comprise two phases, namely, a literature review and an empirical study.

Phase one: Literature review

Phase one includes the following four steps:

Step 1: Conceptualise adult learner self-directedness in an ODL context from a theoretical perspective.

Step 2: Conceptualise employability attributes from a theoretical perspective.

Step 3: Conceptualise the theoretical relationship between the self-directedness of adult learners and their employability attributes.

Step 4: Conceptualise the implications of the theoretical relationship between the self-directedness of adult learners and their employability attributes for workplace training and development, as well as for ODL educator teaching and learning practices.

Phase two: Empirical study

Phase two includes the following nine steps:

Step 1: Determination and description of the sample

The empirical study will take place in the context of a population consisting of adult learners pursuing further education studies in the economic and management sciences field of study at a South African higher education, distance learning institution. Thus, the population consisted of approximately 438 055 adult learners (the approximate number of learners registered at the College of Economic and Management Sciences in 2010). The sample was a stratified, proportional, random sample (10 500) which included different gender, race and age groups. The sample was also stratified by module, qualification, department and school. Probability sampling was used in the study, thereby ensuring that the members of the population all have an equal chance of being selected to participate in the study (Kerlinger & Lee, 2000; Salkind, 2012).

Step 2: Choosing and motivating the measuring instruments

A biographical questionnaire, which included the socio-demographic variables relevant to the study, was used in addition to the two quantitative instruments which were used to measure the variables. The instruments used were the Adult Learner Self-directedness Scale (ALSDS) that was developed for the purposes of the study, and the Student Employability Attributes Scale (SEAS) (Bezuidenhout & Coetzee, 2010).

Step 3: Administration of the psychometric battery

The data was collected by using the postal and marketing research (Bureau of Market Research) services of the higher education institution in question. This institution has a well-developed system for the handling and distribution of material through the postal system.

Step 4: Scoring of the psychometric battery

The responses of the subjects to each of the items contained in the two questionnaires were captured into an electronic spreadsheet format. All the data was analysed by means of statistical analysis, using the statistical programmes SPSS (Statistical Package for Social Sciences) Version 20.0 for the Microsoft Windows platform (SPSS Inc., 2011) and SAS version 9.2 (SAS, 2008) .

Step 5: Formulation of the research hypotheses

The research hypotheses were formulated in order to determine the appropriate statistical analyses to be used.

Step 6: Statistical processing of the data

The statistical programme SPSS Inc., 2008 was used to analyse the data. The statistical procedures comprised the following four stages:

- **Stage 1:** Firstly, an Exploratory Factor Analysis was performed to assess the construct validity of the ALSDS. Thereafter, the categorical and frequency data (means and standard deviations), as measured by the ALSDS and SEAS, were determined for the total sample in order to apply the statistical procedures. Cronbach's alpha coefficients were also determined for the two scales to determine the internal consistency reliability of the instruments used for the purpose of the study.

- **Stage 2:** Secondly, correlation tests were conducted to investigate the direction and strength of the relationship between the variables, as measured by the ALSDS and SEAS. Pearson product-moment correlation coefficients were applied (research aim 1).

- **Stage 3:** Thirdly, inferential statistics were used to enable the researcher to draw inferences about the data. Multiple regressions were performed in order to determine the proportion of variance that may be explained by the independent variable (adult learner self-directedness) as regards the scores of the dependent variable (employability attributes) (research aim 2).

- **Stage 4**: Fourthly, inferential statistical analyses (tests for significant mean differences) were performed to determine whether the gender, race and age groups differed significantly in terms of the constructs measured. Tests for significant mean differences were performed for this purpose (research aim 3).

Step 7: Reporting and interpreting the results

The research results were presented in the form of tables, diagrams and/or graphs while the discussion of the findings was presented in a systematic framework, thus ensuring that the interpretation of the findings was conveyed in a clear and articulate manner.

Step 8: Integration of the research findings

The results of the empirical research were integrated with the findings of the literature review.

Step 9: Formulation of research conclusions, limitations of the study, and recommendations

The final step relates to the conclusions drawn based on the results and their integration with the theory. The limitations of the study are discussed, and recommendations made in terms of workplace training and development, as well as educator teaching and learning practices.

FIGURE 1.1:   RESEARCH METHOD

PHASE 1: LITERATURE REVIEW

Step 1: Self-directedness

Step 2: Employability attributes

Step 3: Theoretical integration

PHASE 2: EMPIRICAL STUDY

Step 1: Determination and descrption of the sample

Step 6: Statistical processing of the data

Step 7: Reporting and interpreting of the results

Step 2: Choosing and motivating the psychometric battery

Step 5: Formulation of reseach hypotheses

Step 8: Integration of the research findings

Step 3: Administering the psychometric battery

Step 4: Scoring of the psychometric battery

Step 9: Formulation of research conclusions, limitations, and recommendations

1.7   CHAPTER LAYOUT

The chapters will be presented in the following manner:

Chapter 1: introduction to and rationale for the study

This chapter will focus on explaining the purpose and rationale of the research study.

Chapter 2: Adult learner self-directedness in an open distance learning context

Chapter 2 addresses the first literature research aim and conceptualises the construct of adult learner self-directedness in an open distance learning (ODL) context. The aim of this chapter is

to conceptualise the construct of adult learner self-directedness in the context of open distance learning and workplace learning, including skills development as indicated in the theory and principles of adult learning, lifelong learning and training and development in the new millennium.

Chapter 3: Employability attributes

Chapter 3 addresses the second, third and fourth literature research objectives, namely, to conceptualise the construct of employability attributes as discussed in the literature; to conceptualise the theoretical relationship between the self-directedness of adult learners and their employability attributes, and to identify the implications of the theoretical relationship between adult learner self-directedness and employability attributes for both organisational training and development (T&D) and ODL educator teaching and learning practices.

Chapter 4: Empirical study

This chapter focuses on the empirical study included in the research methodology used in the study. Firstly, an overview of the study's population and sample is presented. The measuring instruments are discussed and the choice of each measuring instrument justified. This is followed by a description of the data gathering and data processing. Finally, the research hypotheses are formulated.

Chapter 5: Results

This chapter discusses the statistical results of the study and integrates the empirical research findings with the literature review. The statistical results are reported in terms of descriptive, correlational and inferential statistics. The limitations of the study are explained and recommendations made for the field of training and development and for distance teaching and learning practices. The chapter concludes with a summary and integration of the research results

Chapter 6: Conclusions, limitations and recommendations

This is the final chapter in which the research results are integrated and the conclusions reached. The limitations of the study are explained and recommendations are made for the field of training and development and distance teaching and learning, both applied and in terms of further research. The chapter culminates with concluding remarks aimed at integrating the research study.

1.8   SUMMARY

The background to and motivation for the research, problem statement, research objectives, meta-theoretical framework, research design and research methodology of the study were discussed in this chapter. The motivation for this study is based on the principle that an exploration of the relationship between the self-direction of adult learners and their employability may aid trainers and educators in designing and delivering learning programmes at all levels programmes that will not only utilise, but also enhance, the participants' self-directedness attributes, thereby contributing to their ability to take responsibility for their own workplace learning and development and, ultimately, for their own employability attributes in the new millennium workplace.

CHAPTER 2

ADULT LEARNER SELF-DIRECTEDNESS IN AN OPEN DISTANCE LEARNING CONTEXT

Chapter 2 defines and conceptualises the construct of adult learner self-directedness in an open distance learning (ODL) context and, thus, the chapter addresses the first literature review research aim. Self-directedness in individual employees facilitates operational results such as improved employee performance, enhanced employee capacity for critical thinking and inquiry, improved ability on the part of employees to identify and find solutions to problems, knowledge sharing and dissemination and organisational citizenship behaviours. Organisations will also spend less on the training and development of self-directed employees (Guglielmino & Guglielmino, 2011; Karakas & Manisaligil, 2012). In the current tight economic climate a study on self-directedness and, specifically, self-directedness in higher education, open distance learning settings may contribute suggestions vital to the efficiency of both higher education and business (Karakas & Manisaligil, 2012).

In section 2.1 the definitions related to the relevant constructs, including learning, the adult learner, self-directedness and open distance learning, will be examined. In section 2.2 the theoretical models of self-directedness are investigated, while section 2.3 focuses on self-directedness as it relates to the biographical constructs of age, race and gender.

2.1   CONCEPTUALISATION

This section discusses concepts such as learning, adult learning, self-directedness and open distance learning.

2.1.1   Learning

Learning, as a concept, is nebulous and, currently, no generally recognised definition of learning exists (Coetzee, et al., 2013; Erasmus, Loedolff, Mda, & Nel, 2013). Some writers describe learning as the comparatively enduring transformation of a person's current or prospective actions, either by broadening or augmenting his/her existing competencies or by accumulating original, new competencies (Coetzee et al., 2013; Joy-Matthews, Meggison, & Surtees, 2004).

Adopting a different, but not necessarily opposing, perspective, it is possible to focus on whether learning produces not only new competencies and behaviours, but also new ways of thinking that may lead to an unusual re-arrangement of knowledge scaffolds and, ultimately, the unrestricted evolution of innovative knowledge, thus moving towards the notion of developing learning (Erasmus et al., 2013; Ya-Hui, 2009). Developing learning requires active involvement in the learning process in order to nurture the evolution of innovative knowledge by shaping and restructuring knowledge scaffolds (Erasmus, et al., 2013; Ya-Hui, 2009). Nevertheless, however difficult it is to describe the concept of learning, it is common knowledge that learning is part of life although, in the early parts of the twentieth century, there was uncertainty as to whether adults were capable of learning (Baeten, Kyndt, Struyven, & Dochy, 2010; Erasmus et al., 2013; Merriam, 2010). It would appear that the process of learning involves both a psychological construct and an act. Equally, the practice of learning may entail both what the adult learner believes learning to be as well as the practice or behaviours they associate with learning. This may be further refined into what the adult learner wants to achieve from the learning and how they go about learning (Akerlind, 2007; Baeten et al., 2011; Kasworm, 2011).

A distinction is made between children as learners and adults as learners because adults may be seen as comparatively independent, sophisticated beings who function relatively autonomously in the world and who have assumed various life roles, responsibilities and commitments (Coetzee et al., 2013; Mancuso, 2001). Unlike children, adults are usually socially conscientious and of an age where they may be considered accountable for their actions because they are sufficiently aware of their surroundings to take reasonable decisions while they usually act as active agents in their own lives (Billet, 2010(a); Mezirow, 1985). Thus, adult learners should be treated in a different way to children when they engage in learning experiences (Coetzee, et al., 2013; Knowles, 1984).

The goals driving adult learners may differ from those driving children as learners. Adults learn for various reasons, including professional or personal advancement; conforming to the expectations of others; combating boredom or loneliness or for self-improvement and personal gratification (Coetzee et al., 2013; Deggs, 2011; Erasmus et al., 2013; Knowles, 1984). Adult learners are self-sufficient, usually self-governing, fully developed and experienced in life matters (Coetzee et al., 2013; Cretchley & Castle, 2001; Knowles, 1984).

Knowles (1984) first described the concept of "adult learners" (Coetzee et al., 2013; Erasmus et al., 2013). In this description a distinct and definite differentiation was made between adult learners and children as learners. According to the principles of adult learning (Coetzee et al., 2013; Erasmus et al., 2013; Knowles, 1984), adult learners display the following characteristics and needs:

- an autonomous perception of themselves (adult learners see themselves as independent beings, not attached to a parent figure)
- varying personal responsibilities that generate different learning needs
- have accrued life experiences that they bring to any learning experience
- have, in the main, an inner stimulus to learn

Coupled to the specific characteristics of adult learners, the following needs of adult learners may be described:

- to know and understand why they need to learn something
- to be treated as people capable of self-direction (even when their actions indicate low levels of self-direction in learning)
- to link their learning to real-life experiences
- to solve a professional or personal problem or achieve a specific goal through their learning

At the same time, in his classical work, Knowles (1984) theorised that adult learners may contribute significantly to their own learning experience in terms of their willingness and competence to take responsibility for their learning, utilising their life experiences effectively in the learning environment; their desire to apply their newly acquired knowledge and skills, their readiness to learn that is fuelled by their need to solve a problem or accomplish a goal, and their mostly internal motivation to solve a specific problem or realise a particular goal. In effect, Knowles (1984) perceived that because they are naturally inclined to learn and are skilled learners adult learners are capable of and want to be active agents in their own learning.

The main criticism directed at the assumptions underlying andragogy (how adults learn) is that the adult learner is depicted as someone who is separate from and uninfluenced by both culture and situation (Ahmad & Majid, 2010). Education that removes the adult learner from the cultural milieu and its attendant influences does not cultivate in adult learners the capacity for reflective, critical thought processes. The specific focus of adult education should be the application of

information in real-world practical situations encountered in daily life (Billet, 2010(a); Blackburn, 2000; Holton, Swanson, & Naquin, 2001).

One of the major differences between the learning journey of an adult and that of other participants in tertiary education (often called traditional learners) is the unique circumstances of an adult learner (Baeten, et al., 2010; Castles, 2004; Deggs, 2011; Donaldson & Townsend, 2007; Kasworm, 2008; Ross-Gordon, 2011; Stein & Glazer, 2003). Adult learners have often delayed registering for further studies until later in life, they usually register for part-time study, they are often financially independent (although the cost of higher education may be a limiting factor for them), they have people who depend on them for care and they perceive themselves primarily as employees who are studying (Ross-Gordon, 2011). Adult learners have to make careful plans to enable them to commence studying and, eventually, complete their studies. It is, therefore, essential that they manage their time effectively (Castles, 2004; Klein-Collins, 2011). Financial pressure, a lack of effective study skills, worries over personal matters, hostility from their peers about their decision to study and work obligations are some of the dynamics that impact on the learning environment of the adult learner (Castles, 2004; Stein & Glazer, 2003; Hensley & Kinser, 2001; Merrill, 2010; Sachs, 2001).

In addition to the daily challenges facing adult learners in higher education their previous learning experiences may also complicate their higher education experiences. Adult learners enter higher education bearing the burden of both their presuppositions about instructional procedures and techniques and their obligations as adult learners (Baeten, et al., 2010; Donald, 2002; Merrill, 2010; Kasworm, 2008; Klein-Collins, 2011; Knowles, 1984).

Adult learners may find the amount of work, including the required reading, that they have to cover during a limited tuition period daunting and, as a result, they may have to adapt their study behaviour. Adult learners may even find it advantageous to adopt a surface approach to learning, thus ensuring success in their assignments and examinations, rather than them adopting a deep approach that focuses on mastering the learning outcomes to such an extent that the adult learners would be able to apply their knowledge to unrelated situations (Baeten, et al., 2010; Donald, 2002; Merrill, 2001). A lack of confidence in their ability to succeed and the concomitant dread of failing may also adversely influence adult learners (Klein-Collins, 2011).

2.1.3   Self-directedness and adult learning

The term self-directed learning brings to mind suggestions of self-management, autonomy, isolation and remoteness. Self-directed learners are often depicted as solitary figures who learn by relying on their own internal resources, eschewing outside assistance (Botha, 2012; Brookfield, 1985; Ellinger, 2004). Tough (cited in Botha, 2012, p. 395) first described the concept of self-directed learning as a natural, intrinsic attribute that manifests in an individual's daily life and is independent of both the instructor and the educational environment. However, it is palpably impossible for any self-directed learning to come about with no assistance from any resources outside of the adult learner (Billet, 2010; Brookfield, 1985). Research has shown that adult learners rely heavily on external resources when pursuing intellectual development and also that adult learners consciously situate their learning in a communal perspective. However, adult learners may achieve considerable intellectual development independent from formal teaching and assessment practices, but inside informal learning systems and therefore in a social context (Billet, 2010; Brookfield, 1985; Ellinger, 2004).

The major theoretical foundation of self-directed learning is humanistic, focusing on personal improvement with the learner taking responsibility for his or her own learning and the teacher assuming a facilitative role (De Bruin & De Bruin, 2011; Merriam, 1993). Self-directed learning has been described in terms of its goals, the process involved and the adult learner involved (Botha, 2012, p. 387; Ellinger, 2004; Merriam, 2001). The theoretical approach to self-directedness in learning may have as its purpose the cultivation of the adult learner's capacity for self-directed behaviour. The theoretical approach focuses on developing pro-active behaviour in order to empower adult learners to take responsibility for their own learning. A related aim of self-directedness in learning is transformational learning, which focuses on developing self-knowledge through the process of critical introspection in order to promote autonomy in learning. A further objective of self-directedness in learning involves promoting the individual's insights of personal freedom and societal achievement (Billet, 2010(a); Ellinger, 2004; Merriam, 2001).

Self-directedness in adult learners is interconnected with and cannot be separated from their life roles of planning and managing the various facets of their lives, including learning opportunities and career evolution (Coetzee et al., 2013; Cretchley & Castle, 2001; Brookfield, 1985; Knowles, 1984). Knowles was also of the opinion that adults progressed in the development of self-directedness throughout their lives, thereby perceiving self-directedness not as a static

state but as an essential developmental process that contributes to the individual ability to adapt to an ever-changing, contemporary environment (Botha, 2012; Cretchley & Castle, 2001; Knowles, 1984).

Knowles (in Botha, 2012) portrays self-directedness in adult learning (andragogy) as the ability and willingness of learners to activate and take control of their personal learning journeys, either with or without the assistance of others. Self-directedness is a natural evolution of growth into adulthood and is anchored in the profound psychological aspiration of adult learners to be seen and treated by those around them as people skilled in personal autonomy (Ellinger, 2004; Ross-Gordon, 2011). According to De Bruin and De Bruin (2011) and Ellinger (2004), learner autonomy or personal responsibility is the nub of self-directedness. Self-directed learners are critical thinkers who reflect on their own learning, personally assess their mastery of the learning material and their progress towards goal achievement and are able to solve problems effectively by successfully utilising their meta-cognitive abilities (De Bruin & De Bruin, 2011).

The ability of adult learners to be in command of their learning experience over a period of time (the self-management of individual learning) is another significant factor in self-directed learning (Botha, 2012; Ellinger, 2004; Long, 1989). Brookfield (1985) depicts self-directedness as depending on the adult learners' comprehension of their independence from others and on their awareness of their power as individuals to be active (and proactive) agents in their personal circumstances (Botha, 2012). However, it is only when this awareness is fully activated that adult learners are able to attain a state in which they may possess the characteristics of self-directedness. The concept of one person's personal empowerment igniting the personal empowerment of others is analogous of transformative learning theory. Transformative learning theory hypothesises that it is incumbent on adult learners to cultivate a fluid worldview that is predisposed to analysis and change in order to advance their knowledge of their environment and of each human being's distinctive situation (Billet, 2010 (b); Taylor, 2005).

On the other hand, Candy (1990) portrays self-directedness as an individually initiated and individually driven quest for personal growth and self-management (De Bruin & De Bruin, 2011). Self-directedness comprises four facets: personal self-sufficiency, self-administration, adult learner control and autonomous learning (De Bruin & De Bruin, 2011; Karakas & Manisaligil, 2012; Li, Lee & Kember, 2000). The development of self-directedness (or self-management) is a life-long process and may, thus, be augmented by every learning experience. An adult learner's

level of self-directedness is influenced by both the teaching and learning process as well as the adult learner's level of sophistication as a adult learner (Karakas & Manisaligil, 2012; Li, Lee, & Kember, 2000). It would appear that Candy's approach is more compatible with the concept of "open learning". This concept will be discussed in the following section.

Innovativeness, independence and perseverance are all characteristics of those adult learners who are self-directed. Ainoda, Onishi, and Yashuda (2005) perceive self-directedness in learning as indicated by the readiness and eagerness of the adult learner to participate in personally recognised and described learning activities; to actively hunt for information autonomously; to use that information and the facts acquired to cultivate knowledge and, as a result of these actions, to achieve knowledge development through autonomous, independent study (Botha, 2012; Christensen, 2004). Self-directed learners are focused on the future, they are willing and active participants in learning opportunities and they are innovative and creative. In addition, self-directed learners automatically take responsibility for their learning by establishing individual learning goals and by cultivating and utilising the necessary study skills, interest and self- assurance to attain their personal goals successfully (De Bruin & De Bruin, 2011).

However, the literature indicates that the concept of self-directedness in adult learning is nebulous (Botha, 2012; Garrison, 1997). It is multifaceted and various writers may focus on diverse variables in their use of the term. Nevertheless, the one common element in the studies and discussions on self-directedness is that it would appear to apply (or is perceived to apply) primarily to adult learners (Silen & Uhlin, 2008). According to Knowles (1984), self-directedness should be seen as existing on a continuum, where a particular adult learner in one learning situation may display a high level of self-directedness but the same adult learner, in an altered learning situation, may display a lower level of self-directedness. A learner who possesses higher levels of self-directedness will, however, display higher levels of autonomy in the learning situation (Botha, 2012).

2.1.4   Self-directedness and adult learning in open and distance learning

In the post-modern era universities function within an international, complex, changeable and highly market-driven economic environment (Van Den Brink & Fruytier, 2012). Adult learners constitute a significant component of the market for further education (Donaldson & Townsend, 2007; Klein-Collins, 2011; Ross-Gordon, 2011). However, further education may be perceived

as a consumable and not the hub of adult learners' lives – a notion that may be true specifically in the case of adult learners who have multiple roles to fulfil and with diverse demands being made on their time and attention (Donaldson & Townsend, 2007; Rumble, 2000).

Skill-based technological change is quoted as one of the more compelling reasons that drive adult learners back to higher education once they have started working (Jung & Choi, 2009). The fact that employees with higher education levels are earning higher salaries may be ascribed to skills-based technological change and is primarily as a result of a higher demand for such skills in the various labour markets. In addition, it would appear that the remuneration gap between higher qualified and lower qualified employees is increasing as technological advances accelerate (Jung & Choi, 2009). These skills-based technologies may create the need for a new approach to education with this new approach advocating trans-disciplinary education in order to ensure that graduates are equipped with the competencies required to promote the competitive advantage of business organisations and ensure their continued business success (Yawson, 2010).

Technological advances have forever changed the face of education in terms of access, specifically in countries in which human development and the eradication of poverty are national imperatives (Assar, El Amrani & Watson, 2010). The open distance learning approach purports to allow adult learners higher levels of self-management in their educational endeavours while at the same time not excluding adult learners in terms of time and place (Horvath, Peck, & Verlinden, 2009).

Modern distance learning, which harnesses computer and communication technology such as smartphones, the internet and social media, creates learning opportunities that ultimately lead to officially recognised qualifications for a varied adult learner body by using a wide spectrum of technologies (Song, 2013). Thus, the use of technology may collapse the distance between adult learners and teaching staff and between fellow adult learners (Horvath et al., 2009; Howell, Williams & Lindsay, 2003). Thus, a distance learning environment is one that breaks down the barriers which adult learners who want to access further education often experience while providing the flexibility they need (Horvath et al., 2009). Asynchronous distance learning focuses on providing primarily paper-based learning material using postal services, while synchronous distance learning uses computer and sophisticated communication technology

(Horvath et al., 2009). Online distance education creates the impression of face-to-face communication between faculties and adult learners (Coetzee et al., 2013; Horvath et al., 2009). Open distance learning is regarded as a distinctive approach to distance education in that it enables adult learners to access learning opportunities at any time, at any place and using a variety of methods. Thus, open distance learning creates the flexible learning environments which are required in today's fast-changing world (Heydenrych & Prinsloo, 2010). However, the openness in open distance learning not only focuses on the demand side (openness for adult learners) but also on the supply side by challenging accepted assumptions about knowledge, knowledge creation and learning (Heydenrych & Prinsloo, 2010).

It would appear that new learning cultures are emerging and these could be harnessed successfully by open distance learning higher educators. These new learning cultures include the recognition that learning does not take place only in educational surroundings, but everywhere, that it is a lifelong process of which the learner is the manager, that learning may be formal, informal and non-formal and that we can learn much from those around us (Ehlers, 2010). In such a milieu, autonomous learners manage their own learning by utilising social media and communities of expert practice. Thus, learning is now not only learner oriented, but rather it is initiated by the learner. Consequently, the successful informal social network learner is a self-directed learner while the ability to be self-directed is an imperative in ensuring successful lifelong learning (Ehlers & Schneckenberg, 2010).

Learning in open distance learning symbolises the interface between the individual potential to become a productive employee and the knowledge and skills that will form the foundational components of eventual competent performance in the workplace. Whether adult learners acquire new knowledge and experience, broaden existing knowledge and experience or nurture and grow their capacity for producing innovative, new ideas as a result of engaging in open distance learning, it is essential that adult education nurture the ability to apply knowledge within the working environment (Billet, 2010(b)). Adults learn differently as compared to children, whatever the environment. In view of the acknowledged supposition that the technological basis of the open distance learning milieu will provide adult learners with greater autonomy of their learning, the offerings of open distance learning institutions should be adapted not only to accommodate learning autonomy in their adult learners, but also to cultivate autonomous learning when necessary (Heydenrych & Prinsloo, 2010; Horvath et al., 2009). Self-directedness in open distance learning focuses on providing learning experiences that cultivate in adult

learners the capacity for self-directed behaviour that is an essential prerequisite for learner autonomy and, ultimately, success in open distance learning. Adult learners who are self-directed are active agents in their own learning journey, and they use innovative and creative approaches to achieve their learning goals. Self-directed adult learners are more likely to be autonomous learners (Botha, 2012; De Bruin & De Bruin, 2011). The open distance learning milieu demands autonomous adult learners who are eager, not only to take control of their own learning, but also to become innovative thinkers who are capable of using knowledge to generate new knowledge (Heydenrych & Prinsloo, 2010; Ya-Hui, 2009).

In short, adult learner learning is understood to emphasise the progression of knowledge in order to facilitate the nurturing of innovative ideas garnered from meaningful learning experiences. Adult learners are viewed as people who are capable of autonomous, self-directed learning, even when their current learning behaviours do not reflect autonomy and self-direction. Adult learner self-directedness is regarded as an attribute that exists on a continuum and, therefore, self-directedness may be cultivated, given the right learning milieu. Open distance learning may be regarded as the greenhouse in which adult learner self-directedness may be nurtured in order to maximise the developing learning experiences of adult learners and, consequently, cultivate the pioneering, innovative thinkers required by the digital era.

In the next section a selection of models of self-directedness will be discussed. However, the discussion is limited to the most recent models that focus on adult learning in tertiary education environments, with the inclusion of Knowles' classical model of assumptions of adult learning.

2.2   THEORETICAL MODELS OF ADULT LEARNER SELF-DIRECTEDNESS

The following models of self-directedness will be discussed in this section:
- Knowles's classical model of assumptions of adult learning (Knowles, 1984) forms the point of departure of most literary discussions on adult learning. It is for this reason that it is included in this discussion (De Bruin & De Bruin, 2011; Knowles, 1984; Noe, 2013).
- Self-directed learning in educational settings (Garrison, 1997). This model provides a comprehensive view of self-directed learning in education (as opposed to self-directed learning in the workplace) and is included for this reason (Garrison, 1997; Lai, 2011).
- The Chaos vs. Cosmos model (Silen, & Uhlin, 2008) emphasises the tensions that are created both when adult learners are confronted with the imperative to be accountable for

their personal learning and by the adult learners' need to partner with academic staff in the process of growing into self-directedness (Silen & Uhlin, 2008).

- The adult learner self-directedness in open-distance learning settings model (Coetzee & Botha, 2013) attempts to bring together the contextual (pedagogical), behavioural and psychological elements of the self-directedness of adult learners who are engaged in open distance learning experiences (Coetzee & Botha, 2013).

2.2.1 Knowles: Andragogy – the assumptions of adult learning

Knowles (1984) developed the principles of adult learning (andragogy) as an approach to learning that would support adult learners in their mastery of new competencies (Botha, 2012). The principles expounded in the philosophy of andragogy have been both widely accepted and also widely criticised (Caffarella, 1993; De Bruin & De Bruin, 2011). The criticisms levelled at andragogy include the following: it cannot be considered as a theory, the principles ignore the reality of the adult learners' cultural environments and value systems and not all successful adult learners are self-directed (De Bruin & De Bruin, 2011; Caffarella, 1993; Holton et al., 2001; Pratt, 1993). However, in general, most of the principles of the andragogical approach are used in workplace learning, which is one of the environments in which many adults learn (De Bruin & De Bruin, 2011; Knowles, 1984).

The core principles of andragogy are central to the andragogical approach to learning (Botha, 2012, p. 388, Coetzee et al., 2013). These principles describe adult learners in terms of a variety of interrelated cognitive, affective and psychological conditions that affect the learning process and should, therefore, be taken into account in the design and delivery of adult learning interventions.

The core principles of andragogy may be described as follows (Coetzee et al., 2013; Holton et al., 2001; Knowles, 1984; Noe, 2013):

(1) **Principle 1**: Adult learners are self-directed (Coetzee et al., 2013; De Bruin & De Bruin, 2011; Noe, 2013). According to Knowles (1984), the psychological description of the state of adulthood is that of being self-directed. In other words, an adult is someone who has grown to realise and accept that he or she is in charge of and manages his or her life. An adult who has achieved the awareness of self-directedness has a profound psychological desire to be regarded and dealt with by others as an individual who is capable of acting autonomously (Botha, 2012, Coetzee et al., 2013). However, the desire to be seen and

treated as someone who is capable of self-direction may create a challenge for the lecturer in distance learning institutions because many adults who willingly take responsibility for the various life roles in which they are engaged, may display needy, helpless behaviours when confronted with a learning situation (Coetzee et al., 2013; Noe, 2013). Such needy behaviour stems from the habituation in the school environment in which children are taught by a teacher and assume that they are dependent on the teacher for successful learning. Thus, it is incumbent on the adult learning educator, lecturer or training specialist to adopt a variety of strategies that will facilitate the transition from dependent to self-directed learning for adult learners (Coetzee et al., 2013; Noe, 2013).

(2)   **Principle 2**: Adult learners have rich life experiences that may be utilised fruitfully in the learning situation (Coetzee et al., 2013; Noe, 2013). Adult learners take their entire history with them into any learning situation and they need personalised learning experiences (Coetzee et al., 2013, Noe, 2013). The concern with regard to the life experiences of the adult learner is that adult learners would have developed their own values, attitudes, behaviours and biases towards situations and people (Coetzee et al., 2013; Noe, 2013). The life experiences of adult learners contribute significantly to their self-concept. Thus, ignoring their life experiences in the learning situations of adults may generate feelings of rejection in the learners and this is the exact opposite of what the academic or training specialist would wish to achieve (Coetzee et al., 2013; Noe, 2013).

(3)   **Principle 3:** Adult learners need to know why they should learn something if they are to become interested in the learning intervention, learning experience and learning process (Baeten et al., 2010; Coetzee et al., 2013; Noe, 2013). Consequently, adult learners should know and understand why they should participate in a learning experience, what they will be learning, what they will gain from the learning experience and how they will be acquiring new competencies. In addition, adult learners find becoming involved in learning situations useful only to the extent that they feel it will contribute to their life or personal goals in some way (Coetzee et al., 2013; Noe, 2013).

(4)   **Principle 4:** Adult learners are able to experience various stages of readiness to learn (Coetzee et al., 2013; Noe, 2013). Adult learners experience a desire to learn when they are faced with a problem that they need to solve. The needs that drive the stage of readiness to learn may be associated with various developmental life stages (Botha, 2012). Adult learners who are ready to learn will be more willing to participate in the learning experiences that are provided for them and they will be more motivated to take

advantage of opportunities to learn and improve. Adult learners who have enrolled in higher education programmes may be assumed to be ready to learn. However, they may not necessarily be self-directed learners. Readiness to learn may be stimulated by career planning exercises, diagnosing the gap between the adult learners currently find themselves and where they would prefer to be in their life journey, or by introducing credible role models (De Bruin & De Bruin, 2011).

(5) **Principle 5:** The orientation of adult learners to learning is often related to their reason for learning (Coetzee et al., 2013; Noe, 2013). For example, adult learners' readiness to learn is often driven by a desire to become more competent in a specific area in their life. Consequently, they have an orientation to learning that is related to their reason for learning. Thus, an adult learner's orientation to learning may be task-centred, problem-centred or life-centred (Baeten et al., 2010; Coetzee et al., 2013; Noe, 2013). Most adults do not engage in learning situations for the sake of learning, but rather for individual reasons. Hence, the adult learners' life situations should be the focal point of the learning experiences (Coetzee et al., 2013; Noe, 2013). One way of implementing this notion in adult learning situations is to clarify and explain the relevance of subject content to the adult learner's life situation (Coetzee et al., 2013).

(6) **Principle 6:** Adult learners may be either intrinsically or extrinsically motivated to learn (Coetzee et al., 2013; Noe, 2013). Intrinsic motivations such as self-actualisation, realisation of life ambitions, building self-confidence and achieving a better quality of life are the goals that may motivate adult learners. Nevertheless, motivation and what motivates individuals are complex issues and, therefore, it must also be borne in mind that there will be adult learners who are motivated by extrinsic factors such as a better job or a salary increase (Baeten et al., 2010; Noe, 2013).

The assumptions of andragogy would be of no use if they were not taken into account in the design and development of learning interventions and material for adult learners (Coetzee et al., 2013; Knowles, 1984). The andragogical philosophy expounds the design process approach (Coetzee et al., 2013; Knowles, 1984). The educator (from now on referred to as the "learning facilitator") is primarily responsible for designing and guiding a process of knowledge acquisition for the learner. The term "learning facilitator" is used advisedly as the word means learning "enabler" or "helper" (*The concise Oxford dictionary of current English*, 1995) and the purpose of the learning facilitator is to help the adult learner to acquire knowledge (Coetzee et al., 2013). The adult learner, especially in the digital age, has access to several resources for learning while the facilitator is responsible for nurturing the process of individual knowledge expansion

and fostering in the adult learner the capacity to become a self-directed learner (Coetzee et al., 2013). The process of facilitation closely resembles the process of gardening: the gardener may prepare the soil and sow, water and feed the seeds, but only the seed itself is able to grow. In the same way, the facilitator is able to prepare the environment for the adult learner to learn and nurture the adult learner in the learning process, but only the adult learner is able to actually learn (Coetzee et al., 2013).

Knowles (1984) suggests seven steps in the process design of learning situations. This approach encompasses the philosophy of andragogy and focuses primarily on the preparation of the learner and the psychological and physical environment for learning (Coetzee et al., 2013).

(1)   Preparing the adult learners for the learning experience indicates to them the reason why they should become positively involved and engaged in the process of learning, what they will be learning and how they may participate (Coetzee et al., 2013).

(2)   Climate setting focuses on establishing a psychological and physical environment that will inspire adult learners to become fully engaged in the learning process in order to advance in their learning journey (Coetzee et al., 2013). An ideal climate in which adult learners may participate fully is one that nurtures learning (Coetzee et al., 2013), communicates from the outset that the adult learners will be actively involved in their own learning, encourages, even depends on, collaboration between all participants and nurtures trust (Coetzee et al., 2013). The climate should be supportive and reassuring, creating a context in which participants feel valued as human beings (Coetzee et al., 2013). The learning journey should lead to stimulating self-discovery that activates a hunger for more knowledge in much the same way as a plant will flower and then produce more seeds that may become more plants – an endless circle of learning (Coetzee et al., 2013). It is also essential that a climate acceptable of human emotions is established and nurtured (Coetzee et al., 2013). Learning is a quintessentially human exploit and, thus, it is possible, in effect, to state that to be human is to learn (Coetzee et al., 2013). When adult learners are treated as though they are capable of learning (changing their knowledge scaffolds), they will engage more readily in learning endeavours and, consequently, they will become the lifelong learners that the post-modern environment requires them to be (Coetzee et al., 2013). In addition, the physical environment should be comfortable (Coetzee et al., 2013) as being essentially human indicates that most adult learners would

prefer to activate and carry on their learning journey in relative physical comfort (Coetzee et al., 2013).

(3)   Include the adult learners in the planning of their learning (Coetzee et al., 2013). Adult learners tend to be more dedicated to the learning experience when they have been involved in its planning. Involvement in the planning of the learning experience also builds engaged motivation and this, in turn, influences self-directedness (Coetzee et al., 2013; Garrison, 1997). Involvement in planning their learning experiences may vary from encouraging the learners to suggest what they need to learn (this may be difficult in an open distance learning setting) to providing a variety of learning activities from which the adult learners may choose (Coetzee et al., 2013).

(4)   Allow adult learners to identify what they should learn (Coetzee et al., 2013). Difficulties may arise in interconnecting the felt learning needs of the adult learners with those of the employer or profession (ascribed needs) (Coetzee et al., 2013). Both performance management systems and personal development plans may be utilised fruitfully in the work environment to identify both the felt needs and the ascribed needs. In an educational setting, short quizzes, questionnaires or competency models may be used. The essential element of needs identification involves agreeing on a balance between felt and ascribed needs and allowing the adult learners to recognise and express their own learning needs (Coetzee et al., 2013).

(5)   Once the adult learners have identified their own learning needs, they should establish how those needs will be satisfied – which road they should follow in order to grow the competencies that will satisfy the learning needs (Coetzee et al., 2013). This stage of the andragogical design process approach involves adult learners setting their own learning objectives or learning goals

(6)   Implementing each learner's personal learning plan (Botha, 2012). Suggested learning activities for adult learners include investigative projects, analyses of situations, autonomous information gathering and experiential learning (Coetzee et al., 2013).

(7)   Evaluation of the quality of knowledge acquisition and competency development (Coetzee et al., 2013). During this phase, the adult learners should be involved in assessing whether and to what extent they have realised the learning objectives or outcomes they set. The andragogical approach advocates using evidence collected by the adult learners and which would then be authenticated and corroborated by their peers, subject matter experts and the facilitator (Coetzee et al., 2013). Figure 2.1 depicts the principles of andragogy and also the way in which these principles influence the learning milieu.

FIGURE 2.1:   THE PRINCIPLES OF ANDRAGOGY

1 Learner self-directedness	2 Learner life experience	3 Learner need to know why, what & how	4 Learner readiness to learn	5 Learner learning orientation	6 Learner motivation to learn
Varies but still exists	Recognise	How will learning contribute to personal life goals?	Varies	Influenced by readiness to learn	Intrinsic
Nurture growing self-directed-ness through teaching/ facilitation	Personalise learning experiences	Influences motivation	Focuses on personal goals/ problems	Incorporate life situa-tions in learning experien-ces	Extrinsic
	Use in learning situations		Influences motivation		
	Influences motivation				

Source: Adapted from Knowles, 1984.

Figure 2.2 illustrates the learning process design and specific factors that should be considered during each step of the process.

FIGURE 2.2: LEARNING EXPERIENCES PROCESS DESIGN
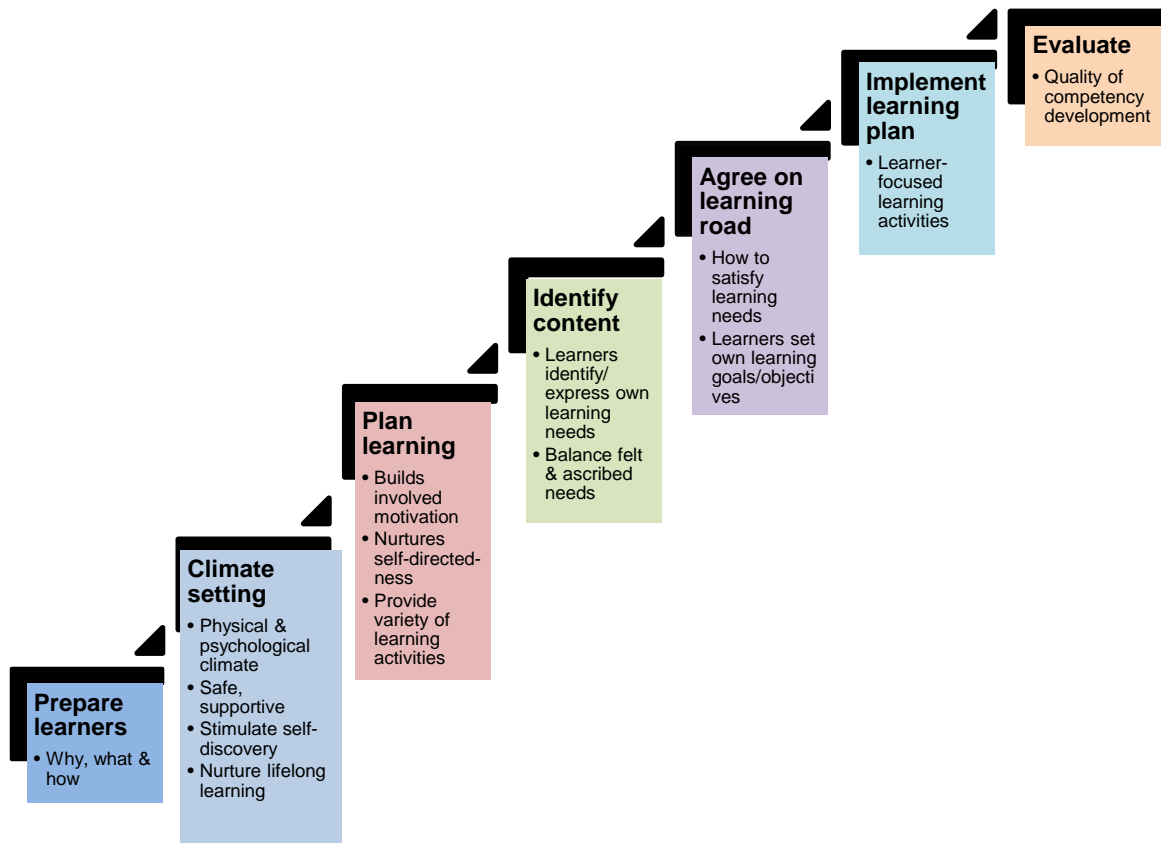
Source: Adapted from Knowles, 1984.

2.2.2 Garrison: Self-directed learning in educational settings

Garrison's (1997) model of self-directed learning in educational settings provides a comprehensive description of three interrelated facets, namely, external management or contextual control (self-supervision), internal monitoring or cognitive responsibility (self-observation) and individual motivation. The latter comprises both entering motivation (the

decision to register at a tertiary education institution) and "task motivation" (the further ongoing line of decisions to engage with the academic work and persevere with the learning behaviours) (Garrison, 1997; Lai, 2011). The self-directed learning in educational settings model proposes to integrate the self-supervision ("self-management" or "transactional or collaborative control") of the physical learning activities and responsibilities with the individual motivational aspects that drive the adult learner to enrol for a course and persist in its activities, and the internal scrutiny of learning that is necessary for individual growth in thought processes and, therefore, the construction of individual knowledge scaffolds (Bergamin, Werlen, & Siegenthaler, 2012; Garrison, 1997; Lai, 2011).

Self-supervision focuses on supervising the visible activities (behavioural actions) which are involved in learning; in other words, embarking on the learning journey in order to achieve personal and learning objectives, engaging with the learning materials and utilising the officially provided learning, as well as the learner support resources and processes (Bergamin et al., 2012; Garrison, 1997; Kasworm, 2011; Lai, 2011). The purpose of this facet of self-directedness is to create a nurturing environment in which adult learners are able to practise self-directedness in their learning in order to foster lifelong learning behaviour (Garrison, 1997, Kasworm, 2011). The context of learning self-supervision in this model constitutes both the social aspect of learning as well as the observable behaviour which adult learners display throughout their course. It is inevitable that a higher degree of adult learner control over the learning process and activities will influence the transactional relationship between the lecturer and the adult learner. The lecturer is responsible for establishing and preserving an energetic dynamic with the adult learner in terms of who exactly is in charge of the learning situation (Garrison, 1997; Kasworm, 2011).

For the adult learner, self-supervision focuses on establishing and continuously forming the learning environment through goal-oriented behaviours (Garrison, 1997; Kasworm, 2011). A collaborative learning context, which is influenced by the adult learner's learning objectives and behaviours, encourages the creation of significant knowledge scaffolds (Bergamin et al., 2012; Garrison, 1997; Kasworm, 2011). In a collaborative learning environment the academic staff provides the necessary academic support, direction and standards that will lead to adult learner success. In other words, the academic staff becomes the facilitators of learning (Garrison, 1997; Kasworm, 2011). Academic management of the adult learners' learning focuses on carefully balancing the proficiency of both of the participants in the learning context, the official learning

resources and the contextual and learner interdependence (Garrison, 1997; Kasworm, 2011). Thus, adult learner self-supervision and academic management mirror each other.

As adult learners continue to develop their capacity for taking control of their learning activities and behaviours they will become increasingly responsible for managing the learning process and constructing their personal knowledge scaffolds (Bergamin et al., 2012, Garrison, 1997; Kasworm, 2011). When adult learners assume greater control of their own learning, they should also become more aware of the need for meaningful learning and this, in turn, will lead to self-evaluation of the learning process. The learner will have to start self-supervising learning to a certain extent before he/she will be sufficiently proficient to engage in the internal scrutiny of learning. The learning context should, therefore, enable the adult learner to self-supervise the learning process (Bergamin et al., 2012; Garrison, 1997). The second aspect of self-directedness is self-observation.

Self-observation refers to the practice of knowing about oneself and one's own behaviours, thoughts and beliefs ("meta-cognition") in order to amend or even to transform the thought processes to fit a specific educational context (Garrison, 1997, Kasworm, 2011). The adult learner starts to analyse both new information and existing knowledge critically and then works with others to authenticate their self-constructed knowledge. Self-observation equals meaning creation (Garrison, 1997; Kasworm, 2011). Self-observation is not only essential in evaluating the quality of the learning that has taken place, but also concomitantly influences the learning methods which adult learners will utilise in their further learning in order to achieve success. Adult learners who take responsibility for their own learning also possess the capacity to self-observe their own learning processes, activities and actions. However, in view of the fact that learning is contextual, the successful self-observation of learning depends on both the learning environment and also the feedback which the adult learners receive not only from their internal self-observation but also from the learning environment (Garrison, 1997; Kasworm, 2011; Silen & Uhlin, 2008). An adult learner who is adept at meta-cognitive thinking will also possess the capacities of introspection and critical thinking (Garrison, 1997; Silen & Uhlin, 2008). Such a adult learner would be able to engage in the practice of reflective learning – willingly returning psychologically and/or spiritually to a specific learning activity or experience in order to develop the ability to observe his or her own behaviour in various circumstances. The expansion of the capacity for self-observation nurtures the facility of meta-cognition and also increases the ability

to build and retrieve knowledge productively and efficiently (Garrison, 1997; Silen & Uhlin, 2008).

Adult learners are able to self-observe their learning when they are skilled at integrating information from various sources and utilising this information both to develop personal meaning and to nurture productive personal learning strategies (Garrison, 1997, 2001; Silen & Uhlin, 2008). Self-observation and self-management are intricately connected. However, adult learners must first experience individual control over the learning context before being able to take responsibility for their learning. Control of the learning context includes personally formulating learning objectives and deciding which learning activities will lead to the successful realisation of the objectives (Bergamin et al., 2012; Garrison, 2001, Kasworm, 2011). Conversely, absolute learner control of the learning context may result in a poor quality of learning. The aim is to establish mutual power over and management of the learning context. Mutual control increases adult learner self-observation and also enhances adult learner learning (Bergamin et al., 2012; Garrison, 2001; Silen & Uhlin, 2008).

Both learning and the construction of meaning do not come about only in an external learning environment – the adult learner's psychological environment may also obfuscate successful learning. Individual motivation is a facet of considerable importance in successful adult learner learning (Garrison, 2001; Taipjutorus, Hansem & Brown, 2012). Although the link between motivation and cognitive activities is not clearly understood, motivation plays a role in the initial decision to enrol for a programme, and continues to play a significant part in the adult learner's decisions to engage with the learning materials in order to achieve success in learning (Bergamin et al., 2012, Garrison, 1997).

A distinction may be made between the decision to enrol in a learning programme – inflowing motivation ("entering motivation") – and engaged motivation – the continued decisions to engage with the learning material and persevere on the learning journey ("task motivation") (Garrison, 1997, Kasworm, 2011). The level of motivation which the adult learner experiences at enrolment (inflowing motivation) will have a direct influence on the adult learner's exertions when engaging with the learning material and activities (engaged motivation) (Garrison, 1997, Kasworm, 2011). Inflowing motivation is the foundation of both personal dedication to an individual objective and the intention to participate actively in the relevant learning materials and activities in order to achieve the goal successfully. Engaged motivation refers to the

predisposition to pursue learning goals vigorously by centring attention, thoughts and activities on and actively persevering in appropriate learning behaviours to ensure that goals are reached in the learning journey (Garrison, 1997; Silen & Uhlin, 2008). The degree of inflowing motivation is established when the adult learner chooses learning objectives and makes the decision to become involved in the learning journey. Inflowing motivation may be regarded as the positive balance in the adult learner's motivational bank account. Thus, a substantial positive balance of inflowing motivation will directly influence the adult learner's continued positive engagement and participation in the learning journey (Garrison, 1997; Silen & Uhlin, 2008).

The individual and environmental qualities of the learning context establish the expected or probable control of the adult learner. Probable control ("anticipated control") is the control the adult learner may anticipate exercising over the success of his/her learning endeavours (Bergamin et al., 2012; Garrison, 1997; Kasworm, 2011). On the other hand, probable control significantly influences individual decisions on how much energy to expound on specific activities – the higher the perception of probable control over an activity, the more energy will be devoted to the activity. In the educational context, probable control has to do with the adult learners' perception of their control over the learning situation (Bergamin et al., 2012). When adult learners are allowed a number of opportunities to manage their learning journey, inflowing motivation may be noticeably reinforced. Increased inflowing motivation will then influence engaged motivation and this will, in turn, cultivate self-directedness (Garrison, 1997; Silen & Uhlin, 2008).

Dynamic engagement with the learning journey enables adult learners to maintain and channel their motivational energy in a positive way (Garrison, 1997; Kasworm, 2011; Taipjutorus et al., 2012). Engaged motivation, personal management of learning activities and assignments and autonomy are intricately and intrinsically linked. Engaged motivation is, in its turn, understood to be strongly related to will (volition). Will (volition) is the deliberate decision to align contradictory emotional and performance preferences with personal learning goals. Adult learners must first be willing to assume responsibility for their own learning journey – to be self-directed – before they start to practise self-directedness in their learning (Garrison, 1997; Silen & Uhlin, 2008).

When it is accepted that quality learning is learning that is both significant and valuable, adult learners' internal motivation can be thought of as the foundation of any quality learning experiences (Candy, 1995, Garrison, 1997; Silen & Uhlin, 2008). Individual motivational states

influence behaviour and, thus, intrinsic motivation in adult learners may cultivate a deep approach to learning. A deep approach to learning is signified by the adult learners' need both to understand the work being studied and to integrate new knowledge with existing knowledge structures and, thus, to create new knowledge and personal meaning (Troskie-De Bruin & Otto, 2004). Adult learners who are internally motivated engage in their learning activities and persist in their learning until they have achieved their goals. In order to nurture intrinsic motivation, educational environments should awaken valid adult learner interest and also the aspiration to construct personally significant knowledge. Real self-directed learning creates a positive, self-reinforcing cycle of intrinsic motivation that leads to externally observable, self-directed learning behaviour. Self-directed learning behaviour is also essential in the development of lifelong learning orientations (Garrison, 1997; Kasworm, 2011).

Adult learner motivation and accountability are two sides of the same coin. In other words, they are intrinsically linked. However, they are also both made possible when academics and adult learners collaborate in the management of the learning journey (Garrison, 1997; Taipjutorus et al., 2012). The essence of self-direction in learning is the desire to engage in deep learning in order to construct personally meaningful knowledge and, as such, is similar to the collaborative constructivist learning philosophy. The lecturer and adult learner should negotiate a process of collaborative management of the learning journey that will achieve mutually inclusive learning goals. In this way, the positive balance in the adult learner's inflowing motivational bank account will increase and this will, in turn, increase engaged adult learner learning (Garrison, 1997; Taipjutorus et al., 2012). However, it is not possible for productive adult learner learning to come about in isolation – the adult learner's own internal resources (motivational orientations and cognitive capacity) must be supported and augmented by the learning atmosphere (characterised by the amount of perceived control the adult learners have over learning goals, approaches to learning and criteria for successful learning) as well as by the educational resources available. In the right context, adult learners will willingly expound the effort they perceive is necessary to achieve their personal learning goals successfully. Adult learner autonomy and collaborative management of the learning process nurture the adult learners' ability to self-observe and self-supervise their learning behaviours and this, in turn, fosters intrinsic motivational dispositions. Intrinsic motivation directly influences the willingness and ability to take personal accountability for learning (Bergamin et al., 2012; Garrison, 1997, Taipjutorus et al., 2012). Figure 2.3 depicts Garrison's (1997) model of self-directed learning in educational settings.

FIGURE 2.3: SELF-DIRECTEDNESS IN EDUCATIONAL SETTINGS

Self-supervision
- goal-directed learning environment
- learning behaviours
- collaborative learning
- managing learning process
- self-evaluation of learning

Increasing area of integration increases self-directedness

Individual motivation
- inflowing motivation – personal dedication
- academic motivation - active perseverance
- high inflowing motivation ▶ academic motivation
- probable student control influence dynamic academic engagements

Self-observation
- knowledge of own learning behaviours
- learning environment and feedback meta-cognition = knowledge creation
- meta-cognition = knowledge creation
- critical thinking ▶ reflective learning

Source: Garrison, 1997.

2.2.3   Silen: Chaos vs. Cosmos; dependence vs. independence

The Chaos vs. Cosmos model (Silen, 2000) emphasises the tensions that are created when adult learners are confronted with both the need to be accountable for their personal learning and also the need to partner with academic staff in the process of growing into self-directedness

(Silen, 2000; Silen & Uhlin, 2008). Two relationships may be identified: (1) the dichotomy between "chaos" (feelings of frustration and disorientation) and "cosmos" (self-created organisation); and (2) the differences between the adult learners' desire for collaboration and what the academic staff think the adult learners need in order to become self-directed. These two relationships influence the adult learners' ability to be active agents in their own learning (Silen, 2000; Silen & Uhlin, 2008).

The relationship between confusion and control generates in the adult learner the impetus to start thinking about what to learn, the learning methods that will be effective, why particular knowledge is important, what the learning goals are and how to achieve these goals (Silen, 2000; Silen & Uhlin, 2008). The adult learners' self-knowledge of their learning goals and needs (what they want to learn and how they want to learn it) is the starting point of their journey to grow into active agents of their own learning. In the learning journey, the adult learners' acquisition of knowledge is focused on their personal curiosities and internal learning desires. Thus, learning becomes a personal preference and not only an activity in which the adult learner engages for the sake of passing an examination (Silen & Uhlin, 2008). Constructive, timely feedback on both learning behaviours and learning content as well as physically experiencing the reality of managing one's own learning are decisive factors in moving from feelings of confusion to feeling in control (Silen & Uhlin, 2008).

In the educational exchange between adult learner and the faculty concerned, the academics create the educational framework for the adult learners (Silen & Uhlin, 2008). The faculty's interpretation and implementation of this framework define the opportunities that adult learners may utilise to take control of their learning. The fundamental issues in programme structuring and the circulation of an educational programme and its component parts include decisions about the knowledge requirements of a course, the way in which knowledge should be communicated and learnt, why the knowledge is sufficiently important to be included in the programme, how adult learners should approach their learning, what the results of the learning should be and how the learning will be assessed (Silen & Uhlin, 2008). Adult learners who are self-directed should be able and allowed to deliberate on and find suitable answers to these questions. Research has established that educational prerequisites on their own do not enable adult learners to become autonomous in their own learning (Silen, 2000; Silen & Uhlin, 2008). Adult learners should cultivate the ability to successfully utilise the opportunities for autonomy with which they are provided in the educational context. In addition, adult learners should

develop the ability to weigh up the consequences of their educational choices against the opportunities for autonomy that are provided. Adult learners who perceive that they are able to control their learning context and who have cultivated the necessary know-how will become autonomous learners. In the same vein, adult learners who continue to feel disoriented, frustrated and adrift in an unfamiliar educational context will remain dependent and they will display behaviours associated with surface learning, including seeking cues as to what information is important and which answers are correct (Silen, 2000; Silen & Uhlin, 2008). Figure 2.4 depicts the Chaos vs. Cosmos/collaboration vs. self-directedness model developed by Silen (2000).

FIGURE 2.4: CHAOS VS. COSMOS; COLLABORATION VS. SELF-DIRECTEDNESS
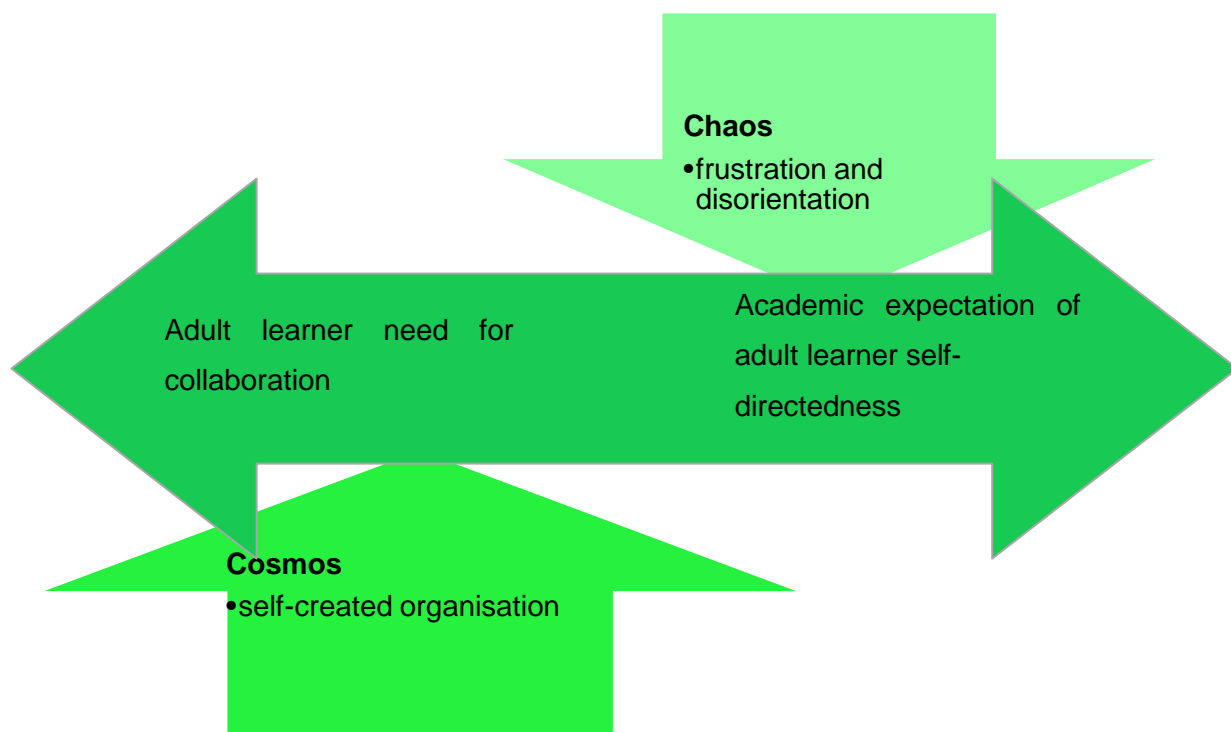
Source: Adapted from Silen, 2000.

2.2.4   Botha: adult learner self-directedness in open distance learning settings

Botha's (2013) adult learner self-directedness in open distance learning model attempts to bring together the contextual (pedagogical), behavioural and psychological elements of the self-

directedness of adult learners who are engaged in open distance learning experiences. The university setting, by definition and purpose, administers a measure of control in adult learner learning. On the other hand, the open distance learning milieu requires a degree of the adult learner self-directedness that has been mentioned by researchers, and possibly assumed, but which has not yet been investigated (Klein-Collins, 2011). Accordingly, the purpose of the adult learner self-directedness in open distance learning model is to identify the elements of self-directedness in open distance higher education, as displayed by the self-reported study behaviours and success beliefs of adult learners. The components of the model are as follows:

1 **Strategic utilisation of officially provided resources.** This construct relates to when and how adult learners utilise the official resources provided by the university in their role as active adult learners (Fowler, 2008; Garrison, 2000; Gibson, 2011; Jones & Healing, 2010). The strategic utilisation of resources clarifies for which purpose, and at which time in their learning journey, adult learners utilise resources such as study guides and tutorial letters. These are historically the university's main source of communication with the adult learner cohort. The element of strategic utilisation of officially provided resources affords an indication of the learning scenario created by the university and also how adult learners choose to interact with the learning situation. The strategic utilisation of officially provided resources may be seen as relating to pedagogical control, academic management and/or adult learner dependence/independence in the learning scenario (Garrisson, 2000; Gibson, 2011; Silen & Uhlin, 2008). These self-reported behavioural indicators specify the way in which the adult learner voluntarily interacts with the learning scenario in order to become familiar with its functions and also whether the adult learner utilises the resources for the intended purpose. The resources provided by the university indicate how the university defines and manages the learning scenario. The way in which the adult learner interacts with the officially provided resources may also provide an early indication of specific self-regulatory behaviours such as setting goals, self-evaluation of study guide assessments and scrutinising the feedback on assignments to determine where mistakes were made in the assignment answers (Gibson, 2011; Jungert & Rosander, 2010; Silen & Uhlin, 2008).

2 **Engaged academic activity.** This construct describes the intentional, purposeful learning actions in which that adult learners engage and that are directly related either to furthering their studies or to improving their knowledge and skill (Bashrina; 2009, Jones & Healing, 2010; Luckett & Luckett, 2009; Lombardi et al., 2011; Van Den Bogaard, 2012). Engaged academic activity illuminates the way in which the adult learners involve themselves with

the learning material, focusing specifically on the adult learners' construction of a learning strategy and its subsequent implementation. The construct also describes the amount of effort in the form of time spent per module which the adult learner actually dedicates to his/her tertiary studies. This component is, therefore, the counterfoil of the facet of interaction with learning materials, as described above, while also including limited elements of autonomous study behaviour (Garrison, 1997; Long, 1989; Lombardi et al., 2011; Silen & Uhlin, 2008). This construct provides an indication of the academic maturity of adult learners in the sense that it indicates their ability to realise the amount and type of effort they should invest in their academic endeavours in order to ensure success and also their ability and/or willingness to plan pro-actively for study time. Engaged academic activity indicates how the adult learner defines and manages the learning scenario (Garrison, 1997; Lombardi et al., 2011; Silen & Uhlin, 2008; Van Den Bogaard, 2012; Vansteenkiste, Lens & Deci, 2006).

3   **Success orientation for open distance learning.** This construct refers to the self-reported thought patterns of adult learners that display their level of self-confidence in their ability to be successful in the pursuit of their studies in an open distance learning environment (Bashrina, 2009; Luckett & Luckett, 2009; Moneta, Spada, & Rost, 2007). Success orientation for open distance learning indicates the mental toolbox which the adult learner possesses and which will contribute to self-efficacy, resilience, persistence and innovative problem solving attitudes as these relate to his/her academic activities. This element of the model corresponds with the psychological dimension of autonomy, individual motivation, adult learner independence and personal self-sufficiency as described in the various models of self-directedness (Christensen, 2004; Garrison, 1997; Silen & Uhlin, 2008). Success orientation for open distance learning indicates which of the psychological components of specific elements of self-directedness distance education the adult learners possess.

4   **Academically motivated behaviour.** This construct describes the self-reported behaviour of adult learners that may be construed to display either an intrinsic or extrinsic orientation to motivation as regards academic activities as well as the resilience and problem-solving behaviours of the adult learners (Henderson-King & Smith, 2006; Silen & Uhlin, 2008; Vansteenkiste et al., 2006). This construct revolves around whether distance education adult learners are sufficiently self-motivated for distance learning, whether their behaviour indicates that they possess the requisite characteristics and/or attitude of resilience and whether they are capable of finding novel solutions to academically-based

problems. Thus, the construct relates to the behaviours that one may expect in a distance learning scenario from adult learners who possess psychological self-directedness, individual motivation, a desire for personal development and personal self-sufficiency (Garrison, 2000; Silen & Uhlin, 2008, Vansteenkiste et al., 2006; Zimmerman, 2002). Academically motivated behaviour is the behavioural counterfoil for the element of success orientation for open distance learning. It indicates the behaviours which adult learners display and that suggest the presence of certain of the psychological components of self-directedness.

It is not possible either to consider or investigate the four facets of the model in isolation. Each facet influences and is influenced by the others as regards cultivating self-directedness in the adult learner. In addition, each of the four facets identified consists, in its turn, of foundational constituents of self-directedness that have been found to contribute in varying degrees to adult learner success (Silen & Uhlin, 2008; Taipjutorus et al., 2012). It is also essential that a study of the elements of self-directedness in adult learners not focus solely on either psychological aspects or behavioural aspects, but that it emphasise both the psychological and behavioural elements of self-directedness. Learning is contextual (Garrison, 1997, Candy, 2000; Silen & Uhlin, 2008; Zimmerman, 2000) and, thus, the concept of self-directedness should also include the elements of the learning scenario (Candy, 2000; Garrison, 1997; Silen, 2000; Silen & Uhlin, 2008; Zimmerman, 2002).

The four elements described in this model attempt to focus separately (in as far as that is possible) on the four facets of self-directedness in open distance learning: the strategic utilisation of the officially provided learning resources and engaged academic activity as it relates to the learning scenario as well as the various sources of definition and control which are utilised by both the academic provider and the adult learner, while also embracing some elements of self-regulating adult learner behaviour. Success orientation for open distance learning and academically motivated behaviour shine the light on the psychological and behavioural aspects of self-directedness within the open distance learning context. Thus, in this way the model attempts to provide a comprehensive view of the self-directedness of adult learners in an open distance learning framework (Garrison, 1997; Kasworm, 2011; Silen & Uhlin, 2008).

Engaged academic activity relates to the ability to personally take control of the learning environment by successfully utilising the officially provided resources in order to create new knowledge scaffolds and reorganise existing knowledge scaffolds so as to produce evolutionary, innovative knowledge. The realisation on the part of the adult learner that he or she can and should take control of his or her personal learning and actively utilise the official resources is an essential component of success in distance learning (Garrison, 1997; Rovai, 2002; Lombardi et al., 2011; Silen & Uhlin, 2008). Success orientation for open distance learning and academically motivated behaviour both encompass self-efficacy, tenacity, creativity and ingenuity in the learning scenario (Ponton, Carr & Derrick, 2004, Taipjutorus et al., 2012; Vansteenkiste et al., 2006; Zimmerman, 2002). In distance learning, adult learner tenacity (persistence) is of critical importance. Tenacity may be described as the ability of the adult learner to persist in a specific endeavour, irrespective of either difficulties or the length of time required for the distance education adult learner to stay engaged in the learning process. On the other hand, creativity entails an agentic, personally original approach to both the learning situation and the problems encountered in that situation while ingenuity involves the imaginative use of learning and problem solving skills and strategies in order to master the learning material and achieve the required outcome (Garrison, 1997; Kasworm, 2011; Rovai, 2002). These three elements, namely, tenacity, creativity and ingenuity, are, in their turn, influenced by the individual ability to realise the possibility and accomplish the feat of being an active agent in the individual's life and learning (Garrison, 1997; Ponton et al., 2004; Silen & Uhlin, 2008). Other elements of autonomy in learning include goal-directedness, an orientation to action, active, creative problem solving and the ability to initiate action (Ponton et al., 2004; Rovai, 2002; Van Dinther, Dochy & Segers, 2011).

Research has shown that goal setting nurtures individual motivation (Ponton et al., 2004; Van Dinther et al., 2011). In self-directed learning, the thinking is as follows: adult learners set goals, assuming that the realisation of these goals will lead to a sought-after outcome. For example, adult learners may set themselves the goal of achieving a tertiary qualification, assuming that the qualification will ensure a highly paid job. Conversely, the personal perception of one's capacity to engage successfully in those activities that will lead to goal achievement (self-efficacy beliefs) plays a role in the goal-directed behaviours (Rovai, 2002; Ponton et al., 2004; Van Dinther et al., 2011; Vansteenkiste et al., 2006). The majority of people will not engage in activities if they believe that they will be unsuccessful and, thus, it is crucial that a researcher not ignore the importance of self-efficacy beliefs in the context of self-directed learning in any

learning environment (Ponton et al., 2004; Taipjutorus et al., 2012). In addition, nurturing in adult learners the capacity for ingenuity is a significant constituent in the fostering of tenacity in adult learners and the consequent facilitation of self-managed learning. Adult learners need to cultivate both ingenuity and tenacity if they are to be effectively motivated for their open distance learning encounters. The fostering of positive self-efficacy beliefs is intrinsically linked to the cultivation of ingenuity, creativity and tenacity which would probably falter in the absence of self-efficacy beliefs (Ponton et al., 2004; Van Dinther et al., 2011; Zimmerman, 2002).

Self-efficacy beliefs in adult learners are related to academically motivated behaviour. Adult learners who display academically motivated behaviour will engage comprehensively with the module content, they will work more consistently on their academic tasks and they will experience more positive emotions, even when difficulties arise, as compared to an adult learner who does not display academically motivated behaviour (Taijuptorus et al., 2012). Thus, an adult learner who displays academically motivated behaviour will possess positive self-efficacy beliefs and will willingly and enthusiastically engage with difficult, perplexing academic tasks. In addition, self-efficacy beliefs influence the amount of effort which adult learners devote to academic tasks and also how well adult learners perform. There is also a positive relationship between self-efficacy beliefs and adult learner tenacity (persistence) (Taijuptorus et al., 2012; Zimmerman, 2000). Academically motivated behaviour may be developed by creating opportunities for adult learners to experience real success when they cope with a specific problem (Van Dinther et al., 2011). By exposing adult learners to authentic confirmation of their ability to be successful in an endeavour, the opportunities for dealing successfully with real problems will nurture a robust individual perception of self-efficacy. Success gives birth to a sound belief in self-efficacy while failure spawns a lack of belief in self-efficacy. The caveat is that a strongly developed sense of self-efficacy may be nurtured only through grappling with real, difficult obstacles that require sustained exertion and tenacity (Van Dinther et al., 2011).

A meaningful relationship exists between the many emotions which adult learners experience in an academic environment and their subsequent academic success (Taipjutorus et al., 2012). Feelings of optimism and confidence nurture self-regulated adult learner behaviours while adult learners who experience feelings of inadequacy and helplessness tend to seek help from external guidance and support systems. Hopelessness, boredom and frustration have a negative effect on both adult learner motivation and academic effort (Pekrun, Goetz, Titz, & Perry, 2002, Taipjutorus et al., 2012).

The significance of the development of self-efficacy by providing various forms of feedback information to adult learners originates in the conclusion that it is possible to foster adult learner self-efficacy in tertiary education encounters (Van Dinther et al., 2011). Practical experiences are the most powerful tool as regards the development of self-efficacy, provided such experiences are sufficiently challenging and provide the adult learners with sufficient opportunities to apply relevant knowledge and skills in task performance. However, care should be taken in the development of practical learning experiences to match the authenticity level of the experience with the adult learners' level of competency, the complexity of the assigned task and the supervision that is possible in the learning scenario (Van Dinther et al., 2011). The element of success orientation for open distance learning in Botha's model describes the self-efficacy beliefs of the adult learners.

Autonomy in learning is often described in research by focusing on adult learner activities or behaviours. These behaviours include the ability and willingness to set learning goals, organise and plan learning activities, secure relevant learning resources and review the progress towards goal achievement (Kasworm, 2011; Ponton & Carr, 2000, Silen & Uhlin, 2008). In Botha's model, the behaviours associated with autonomy are encompassed in the term engaged academic activity. Autonomous learners are active agents in their own learning, consciously deciding to engage in behaviours that will enhance their learning experience (Kasworm, 2011; Pintrich, 2004). When an adult learner displays autonomy in learning, that adult learner has taken the initiative to engage with the learning material and other sources of learning, the adult learner will persist in the required action until success has been achieved and the adult learner will be resourceful in the pursuit of the goal which has been set, finding creative ways to overcome difficulties in order to attain the goal (Kasworm, 2011; Ponton & Carr, 2000; Silen & Uhlin, 2008).

The hiatus between the intent to engage with the learning material and the evolution to action is termed action-orientation (Ponton & Carr, 2000; Silen & Uhlin, 2008). An adult learner should, at least, have a broad idea of what is to be achieved and also some semblance of how to achieve a goal before any action may be taken. Educators may make suggestions regarding appropriate learning behaviours and strategies while leaving the adult learners the freedom to choose those behaviours and strategies that best suit their unique situation. The quintessential element of the role of the university educator is that of facilitation or guidance, not prescription. In this way the

adult learner will master not only the subject related knowledge of a module but will also nurture the competencies of goal setting and planning for study, which, essentially, comprise action-orientation (Ponton & Carr, 2000; Silen & Uhlin, 2008).

The reverse side of the coin of action-orientation is self-startedness – the behaviour that manifests the motivation to act. A self-started adult learner is capable of independently setting learning goals, formulating a learning strategy and progressing towards goal achievement, despite complications that may arise (Kasworm, 2011; Ponton & Carr, 2000; Silen & Uhlin, 2008). Consequently, self-startedness implies an active approach to problem solving, specifically the problems related to the achievement of the learning goals. The role of the academic educator is to facilitate the realisation on the part of adult learners that they should be active agents in their own learning and also that they should create their own learning opportunities, based on their own unique needs and circumstances (Kasworm, 2011; Ponton & Carr, 2000).

An autonomous learner engages in self-regulatory learning behaviours (Black & Deci, 2000; Garrison, 1997; Silen, & Uhlin, 2008). Autonomous adult learners want to know, continuously, how far and how well they have travelled on the road to goal achievement (Garrison, 1997; Silen, & Uhlin, 2008; Ponton & Carr, 2000). Thus, adult learners should be able to monitor their own progress as well as to assess whether the learning strategies they are currently employing are appropriate for the learning context and then adjust these learning strategies when necessary (Garrison, 1997; Silen, & Uhlin, 2008; Ponton et al., 2000; Zimmerman, 2002).

The strategic utilisation of the officially provided resources aspect of self-directedness relates to the adult learners' goal-directed and self-monitoring behaviours, or self-regulated learning. Self-regulated learning involves the adult learners using their cognitive competence to achieve academic success, thereby acting as pro-active agents in their own learning (Garrison, 1997; Silen, & Uhlin, 2008; Zimmerman, 2002). The utilisation of official resources indicates the extent to which adult learners realise that they may be pro-active agents in their own learning by recognising that learning resources, other than the prescribed books and officially prescribed reading such as articles, are useful means to realise success in their learning journey. This element of the model also indicates when and to what purpose in the learning journey adult learners prefer to utilise specific resources. A tutorial letter either contains assignment questions, feedback on assignments or information on the forthcoming examination. A self-

directed, self-regulating adult learner will at least use the feedback provided in a tutorial letter to gauge his/her mastery of the learning outcomes associated with a specific learning unit (Black & Deci, 2000; Garrison, 1997; Silen, & Uhlin, 2008). On the other hand, a study guide is a useful map for guiding the adult learner successfully through the learning journey, indicating which sections of the prescribed material is important and providing practice opportunities to master the important knowledge and skills associated with the learning content. Thus, a self-directed adult learner will utilise a study guide as a map for navigating the learning journey, thereby broadening his or her perspective and cognitive scaffolds, and not only as a way of establishing useful questions from the learning material, subsequently searching for and memorising these answers in order to pass an examination. The latter behaviour may only add to an existing knowledge scaffold but create no possibility of developing new knowledge scaffolds (Garrison, 1997; Silen, & Uhlin, 2008). When the interrelatedness of the concept of self-directedness is considered, then the behaviour manifested by adult learners in their utilisation of the official learning resources provides a suitable measure for determining their level of self-regulation and such behaviour may, thus, be regarded as one of the components of self-directedness (Garrison, 1997; Silen, & Uhlin, 2008). In terms of the various descriptions and models of self-directedness, the officially provided resources may represent the element of pedagogical control, academic management and/or academic interpretation of the educational framework. However, the way in which the adult learner views the officially provided resources and how they are utilised in the learning journey will indicate the adult learners' level of or orientation to strategic utilisation of officially provided resources, one of the elements of self-directedness in learning. Essentially, reporting on these behaviours will indicate the adult learners' comprehension of the learning context and their role as active learners within that context (Garrison, 1997; Silen & Uhlin, 2008).

Academically motivated behaviour is associated with academic motivation. Academic motivation may be conceptualised as consisting of both controlled motivation and autonomous motivation (Vansteenkiste et al., 2006; Silen & Uhlin, 2008). Controlled motivation is related to pressure or coercion while autonomous motivation is related to both self-will and the ability to make independent decisions. Intrinsic motivation and, in some instances, extrinsic motivation are usually associated with autonomous motivation (Vansteenkiste et al., 2006; Silen & Uhlin, 2008). An adult learner who displays intrinsically motivated study behaviour will derive satisfaction from achieving success in his or her studies and not from influences such as recognition and esteem. Consequently, an intrinsically motivated adult learner will engage with a

learning activity for its own sake. On the other hand, an externally motivated adult learner will engage with a learning activity for the sake of achieving a learning goal, and not for the sake of the activity itself (Vansteenkiste et al., 2006; Silen & Uhlin, 2008). Research has shown that including external rewards and/or external controls in activities which are essentially engaged in as a result of their intrinsic value for the adult learner, decreases the adult learners' intrinsic curiosity and continued engagement. However, the extrinsic motivation associated with a desired behaviour does not, inevitably, threaten intrinsic motivation and it is possible that extrinsic motivation may augment intrinsic motivation (Vansteenkiste et al., 2006). Extrinsic motivators may be internalised and, thus, enhance intrinsic motivation. When an adult learner identifies strongly with the relevance of a learning activity, and is able to realise that the learning activity contributes to his/her learning, the adult learner will then be able to accept the external regulation of the activity and, thus, the externally controlled activity may enhance the intrinsic motivation (Vansteenkiste et al., 2006; Silen & Uhlin, 2008). However, the external regulation of learning behaviours, such as imposing deadlines or offering rewards, may result in motivation that is not internalised by the adult learner and, thus, create the impression of either coercion or external motivation. A learning context that nurtures autonomous motivation will cultivate intrinsic motivation and inspire a natural curiosity in a learning activity. In turn, this will enhance competence and the realisation of learning outcomes (Vansteenkiste et al., 2006; Silen & Uhlin, 2008).

It is, therefore, clear that theoretically the four facets of self-directedness in open distance learning are interrelated and influence each other. The adult learner who displays a positive success orientation to open distance learning will probably engage in activities that display academically motivated behaviour while he or she will probably utilise the officially provided resources strategically and demonstrate the behaviours associated with engaged academic activity. Conversely, the adult learner with low levels of success orientation to open distance learning will possibly lack some of the psychological requirements of self-directedness such as resilience and self-efficacy. These, in turn, will manifest and adversely affect behaviours such as the strategic utilisation of official learning resources, academic engagement, engaged academic activity and problem solving attitudes and strategies. As in any other situation in which one deals with a heterogeneous group, socio-biographical differences may also impact on the level of self-directedness of adult learners (Zimmerman, 2002). Figure 2.5 illustrates adult learner self-directedness in open distance learning settings as visualised by Botha (2013).

FIGURE 2.5:   SELF-DIRECTEDNESS IN ODL

- interaction with learning material
- how, when and why
- offical involvement in learning scenario

- learning actions
- learning strategy and implementation
- effort (time)
- student management of lerarning scenario

Resource utilisation

Engaged academic activity

Academically motivated behaviour

Success orientation for ODL

- intrinsic/extrinsic
- controlled/autonomous
- creativity
- ingenuity
- problem solving behaviours

- self-confidence and self-efficacy
- resilience
- persistence

Source: Botha, 2013

In the following section the person-centred variables that influence the self-directedness of adult learners will be further explored.

2.3   VARIABLES INFLUENCING ADULT LEARNER SELF-DIRECTEDNESS IN OPEN DISTANCE LEARNING

Cultural influences play an important role in the learning of adults and may even influence learning style preferences (Ahmad & Majid, 2010). The cultural contexts of adult learners may inform the development, or lack thereof, of their self-directedness, autonomy and willingness to be active agents in their own learning. The hub or foundation of self-directedness, namely, learner autonomy, is profoundly influenced by cultural norms and expectations (Ahmad & Majid, 2010). Cultural norms and behaviours are so deeply entrenched in individual behaviour that they are automatically displayed in the behaviour of adults with no conscious thinking being

involved in this process. In cultures in which collectivism is the norm, autonomous action may be suppressed by social norms (Ahmad & Majid, 2010).

In a 2011 study conducted by Guglielmino and Guglielmino (2011), they found that there are significant associations between the cultural dimensions, as described in Hofstede's Dimensions of National Cultures, and self-directed learning readiness. Specifically, individualism and power distance are significantly associated with higher levels of self-directed learning readiness. Individualism strongly predicts self-directed learner readiness with high individualism being an indication of the willingness of the adult learner to be an active agent in his/her own learning although this does not exclude the willingness to also be of assistance of others (Guglielmino & Guglielmino, 2011). Conversely, a high power distance in countries in which power is not distributed equally in society and this status quo is accepted by the people predicts a lower level of self-directed learner readiness. Individuals in these societies do not see themselves as being able to be active agents in their own lives and capable of changing their own situations and, therefore, they struggle to view themselves as independent learners. Thus, culture strongly influences self-directed learning (Guglielmino & Guglielmino, 2011). Interestingly, this study of Guglielmino and Guglielmino (2011) also found that there is a strong positive relationship between relative economic prosperity and self-directed learning readiness (Guglielmino & Guglielmino, 2011). However, little was found in the research to indicate whether and/or how self-directedness is influenced by socio-demographic variables such as race, gender and age. Accordingly, this research study attempts to address this gap by investigating the link between the self-directedness of adult learners and their race, gender and age.

Liddell (2008) found positive associations between readiness for self-directed learning and education levels although readiness for self-directed learning is negatively associated with job tenure. On the other hand, it was not possible to find a relationship between readiness for self-directed learning and age. Oliveira and Simões (2006) found an indirect relationship between self-directedness, age and education level, while Reio and Davis (2005) found a low, but statistically significant, relationship between readiness for self-directed learning and culture, as well as between readiness for self-directed learning and age, although no significant relationship could be found between self-directed learning readiness and gender. This same study by Reio and Davis (2005) found that, when the data is controlled for ethnicity, a significantly variable relationship exists between readiness for self-directed learning and age. In the study by Reio and Davis (2005) readiness for self-directed learning increased significantly as age increased,

with young males between 14 to 20 years old displaying the lowest levels of readiness for self-directed learning. A significant relationship has been found between self-directedness and cross-cultural adaptability. Cross-cultural adaptability consists of emotional resilience, flexibility and personal autonomy, specifically among citizens of the United States working abroad (Chuprina & Durr, 2006). However, it must be pointed out that these studies were conducted in the United States and it may not be feasible to extrapolate the results to the unique South African environment.

Derrick, Ponton, Hall, Rhea and Carr (2005) found that a causal relationship exists between self-efficacy and autonomy in learning, specifically as regards resourcefulness, initiative and persistence. Adult learners participating in online courses were found to possess higher levels of independent learning than adult learners attending traditional classes in higher education (Derrick, Ponton, & Carr, 2005). It would appear that women possess lower academic self-efficacy than men (Huang, 2013) but, once again, these studies included mostly samples from North America and Europe. A study conducted in South Africa into the self-efficacy of female and male adult learners with regard to electricity as a subject in a technology teacher programme found that the female adult learners showed lower levels of self-efficacy as compared to the male adult learners and were also culturally not encouraged to participate in technology or science related subjects, while male adult learners were culturally expected to perform well in such subjects and also received more encouragement than women (Mackay & Parkinson, 2008). Chan, Liu, Sung, Lin, Cheng, and Cheng (2013) found that women adult learners displayed significantly lower perceived levels of internet self-efficacy than their male counterparts although, conversely, the female adult learners received significantly higher marks in their final assessments than the male adult learners. It would appear that women tend to set more difficult goals than men, while men are more willing to engage in difficult tasks because they possess higher levels of self-efficacy (Vieira & Grantham, 2011).

In a study conducted in the United Kingdom, Richardson (2011) found no difference in the academic engagement of adult learners of different racial groups although male adult learners in a science course indicated higher levels of engagement than the female adult learners (Hampden-Tompson & Bennett, 2013). As was stated previously, most of the research findings cited above were based on studies conducted in first world countries, and little information could be found on South African adult learners in higher education.

2.4 THE IMPLICATIONS OF SELF-DIRECTED LEARNING FOR OPEN DISTANCE LEARNING AND THE WORKPLACE

In this section, the implications of self-directed learning and its nurturing for the open distance learning milieu and the post-millennium workplace are explored further.

2.4.1 Self-directed learning in the ODL context

The concept of open distance learning accommodates the precept adopted and widely communicated by Knowles (1984, cited in Botha, 2012, p. 87) that adult learners should be able to access higher education opportunities if and when they experience personal feelings of motivation (needs and/or desires) as regards furthering their education. In addition, higher education institutions should prepare adult learners for the work environment by facilitating the development of autonomous, lifelong learning and, in this way, develop both subject-specific competence and also the capacity for advanced reasoning (Candy, cited in Dynan et al., 2008; Donald, 2002). In the post-modern, digital era, adult learners may be able to more readily develop and display the capacity for self-directedness in learning (Karakas & Manisaligil, 2012). E-learning, online or web-based learning, social media, social networking and digital devices may create learning contexts that are easily available, interactive and adaptable to individual requirements. In such contexts, adult learners may automatically assume control of and manage their learning experience autonomously, while also becoming accustomed to creating their own knowledge (Karakas & Manisaligil, 2012). Self-directedness in individual employees creates operational results such as improved employee performance, enhanced employee capacity for critical thinking and inquiry, improved ability to identify and find solutions to problems, knowledge sharing and dissemination and organisational citizenship behaviours. Organisations will also have to spend less on training and development (Guglielmino & Guglielmoni, 2011; Karakas & Manisaligil, 2012).

Cultivating and nurturing self-directed learning in adult learners should be based on creating a fit between the level of self-directed learning required and the adult learner's own progress in self-directedness (Hiemstra, 2011). Thus, teacher directed offerings should be progressively replaced with self-directed offerings over the course of a programme at a tertiary institution. In addition, self-directed learning should be applied in the context of learning activities while all teaching should focus on developing subject knowledge as well as nurturing adult learner self-

directedness simultaneously (Hiemstra, 2011). Hiemstra (2011) offers the following suggestions for educators in open distance learning institutions:

- find learning resources that will achieve learning needs and outcomes and guide adult learners to these resources
- utilise various sources of expertise and distribute knowledge from these sources to adult learners
- find and employ various means to stimulate and retain learner interest
- create and nurture a positive learning experience through positive feedback
- cultivate and nurture self-assessment and reflective practices among adult learners
- unlock and nurture creative, critical thinking

How would one go about nurturing the will to be self-directed in learning? The motivational inclination to be self-directed in learning is controlled by both external contexts and internal orientations. Compulsory, pre-developed learning tasks, goals and criteria may play a role in augmenting intrinsic motivation, but may also diminish the will to be autonomously responsible for learning. Sustained learning is, in the end, intrinsically motivated and directed. Adult learners should be allowed to collaboratively manage and to become actively involved (engaged) in the development and execution of their own learning journey. However, in the tertiary educational environment this may be difficult and it may be necessary to persuade adult learners to accept externally constructed objectives and incentives as personally meaningful by explaining the intrinsic worth or significance of certain learning goals and activities. Another approach may be to provide a number of alternative learning goals and activities so that adult learners may choose those that are more personally meaningful or preferred (Garrison, 1997; Kasworm, 2011). In order to create an alignment for adult learners between the goals (or outcomes) to be achieved in the learning experience and their own life goals, university educators should enhance the value of achieving educational goals for the adult learners. In addition, the learning skills of adult learners should also be enhanced in order to equip them with the means to set their own intermediate learning goals and gauge their progress to goal achievement (Silen & Uhlin, 2008).

2.4.2   Self-directed learning in the workplace

New work environments in the twenty-first century place diverse demands on employees. However, it is essential that employees be able to correctly identify and solve problems, display creativity and innovation and be sufficiently agile to flourish in ambiguous environments

(Karakas & Manisaligil, 2012). Open organisational cultures, workplace and time flexibility, empowerment of employees and labour market mobility are all elements in the work context that influence employee self-directedness and autonomy. In the new millennium workplace, employees may become self-directed, lifelong learners who take responsibility not only for their own learning but also for their own career development and management (Karakas & Manisaligil, 2012). The influence of the digital age on the organisation should be mirrored in the human resource development practices of the organisation. Workplace learning is evolving rapidly, creating expectations on the part of employees that learning and development opportunities should be available when required, learning should be continuous and learning content and delivery should be flexible (Armstrong & Sadler-Smith, 2008, cited in Karakas & Manisaligil, 2012). Self-directedness in learning is of key importance in the development of employees in this era (Karakas & Manisaligil, 2012).

In the post-modern world of work, employees are progressively facing the challenge of evolving into lifelong learners in order to ensure their continued employability (Coetzee, 2012; Ellinger, 2004). Research has shown that employees who have cultivated the attribute or competence of self-directedness are capable of lifelong learning (Dynan, Cate, & Rhee, 2008). The purpose of lifelong learning is the construction and continual evolution of competencies that are indispensable within a chaotic, unpredictable work context. Over and above this purpose, lifelong learning aims to inspire personal self-realisation throughout the individual's lifetime (Billet, 2010b). In this context, lifelong learning involves the acquisition of four facets of wisdom, namely, the wisdom of being, the wisdom of knowing, the wisdom of doing and the wisdom of coexistence (Candy, 2000; Dabic, 2008; Ya-Hui, 2009). These four facets of wisdom enable the employee to function effectively as a thinking being who is also part of a social whole. Lifelong learning encompasses the learning in which employees are involved after they have completed a qualification that allows them entry into the working world. As a result lifelong learning embraces workplace learning (planned and unplanned as well as structured and unstructured), continued professional development, further tertiary education and self-directed learning (Billet, 2010b; Candy, 2000).

The concept of a "learning organisation" represents the confluence of the concepts of "learning" and "workplace" by interlinking the learning of individual employees and the learning of the organisation (Botha, 2012). Employees who are lifelong learners are able to contribute to the evolution of a learning organisation. The essence of learning organisations is that individual

learning may lead to organisational change on condition that the knowledge gained through individual learning is disseminated throughout the work group or organisation and may be used to drive organisational change (Botha, 2012; Casey, 2009; De Simone, & Werner, 2012; Basar, Nawaz, Adnan, 2013). Thus, it is not possible to divorce the concept of the learning organisation from knowledge management.

Organisations that are quick to learn will probably possess the only sustainable competitive advantage in the post-modern era (Botha, 2012; De Simone & Werner, 2012). Learning organisations excel at acquiring, sharing and utilising knowledge in order to create a sustained competitive advantage (Botha, 2012: Roper & Pettit, 2002). The creation of an organisational environment that nurtures learning may boost both employee and organisational performance. A supportive organisational environment includes deliberate, planned engagement in quality learning at all levels while overtly prizing individual and organisational growth (Botha, 2012; De Simone & Werner, 2012). Learning organisations are pro-active in their preparation for environmental changes and challenges and pro-actively cultivate the future competencies of their employees in order to ensure their continued survival. Learning is a way of being and is acculturated in a learning organisation and its employees (Botha, 2012; Candy, 1996).

In the post-modern economy organisations may be viewed as knowledge-creating or knowledge-utilising mechanisms (Billet, 2010b; Lundvall & Nielsen, 2007). A firm that sees knowledge as a useful, significant resource focuses on creating new knowledge and utilising that knowledge in the establishment of a sustained competitive advantage (Billet, 2010b; Lundvall & Nielsen, 2007). The creation and creative utilisation of knowledge is the corner stone of innovation (Ya-Hui, 2009). A dynamic organisation, including its employees or people, that is constantly interacting with and being proactive within its global environment may become "more" and, thus, achieve more in the sense of achieving synergy when its focus is on creating and utilising knowledge as an important and essential resource (Casey, 2009; Ya-Hui, 2009). In the technological era, with the amount of knowledge available increasing dramatically every year, it is essential that any organisation that wants to survive should have a knowledge focus. However, finding out how to utilise knowledge and which knowledge to utilise effectively is not always an easy task (Lundvall & Nielsen, 2007; Ya-Hui, 2009). Without context, knowledge is nothing more than information (Casey, 2009; Ya-Hui, 2009). However, information becomes knowledge when it is perceived and assimilated in a specific context (time and space) (Kasworm, 2011; Ya-Hui, 2009). Thus, knowledge is the origin of the process of knowledge

creation and utilisation and should be complemented by knowledge structures (unchanging configurations of interconnected knowledge) and knowledge patterns and variations (how knowledge is pooled, shared and changed within the organisation). An organisation's sustainable competitive advantage is not to be found in the foundational knowledge (the various bits of knowledge that exist in the employees and organisational processes) per se, but in the way in which knowledge is utilised to generate the products and/or services that the consumers need (Coetzee, 2013, p. 128).

In answer to the changing business context, human resource development efforts and workplace learning should be more agile, need-specific, future-driven, contextual, proactive and ongoing (Karakas & Manisaligil, 2012). In such a milieu, the nurturing of self-directed learning may be seen as one of the principal successes of business organisations with learning organisations, which naturally support continued learning, tolerate errors, encourage risk-taking and support innovative ideas, being the natural incubators of self-directedness in their employees (Karakas & Manisaligil, 2012). Diverse media and digital tools may be used to create learning experiences that overflow the boundaries of the organisation and tap into the vast competence which is available in the rest of the world (Karakas & Manisaligil, 2012).

2.5   EVALUATION

In this section, a definition of self-directedness in open distance learning settings will be developed. The models discussed above will be evaluated and their strong and weak points explored. Finally, the relevance of Botha's model will be explained.

Despite the fact that adult learner self-directedness is a nebulous concept, tacit agreement has been reached that self-directedness encompasses between three and four components, including self-observation, self-supervision and self-motivation (Bergamin et al., 2012; Garrison, 1997) or a balance between adult learner dependence and adult learner independence (Silen, 2008). Botha's (2013) model investigates the self-directedness of adult learners in open distance learning contexts and presents a multi-faceted view of self-directedness as consisting of the way in which adult learners utilise officially provided learning resources, engaged academic activity, adult learners' success orientation for open distance learning and adult learners' academically motivated behaviour. In this model, these four facets are demonstrated as being interrelated and, therefore, affecting each other. On the other hand, the facets of the

strategic utilisation of officially provided resources and engaged academic activity may be regarded as counterfoils for each other, and, likewise, the facets of success orientation for open distance learning and academically motivated behaviour are counterfoils for each other.

In the context of open distance learning, adult learner self-directedness is viewed as the relationship between the adult learners' management of and engagement with the official learning environment as represented by officially provided resources, on the one hand, and the adult learners' self-beliefs (including self-efficacy, self-confidence, resilience and persistence) and the way in which these self-beliefs manifest in the adult learners' motivation, creative, ingenuous study and study-related problem-solving behaviours (Ainoda et al., 2005; Billet, 2010(a), Brookfield, 1985; Candy, 1991; Coetzee et al., 2013; Christensen, 2004; Ellinger, 2004; Garrison, 1997; Karakas & Manisaligil, 2012; Knowles, 1984; Ross-Gordon, 2011).

The core contributions made by the principles of andragogy to this discussion are as follows (Knowles, 1984):

- the principle that all adult learners want to be treated as capable of self-direction, even when their study behaviours do not reflect self-directedness
- a continuum of self-directedness, with no self-directedness on the one side and fully autonomous learning on the other side
- the use of adult learner learning experiences within the learning situation

A distinct weakness of this model is, however, the lack of research supporting its use and usefulness in tertiary education settings. The evidence used to support the principles was gathered in workplace learning environments (Knowles, 1984). Another weakness is the apparent dissociation between the individual, learning and cultural context (Ahmad & Majid, 2010; Billet, 2010). Very little research exists on the application of the principles of andragogy within the South African context (De Bruin & De Bruin, 2011).

The self-directedness in the educational settings model focuses attention on both the observable behaviours of the adult learner and the underlying motivations and beliefs that inform such behaviours (Garrison, 1997). The willingness of adult learners to be prepared for control and, eventually, to control their learning milieu is another central tenet of this model. Lastly, self-reflective thinking and the meta-cognitive ability are considered to be essential elements of the model (Garrison, 1997). The precept that the motivation of adult learners and psychological constructs may influence the adult learners' self-directedness in learning is

supported by research, with a strong relationship existing between self-confidence and self-directedness and a weaker, but still statistically significant, relationship between self-directedness and internal control beliefs (Oliviera & Simoes, 2006). However, a weakness of this model is the paucity of research supporting the principles although some researchers do utilise the principles in their own writings (Bergamin et al., 2012; Lai, 2011). No research supporting the self-directedness in educational settings model in the South African environment could be found.

Essentially the chaos vs. cosmos model relates to the elements of Garrison's model, but focuses primarily on the adult learners' state of mind when confronted with an educational milieu and expectations for which they are not prepared – chaos – and the measures which adult learners use to impose order on this perceived chaos – cosmos (Silen, 2000; Silen & Uhlin, 2008). According to the chaos vs. cosmos model, it is essential that a balance be created between the adult learners' need for guidance and collaboration in the learning experience and the academic's expectation of the adult learners' capacity for self-direct learning. Once again, a paucity of research on the chaos vs. cosmos model is a definite weakness of the model. No research could be found that supports the application of the chaos vs. cosmos model within the South African situation.

Botha's (in Coetzee & Botha, 2013) model of the self-directedness of adult learners in ODL settings attempts to assimilate the contextual, behavioural and psychological elements of adult learner self-directedness into a coherent whole in order to establish the position of adult learners on the self-directedness continuum, specifically in the open distance learning environment (Coetzee & Botha, 2013). No South African model exists to explore adult learner self-directedness in open distance learning. The rapid advances in communication technology, the growing need for open distance learning and the dire situation with regard to the skills gap in South Africa implies the presence of a fertile field for the nurturing of adult learner self-directedness which this model attempts to address.

2.6   SUMMARY

This chapter addressed the first research objective, namely, to define and conceptualise the construct of adult learner self-directedness in an open distance learning (ODL) context. The

discussion included an exploration of the concepts of learning and self-directedness, as well as a discussion of the three established models of self-directedness and also the model developed by Botha. The models discussed included the principles of andragogy, self-directedness in educational settings, chaos vs. cosmos and self-directedness in open distance learning settings. The socio-demographic variables influencing adult learner self-directedness were briefly discussed and the implications of self-directed learning in the ODL context and in the workplace deliberated upon. Lastly, the models of self-directed learning were evaluated and a description provided of self-directed learning in ODL. Chapter 3 discusses the second research objective, namely, to define and conceptualise the construct of employability.

CHAPTER 3

EMPLOYABILITY ATTRIBUTES

Chapter 3 addresses the second, third and fourth literature research objectives, namely, to conceptualise the construct of employability attributes as discussed in the literature; to conceptualise the theoretical relationship between the self-directedness of adult learners and their employability attributes, and to identify the implications of the theoretical relationship between adult learner self-directedness and employability attributes for both organisational training and development (T&D) and ODL educator teaching and learning practices.

The concept of employability and its relation to the capacity of employees to successfully overcome and, preferably, stay abreast of turbulent changes in the workplace of the post-modern economy is the subject of this chapter. Consequently, the definitions of the constructs of employability and employability attributes will be explored in section 3.1. Section 3.2 will focus on investigating certain models of employability while section 3.3 discusses the variables that may influence employability. Finally, section 3.4 focuses on the implications of employability for open distance learning and training and development.

3.1   CONCEPTUALISATION

This section explores the concepts of employability and employability attributes.

3.1.1   Employability

Tertiary institutions are nowadays tasked with developing employability in their adult learners in order to increase the productive potential of the human resources of organisations (Boden & Nedeva, 2010; Coetzee, 2012; Eddy & Garza-Mitchell, 2012). Nurturing employability orientations and the ensuing agility it creates within an organisation may contribute to a high strategic significance for the organisation (Van Dam, 2004). However, the concept of employability is both unclear and indefinite and, thus, it is difficult to describe the higher education graduate who does possess the required competence of employability (Coetzee, 2010; Brown, Hesketh, & Williams, 2003; Cassidy, 2006). It is clear that employers look for employees who are capable of proactive adjustment and action-oriented behaviours. However, it remains a challenge to describe accurately the personal characteristics and competencies that would inform agile behaviour – the type of behaviour that enable employees to be action-oriented and adjust proactively to changes (Coetzee, 2012; Fugate,

2006; Potgieter & Coetzee, 2013; Sewell & Pool, 2010). Nevertheless, it has emerged that the concept of employability includes not only academic achievement but also active control of one's career as well as a consciousness of and responsiveness to labour market activity (Jackson, 2013). Lent (2012) includes the notion of preparedness for life – the ability to weather the storms of life. This notion of life preparedness focuses on planning, in as far as that is possible, for the times when a career plan does not proceed as planned by the individual, and specifically cultivating agility in a fluid scenario. Emerging research indicates that the notion of employability and how well it is developed in graduate adult learners is also a concern of the adult learners (Boden & Nedeva, 2010).

Research into employability may be divided into three types: (1) research focusing on a national or industry level; (2) research focusing on employability as an issue of special interest in the field of human resource management and (3) research focusing on employability of individuals. Employability research on the national or industry level investigates employability in the context of national training and development programmes and/or the specialised requirements of a particular economic sector, while research on employability as an issue of special interest in human resource management has, as its focal point, career management and the individual responsibility for careers. The aim of a business organisation is to deploy staff in such a way so as to enhance organisational flexibility. Individual employability research emphasises the role of the higher education sector in preparing adult learners for effective work performance while also focusing on the individual temperaments and behaviours as they relate to employability (Brown, Hesketh, & Williams, 2003; De Vos, De Hauw, & Van der Heijden, 2011; Rothwell, Jewell, & Hardie, 2009).

In the light of the three streams of research into employability, the concept may be variously described as a psychosocial construct, a set of skills or competencies or a process (Beukes, 2010; Bezuidenhout & Coetzee, 2010; Fugate & Kinicki, 2008; Knight & Yorke, 2003; Pool & Sewell, 2007). According to Brown and others (2003), economic conditions and labour markets should also be included in the study of employability. An extremely narrow view of employability focuses only on whether and how quickly a graduate is able to secure and then hold on to a job (Wittekind, Raeder, & Grote, 2010). At the other end of the spectrum, a short definition of employability would refer to those adult learners who possess specific competencies that augment and make it possible for them to access employment opportunities (Greenbank, 2012). However, most researchers agree that the concept of employability encompasses not only a view of the current job situation of employees, but also a future orientation (Boden & Nedeva, 2010; Wittekind et al., 2010).

In view of the future-oriented interpretation of employability, immediate employability should not be confused with sustainable employability (Bezuidenhout, 2010). Immediate employability focuses on the ability of the university graduate to obtain a job suited to his or her qualification – that is, a job that requires the qualification that the individual concerned would have obtained at a higher education institution. Thus, the concept of immediate employability tends to be short-term in nature. On the other hand, sustainable employability has, at its c0entre, the competence to remain employable over a period of time and, thus, has a longer-term focus than the concept of immediate employability (Bezuidenhout, 2010).

In terms of current research, employability is seen as a psychosocial construct that relates to the capacity of employees to adjust the thought processes, emotions and behaviours which are relevant to their careers in such a way so as to bring about a flexible organisation that will be able to withstand the fluctuations of the post-modern global economy (Coetzee, 2012). As a psychosocial construct, employability has both subjective and objective qualities. Employees with high levels of employability are able to sustain their employment and enhance their job market mobility (De Vos et al., 2011; Lent, 2013). Employability, as it relates to career management, is concerned with the self-directed, agentic approach of an employee to searching for, securing and retaining employment. Thus, the construct is an over-arching term for describing the set of individual qualities and attributes that enable the employee to create a secure sense of worth as an employee in an ever-changing, chaotic and unpredictable work context (Jackson, 2013). Poropat (2011) describes employability as multifaceted, indicating a facet which focuses on individual characteristics such as competencies and personalities, another encompassing personal circumstances such as cultural background and personal circumstances and a third which includes external factors such as the labour market and recruitment activities on the part of employers.

In addition, employability may be described as a set of competencies that enable adult learners and employees to secure sustained employment (De Vos et al, 2011). As such, competencies comprise the knowledge, skills and abilities required to take responsibility for and perform a variety of job tasks, as well as the capacity to adjust to changing labour market demands (De Vos et al., 2011). In the context of competencies, employability embraces meta-cognition, that is, mindfulness in learning that facilitates the evolution of the thought processes of individuals to a higher level of comprehension (Coetzee, 2012; Knight & Yorke, 2003; Lent, 2013).

As a value employability affects and is affected by self-efficacy beliefs, self-confidence and the behaviours involved in searching for and securing a position (Clark & Zukas, 2013;

Coetzee, 2012; Hinchliffe & Jolly, 2011; Knight & Yorke, 2003). Employability, as embedded in the value system, implies that employability orientations or dispositions are formed through experiences and exposures to specific situations in which particular behaviours are perceived to be preferable to others (Clark & Zukas, 2013). Employability also relates to the management of an employee's career (Beukes, 2010). An employee who wishes to remain current and employable may choose to change jobs frequently in order to gain exposure to a range of job contents, work milieus and industries (Beukes, 2010; Van Dam, 2004). Involvement in new work processes and practices may nurture the growth of new capabilities and, thus, escalate the employee's labour market mobility. In addition, personality traits such as openness and initiative may influence career variables such as career planning, innovativeness, employability and entrepreneurial actions (Beukes, 2010; Potgieter & Coetzee, 2013; Van Dam, 2004). Openness relates to an individual's positive orientation to new concepts and transformation, while initiative relates to the pro-active, autonomous self-management of work activities and career progress.

Continuous learning is an essential prerequisite for sustained employability (De Vos et al., 2011) with continuous learning nurturing the capacity for ongoing adaptation. Competency development goes hand-in-hand with continuous learning. Competency development encompasses the development opportunities provided by the employer and utilised by the employee and which nurture and grow the overall job competence of employees (De Vos et al., 2011). In the context of employability, competency development includes the development of the career-related capabilities of employees. This, in turn, implies not only that employers should ensure that such opportunities are provided, but also that employees should take full advantage of such opportunities (De Vos et al., 2011).

Employable employees are not only capable of obtaining and retaining employment, but they are also able to recognise, understand and bring to fruition those professional opportunities that will ensure high employability and the consequent job mobility in the labour market (Van Emmerik, Schreurs, De Cuyper, Jawahar, & Peeters, 2012). In terms of this view, employability may be described as both perceived and objective employability. Perceived employability comprises the individual's perception of his or her employability and includes the qualifications which are related to a specific position, individual willingness to cultivate a varied set of competencies and/or find a different job, labour market know-how and individual self-promotion (Van Emmerik et al., 2012; Wittekind et al., 2010). On the other hand, objective employability relates to the professional profile of an employee, including the level of qualifications and relative position in the labour market (Van Emmerik et al., 2012).

Research shows that there are significant correlations between academic achievements and later work performance, including occupational results. In fact, a study found a significant correlation between the citizenship performance of employees and their academic results (Poropat, 2011). Citizenship performance is similar to organisational citizenship behaviour and is a vital component of workplace performance. According to Poropat (2011), citizenship performance is one of the facets of employability. Moreover, Poropat (2011) found that citizenship performance was a mediating factor between conscientiousness and academic performance. A conscientious adult learner is, thus, more likely to achieve higher marks for academic work and is also more likely to display higher levels of employability than a less conscientious adult learner (Poropat, 2011). Adult learner employability may be enriched by providing work experience opportunities, exposing adult learners to entrepreneurial thinking, providing effective advice on careers and ensuring that adult learners develop a portfolio of evidence indicating their progress and achievements throughout their adult learner careers (Coetzee, 2012; Cassidy, 2006; Knight &Yorke, 2003; Rothwell et al., 2009).

The construct of employability cuts across several disciplines and incorporates three levels, namely, individual, organisations and industries. Consequently, although the definitions are not always consistent and fully resolved, employability has a profound effect on both organisations and employees (Coetzee, 2012; Van der Heijde & Van der Heijden, 2006).

3.1.2   Employability as attributes

Employability attributes may be seen as a set of outlooks or intrinsic abilities that predisposes an individual to specific behaviours as well as the cognitive adjustment of goals and behaviours (Lent, 2012; Potgieter, Coetzee, & Masenge, 2012). Employability attributes are related to individual dispositions and include self-esteem, emotional intelligence, intrinsic motivation, self-efficacy and autonomy (Coetzee, 2012, Lent, 2012). Employability attributes such as career resilience, career self-management, pro-activity and self-efficacy may positively influence individual job performance, organisational performance and personal career outcomes (Lent, 2012).

Self-esteem relates to an individual's view of him/herself as someone who is an effective, moral and satisfactory human being and member of society. Emotional intelligence is the individual ability to use affect to guide cognition and behaviour. People with a healthy self-esteem tend to display higher levels of emotional intelligence (Potgieter et al., 2012). Intrinsic motivation is the motivation a person may feel despite the fact that no apparent external rewards are being offered (Von Emmerik et al., 2012), thus people may become involved in activities, not for the reward offered, but rather for the sake of the activity itself.

Intrinsic motivation is strongly linked to the need for self-development and continued learning (Von Emmerik et al., 2012).

Career self-management refers to the realisation and willingness of an individual to take personal responsibility for managing his or her career. Proactive career behaviour (the activities involved in individual career management) is inextricably linked with career self-management (Akkermans, Brenninkmeijer, Hulber, & Blonk, 2013). Career self-management comprises two components, namely, a cognitive component (career insight) and career-related behaviours, such as career planning and being aware of career opportunities (Akkermans et al., 2013). These competencies may be grouped together as "career competencies" in relation to employability. Career competencies comprise reflective competence ("knowing why"), communicative competence ("knowing whom") and behavioural competence ("knowing how") (Akkermans et al., 2013). Career self-management implies that individual and career development should be a self-managed activity (Enache, Sallan, Simo, & Fernandez, 2011). A career that facilitates employment in more than one organisation is termed a boundaryless career while employees who are involved in a boundaryless career are believed to possess a boundaryless mindset. A boundaryless mindset is associated with self-directedness and career self-management (Enache et al., 2011).

Self-efficacy in the broader sense relates to a person's belief in his or her ability to deal successfully with difficulties and, consequently, career self-efficacy relates to an individual's confidence in his or her ability to engage successfully in career-related actions and deal with career-related difficulties (Grier-Reed & Ganuza, 2012; Koivistu, Vinokur, & Vuori, 2011). Career self-efficacy is positively related to career persistence (Koivistu et al., 2011). Resilience may be described as the ability to grow and recover from disruptions in life, such as hardship or misfortune and even affirmative experiences, and it has been shown to have a significant effect on the ability of employees to weather life's storms effectively (Bimrose & Hearne, 2012; Youssef & Luthans, 2007). Thus, career resilience refers to the ability to adjust to disruptive changes. Career adaptability goes hand-in-hand with career resilience, and focuses on the effective negotiation of changes in a career by acting in a pro-active manner (Bimrose & Hearne, 2012; McMahon, Watson, & Bimrose, 2012). Self-perceived employability stimulates career self-management beliefs and career self-efficacy (Potgieter et al., 2012). In addition, the Myers-Briggs-Type Indicator personality type preferences are significantly related to ingenuity, liberal thinking and a preference for learning (Potgieter et al., 2012). Potgieter and others (2011) found that a significant relationship exists between employability attributes and personality preferences.

Being prepared for life is associated with attributes such as agency, resilience, agility and an anticipation of adverse events (Lent, 2012). Career adaptability relates to the ability to deal with both the expected and the unexpected in one's career in order to establish a "good as possible" fit between the individual's competencies and the changing working milieu (Lent, 2012). Such preparedness supports not only career planning, but also career adjustments.

3.1.3   Employability as skills

It would appear that employers prefer employees who possess a set of over-arching competencies in addition to the competencies developed through tertiary education (Coetzee, 2012; Griesel & Parker, 2007; Potgieter et al., 2012). Several higher education institutions have developed programmes which cultivate employability skills among their graduates. This notion of cultivating employability skills seems to be extremely popular as it is supported by numerous tertiary institutions (Bridgstock, 2010; Poropat, 2011). Employability skills include interpersonal skills, teamwork, leadership, communication skills, problem-solving and numerical skills and are usually acquired within the context of family life and learning (Arnau-Sabates, Marzo, Jariot, & Sala-Roca, 2013; Hinchliffe & Jolly, 2010). The reasoning behind generic employability skills is that employees who possess these skills will be more capable of transferring tertiary education learning to workplace learning (Coetzee, 2012). It is generally understood that the mastery of employability competencies will create labour market mobility for graduates and employees. Employers believe that such employees will be capable of learning faster in the work environment while they will also recognise and utilise specific skills suitable for the workplace and solve work-related problems more efficiently (Coetzee, 2010; Cassidy, 2006; Griesel & Parker, 2007, Poropat, 2011). However, Bridgstock (2010) argues that the knowledge and skills developed in specific disciplines are equally, if not more, important in securing and ensuring employability. Research indicates that many graduates who wish to enter the job market lack specific overarching skills that are not necessarily related to their field of study, but that are essential in order to ensure career entry and success (Coetzee, 2012; Davis, 2006). Employers tend to blame the poor job performance on the part of recent university graduates on a lack of adequate skills development in higher education (Jackson, 2013). The cultivation of employability skills facilitates the development of the resilience, proactivity and agility required by all employees in the current work environment (Sung, Turner, & Kaewchinda, 2013). On the other hand, employers are not the only ones who realise the need for well-developed employability attributes in their employees – graduates of higher education have also started to realise that they need to prove more than academic excellence in order to secure a job, although this phenomenon is less well documented (Jackson, 2013).

Employability attributes also relate to the "soft skills" or the more psychological-relational competencies which are required in the working world (Andrews & Higson, 2008; Coetzee, 2010; Cassidy, 2006; Griesel & Parker, 2009, Potgieter et al., 2012). Psychological-relational skills include meta-cognitive and behavioural skills such as interpersonal skills, communication skills, conflict resolution skills and emotional intelligence (Andrews & Higson, 2008; Cassidy, 2006; Griesel & Parker, 2009; Potgieter et al., 2012; Rainsbury, Hodges, Burchell, & Lay, 2002). Technical or "hard" skills, on the other hand, have to do with the functional job which a person is performing within an organisation, or the technical aspect of a job. During their tertiary education adult learners usually acquire the "hard skills" related to a specific job (Billet, 2010b). However, in the postmodern working milieu, employees require a complementary set of both "hard" and "soft" skills in order to be employable and productive in the workplace. However, the perception exists that today's graduates are lacking in the soft skills required for effective job performance (Griesel & Parker, 2009; Jackson, 2013; Jones & Healing, 2010; Rainsbury et al., 2002).

Coping skills may be seen as the counterfoil of adaptability. Where adaptability is seen as a personal attitude or ability, coping skills refer to a set of learnt behaviours focusing on the intellectual, behavioural, social and affective aspects of coping with sudden and unexpected changes (Lent, 2012). Career exploration, goal setting, establishing a fit with the environment, being prepared for work and social requirements, effective utilisation of social as well as personal networks and self-directed learning are some of the skills associated with employability (Sung et al., 2013).

Research into employability as skills has disregarded the influence of factors such as social class, ethnicity and gender and the way in which these factors affect employability (Clark & Zukas, 2013). However, when employability is viewed as part of the domain-specific competence of an individual, and the assumption is made that the development of domain-specific competence includes the inculcation of dispositional approaches to the domain knowledge and skills, a different perspective is created (Clark & Zukas, 2013). These beliefs may also, in their turn, influence the context of domain specific development, for example, by creating the impression that the profession in question is not open to other genders or races. Thus, the beliefs held by people both inside and outside of a profession influence who will attempt to gain entrance to that profession by enrolling for a qualification in a particular domain (Clark & Zukas, 2013).

3.2   MODELS OF EMPLOYABILITY

In this section models of employability that relate to adult learner employability will be discussed.

The following models of employability will be discussed in this section:

- Bezuidenhout and Coetzee's (2010) Employability Attributes Framework gives a clear description of the employability attributes required by students in tertiary education to enable them to cultivate well-rounded employability behaviour in the workplace. This model is the only model which focuses on students in tertiary education in South Africa and was the focus for this research for that reason.

- Beukes's (2010) model of self-regulating employability describes a self-regulatory process that employed adults may use to ensure their own employability in the workplace. This is the second South African model included in the literature review.

- Knight and Yorke's (2003) Understanding, skills, efficacy beliefs and Metacognition (USEM) model provides an indication of an approach which is used in the United Kingdom to address the issue of learner employability in tertiary education and was the precursor for the Key to Employability model of Pool and Sewell.

- Pool and Sewell's (2007) model combines the fundamental components of the construct of "employability" and depicts a simple and understandable representation of the construct. The combination of the various component of the model provides the key that enables graduate adult learners to unlock the door of employability.

- Van Dam's (2004) model provides a description of employability orientation in the workplace and also of the various workplace factors that influence employability. This model focuses specifically on the workplace as the context for employability.

- Fugate, Kinicki, and Ashforth's (2004) model focuses on employability as a disposition in individuals, instead of a set of competencies that can and should be cultivated. The point of departure for this model is that, because individual characteristics play a role in human behaviour, the view of employability as a personal disposition is more realistic than the view of employability as a set of skills.

- Van der Heijde and Van der Heijden's (2006) model of employability brings to the fore the importance of including subject or domain specific competence, generic competence as well as personal attributes in the employability framework.

3.2.1 Bezuidenhout and Coetzee: The Employability Attributes Framework

The Employability Attributes Framework (EAF) was designed specifically for the tertiary education context and defines a collection of eight fundamental attributes that relate to the employability of higher education adult learners (Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). Employability attributes are vital prerequisites for adult learners who propose to search for positions and wish to remain employable. The fundamental attributes include career self-management, cultural competence, self-efficacy, career resilience, sociability, entrepreneurial orientation, proactivity and emotional literacy (Coetzee, 2012; Potgieter et al., 2012). Each of these attributes relates to a career, intrapersonal or interpersonal dimension of the construct of employability. The attributes that relate to the intrapersonal dimension describe characteristics that are important in the work milieu but which are equally important for personal growth. The attributes that relate to the interpersonal dimension describe attributes that are equally important in both the employment and general social contexts of life while the career dimension relates to specific career-related behaviours that will ensure success in organisational settings. Each employability attribute, in its turn, comprises a set of traits from which the fundamental attribute is constructed (Coetzee, 2012; Bezuidenhout & Coetzee, 2010, Potgieter et al., 2012).

3.2.1.1 Career dimension of employability

Career self-management, career resilience and entrepreneurial orientation all relate to the career dimension of employability. Career self-management is the skill of ensuring sustained employability by adopting a lifelong learning attitude and pro-actively taking control of career planning and also managing activities (Coetzee, 2012; Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). Career self-management is constructed from traits such as self-reflection on career goals, identifying the competencies required to achieve these goals and implementing appropriate actions in order to achieve career goals. Self-confidence, persistence and on-going, relevant learning activities that will facilitate the achievement of career goals are also vital for ensuring career success (Coetzee, 2012). Career resilience relates to the capacity to relish changes in the global and organisational context by being sufficiently agile to enjoy the introduction of new work processes, technologies and colleagues and to adopt different work behaviours when required (Potgieter et al., 2012). Self-confidence, welcoming feedback on both strong and weak points, personal agility and persistence in pursuing career goals are the traits that construct the attribute of career resilience (Coetzee, 2012). On the other hand, a person who manifests an entrepreneurial orientation perceives risks as possibilities, prefers to be innovative and inventive, is able to tolerate uncertainty and prefers to act independently when promoting his or her career. Entrepreneurial individuals value the opportunity to create something significant (Potgieter et

al., 2012). This fundamental attribute is constructed from curiosity about new business ventures and the wish to explore and become involved in such business ventures, being receptive to novel ideas, positively embracing changes in the work context, easily accommodating ambiguity and taking personal responsibility for career accomplishments and disappointments (Coetzee, 2012; Bezuidenhout & Coetzee, 2010). Research indicates that employability attributes positively influence job performance, as well as career prospects and career results for job holders (Potgieter et al., 2012; Schreuder & Coetzee, 2011).

3.2.1.2 Intrapersonal dimension of employability

Proactivity, self-efficacy and emotional literacy all relate to the intrapersonal dimension of employability. Proactivity describes the ability of employees to adopt an agentic, active role in their employment careers (Coetzee, 2012, Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). Proactive employees will adapt to circumstances, they will be aware of future demands as they relate to their careers and they will strive to advance their careers and circumstances. Proactivity comprises the qualities of self-directedness, future orientation, goal-directedness and future-directed personal and career development (Coetzee, 2012). Self-efficacy is the personal perception of individuals of the difficulties involved in the pursuit of career-related actions, their belief in their ability to perform the required actions successfully and the persistence of their beliefs in the face of difficulties. On the other hand, self-efficacy describes an individual's personal belief in his or her ability to deal with and achieve goals which have been set and achieve success in specific circumstances (Potgieter et al., 2012). Autonomy, self-management, goal-directed behaviour, perseverance, the pro-active pursuit of learning opportunities and finding innovative resolutions to problems all comprise the construct of self-efficacy (Coetzee, 2012). High levels of employability positively influence the self-efficacy beliefs of individuals (Schreuder & Coetzee, 2011).

Emotional literacy describes the ability to be aware of, adapt and manage individual emotions as well as the emotions of others (Potgieter et al., 2012). Emotional literacy comprises the ability to comprehend and manage personal emotions and temperaments, correctly identify the emotions of others, cheer up someone who is feeling out of sorts and defuse emotionally volatile situations (Coetzee, 2012; Bezuidenhout & Coetzee, 2010). In a study conducted in Bulgaria and Romania emotional intelligence was found to be a core component of a competency profile for hotel management positions (Ineson, Rhoden, Nita, & Alexieva, 2011). Jackson (2013) associates skills such as self-management, entrepreneurial development, social concern and professional expertise with employability. Emotional intelligence is positively associated with career decision-making self-efficacy and an openness to investigate a range of career preferences (Schreuder & Coetzee, 2011).

Psychological career resources such as creativity, social skills, self-esteem, flexibility and connectedness are strongly associated with both coping in the workplace and employability (Coetzee & Esterhuizen, 2010). Jones (2013) found that adult learners who are exposed to wider cultural experiences through international exposure develop personally and also manifest enhanced self-efficacy.

3.2.1.3 Interpersonal dimension of employability

Sociability and cultural competence relate to the interpersonal dimension of the employability construct. Sociability refers to the inclination to establish and maintain social networks and make the most of formal and informal career and social networks in order to advance career prospects (Coetzee, 2012; Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). This attribute encompasses the ability to actively cultivate the friendship and goodwill of those who may assist with career progress, for example by locating and providing job opportunities and also to vigorously pursue feedback that will promote career progress. A sociable employee will be self-confident and sufficiently socially agile to adapt non-verbal actions to various social milieus (Coetzee, 2012). Cultural competence revolves around the capacity to function successfully in culturally varied contexts. Thus, cultural competence comprises the ability to assimilate the customs, values and beliefs of cultures other than one's own, participate in inter-cultural exchanges with self-confidence and relish the prospect of opening and sustaining culturally diverse associations (Coetzee, 2012; Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). Potgieter and Coetzee (2013) found a significant relationship between employability attributes and personality preferences, specifically those personality types who are sociable and culturally competent and who have a well-developed interpersonal dimension. A personality type that prefers a deliberately planned and well-thought-out life and career plan may manifest poorer intercultural competence (Potgieter & Coetzee, 2013). According to Jones (2013), international experience may contribute successfully to adult learner transformation and continued learning by enabling adult learners to experience diverse perspectives. The intercultural competence of adult learners may develop significantly in such circumstances. Figure 3.1 depicts the four dimensions of employability attributes as defined by Bezuidenhout and Coetzee (2010).

FIGURE 3.1: EMPLOYABILITY ATTRIBUTES FRAMEWORK
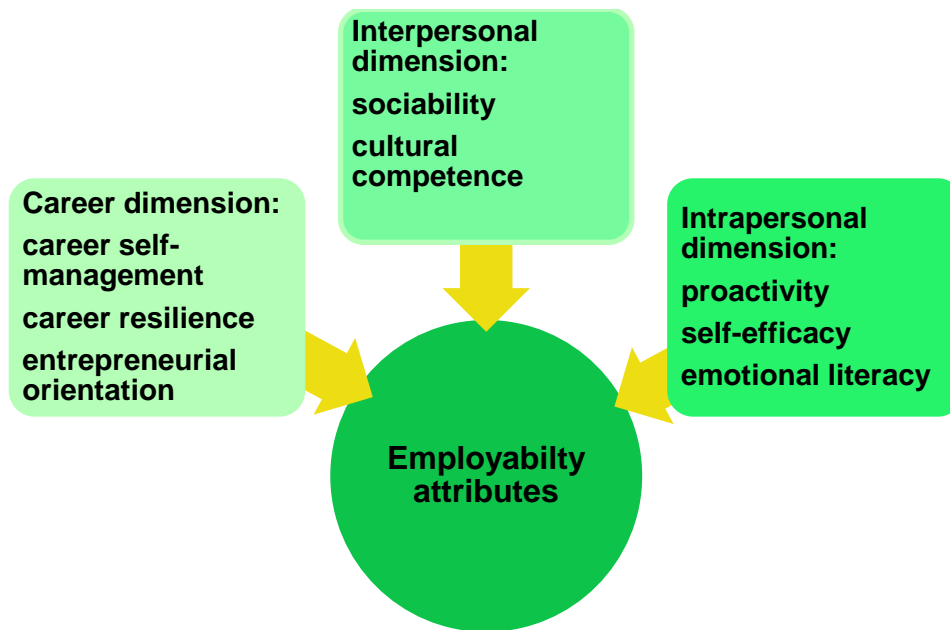
Source: Adapted from Bezuidenhout & Coetzee, 2010.

3.2.2   Beukes: The Self-Regulatory model of Employability

Beukes (2010) proposes a self-regulatory, career-oriented model of employability. This model depicted the individual employee as an active agent in the development of employability. The active development of employability is affected by utilising a repetitive sequence of phases of improvement and its purpose is to accompany, monitor and unobtrusively direct employees to the self-management of career behaviours through continuous learning and the reintegration of knowledge gained into their personal, mutable work contexts (Beukes, 2010). Individuals will then eventually be able to utilise their employability competencies to access and retain employment, regardless of the state of the labour market.

The phases of improvement consist of the following five activities: self-audit of competencies and alignment with labour market demands and employment opportunities (audit and alignment), setting specific career goals in order to adjust alignment (clarifying career goals); individual learning (learning); self-presentation and competency trade-off. On completion of the audit and alignment phase, the individual will possess self-knowledge in respect of his or her market value and will have an approximate idea of the career goals that will facilitate alignment with the labour market. Once career goal clarity has been achieved the person will know which specific career goals to pursue in order to achieve maximum alignment.

However, a problem with this phase in the model may arise because of the propensity of adult learners to approach first parents and then lecturers for career advice. This will present a problem if the parents are not well informed on labour market issues and are, therefore, unable to provide useful advice (Greenbank, 2011).

In the learning phase the individual will make use of both formal and informal learning opportunities in the pursuit of career goal achievement. Learning involves the realisation of the necessity of adopting a lifelong learning approach in order to remain abreast of changes in the work context and work content and anticipate the changed environments created by the speed of technological advancement (Beukes, 2010). At the conclusion of this phase the person should be able to produce evidence to prove his or her level of development in relation to labour market demands and job opportunities.

Self-presentation involves the ability of the individual to eloquently present and communicate his or her unique competencies, career prospects, and future development goals in order to negotiate an offer of employment. This phase also involves the successful negotiation of an acceptable remuneration package. The capacity to communicate effectively is an essential component of self-presentation (Beukes, 2010). The last phase, competency trade-off, entails the reaching of a compromise between the personal competencies of the prospective employee and the remuneration offered by the organisation (Beukes, 2010). Implicit in this stage is the opportunity for further growth and development in order to sustain employability and achieve long-term career goals.

The model is presented as repetitive because the imperative to sustain employability requires a periodic revisiting of the various stages in order to ensure that personal competencies remain aligned with labour market demands, that career goals are still relevant, that learning is supporting employability, that self-presentation is still relevant and that the competency trade-off is realistic with regard to both labour market and organisational demands and personal competencies (Beukes, 2010; Coetzee, 2012). Figure 3.2 depicts the five steps of the self-regulatory, career-oriented model of employability developed by Beukes (2010).

FIGURE 3.2:   THE SELF-REGULATORY MODEL OF EMPLOYABILITY

Step 1

Self-audit and labour market alignment

Step 2

Clarify career goals

Step 3

Learn and grow

Step 4

Self-presentation

Step 5

Competency trade-off
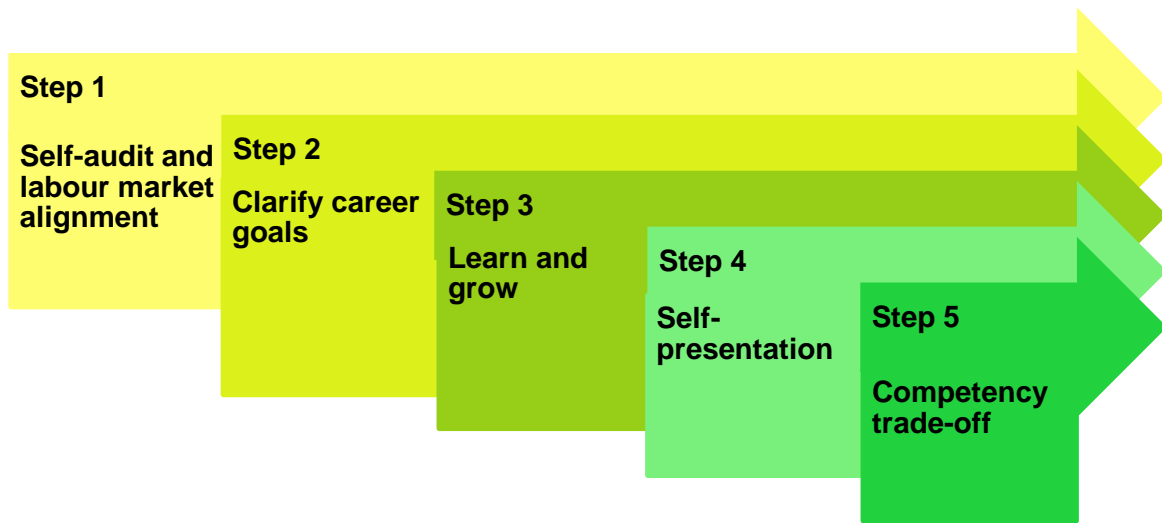
Source: Adapted from Beukes, 2010.

3.2.3   Knight & Yorke: Understanding, Skills, Efficacy Beliefs and Metacognition

Employability represents the coming together of comprehension (understanding), skills, self-efficacy and meta-cognition (Knight & Yorke, 2003; Pool & Sewell, 2007). According to Knight and Yorke's (2003) model, a graduate does not require only knowledge and skills, but also the ability to think about assumptions, beliefs and actions as well as the psychological underpinnings that govern behaviour and decisions. The role of higher education in this model is that of exposing the adult learner to increasing levels of the self-reflexive and self-motivational conditions and behaviours that will enhance their knowledge and skills and, thus, create the psychological attribute of employability. Adult learners who are able to perceive a positive correlation between the effort they make and the successes they experience will be more likely to display employability characteristics (Knight & Yorke, 2003; Pool & Sewell, 2007). Although well-thought-out and established learning environments may enhance the possibility of an adult learner developing employability characteristics, there is no guarantee that this will happen. The model describes the following three domains of learning experiences: the inner domain, the personal domain and the social domain (Knight & Yorke, 2003; Pool & Sewell, 2007). The inner domain emphasises the inner psychological processes of an adult learner, including self-efficacy beliefs, motivation and perceptions. The personal domain focuses on an adult learner's approach to both learning and learning behaviours while the social domain revolves around the learning environment and the curriculum to be mastered, and the potential for learning that exists in this domain. The

purpose of the learning experience is to nurture meta-cognitive capabilities in the adult learners to enable the adult learners to achieve employability (Knight & Yorke, 2003; Pool & Sewell, 2007).

Learning is the result of the relationship between an adult learner's learning beliefs and behaviours, the learning context and the curriculum offered to the adult learners (Knight & Yorke, 2003; Pool & Sewell, 2007). The adult learners' beliefs about learning determine the quality of learning that takes place. A performance orientation to learning, in other words, focusing on obtaining a good mark may not result in quality learning. However, when an adult learner adopts a mastery orientation to learning the adult learner will aim to make sense of the information and, thus, the adult learner will transform his or her knowledge scaffolds and, as a result, become sufficiently agile to function effectively in an evolving environment. An adult learner's approach to learning may be changed by changing the learning context. However, this is a challenging goal to achieve (Knight & Yorke, 2003; Pool & Sewell, 2007).

The learning behaviours of adult learners provide an indication of the way in which the adult learners study (Knight & Yorke, 2003; Pool & Sewell, 2007). An adult learner who adopts a surface approach to learning focuses on memorising sufficient information in order to pass the required examinations, an adult learner with a deep approach focuses on understanding while the adult learner with a strategic approach attempts to achieve understanding but will also focus on what needs to be done to pass a module and achieve a good mark (Knight & Yorke, 2003; Pool & Sewell, 2007). An adult learner's approach to study is ruled by a personal learning belief as well as the cues which the adult learner receives from the learning environment – if the learning environment, through the teaching and assessment designs, focuses on mastering sufficient facts to pass an examination or assignment instead of focusing on understanding and the application of knowledge and skills, the adult learners will adopt a surface or strategic approach to their learning tasks (Knight & Yorke, 2003; Pool & Sewell, 2007).

The learning environment creates a space for adult learners to engage with the learning material (Knight & Yorke, 2003; Pool & Sewell, 2007). A learning environment that nurtures quality learning will create opportunities for adult learners to work collaboratively, engage with each other about the learning material, create social networks and collectively find solutions to problems (Knight & Yorke, 2003; Pool & Sewell, 2007). The curriculum or knowledge content that adult learners are required to master should be supportive of and supported by the learning environment. Alignment between what the adult learners should

learn, what they do learn and what is assessed is crucial in the creation of quality learning opportunities. Both the curriculum itself and also the way in which it is taught and assessed should reinforce both a deep approach to studying and a mastery orientation to the subject content (Knight & Yorke, 2003; Pool & Sewell, 2007). It is essential that adult learners learn how to think critically, ask questions, look for information and argue a point. The way to achieve these goals is through a curriculum and learning environment that expects these behaviours, assesses them and, ultimately, judges competence on this basis (Knight & Yorke, 2003; Pool & Sewell, 2007).

The elements of quality learning that leads to meta-cognition are influenced by specific personal inner processes such as motivation, perception and self-efficacy beliefs (Knight & Yorke, 2003; Pool & Sewell, 2007). Thus, an adult learner who believes that quality learning focuses on achieving understanding may adopt a surface approach to studying because the learning content and/or environment is perceived to focus on the acquisition and regurgitation of knowledge and facts only (Knight & Yorke, 200; Pool & Sewell, 2007). An adult learner with low self-efficacy beliefs may hesitate to grapple with a complex task in order to gain understanding, and focus only on the acquisition of knowledge because he/she doubts his or her ability to understand the complex task. Consequently, the learning achieved is not quality learning and may, in fact, not even be learning at all (Knight & Yorke, 2003; Pool & Sewell, 2007). With regard to motivation it is imperative to realise that adult learners are self-motivated to learn and that they cannot be induced, coerced or convinced to engage with the learning material. Thus, the designers of learning material and learning environments should focus on providing several learning events that may be completed successfully so that adult learners will come to value the learning and achieve understanding (Knight & Yorke, 200; Pool & Sewell, 2007). Alignment in the curriculum may be achieved through ensuring that the teaching and assessment content and practices are aligned. Alignment may also be achieved by ensuring coherence between the adult learners' approaches to learning, study behaviours, the learning environment and the content to be studied. Thirdly, alignment may be created through nurturing consistency between the adult learners' internal self-efficacy, motivation and perception and the four elements of quality learning (Knight & Yorke, 2003; Pool & Sewell, 2007).

The DOTS programme, developed by the Centre for Employability at the University of Central Lancashire in the United Kingdom, builds on the USEM model of employability (Pool & Sewell, 2007). The DOTS programme is based on immersing adult learners in deliberate, intentional learning experiences in order to nurture the development of competencies such as decision making, being aware of various employment opportunities and their

prerequisites, dealing effectively with the transition from higher education to the employment market and cultivating self-awareness with regard to individual preferences, principles, concerns and capabilities. The model may be applied well in the field of career development education and, thus, a newer model, more appropriate to employability, has been developed. This is the Key to Employability model (Pool & Sewell, 2007; Sewell, & Pool, 2010). The USEM model of employability, which was developed by Knight and Yorke (2003), is depicted in figure 3.3.

FIGURE 3.3:   THE USEM MODEL
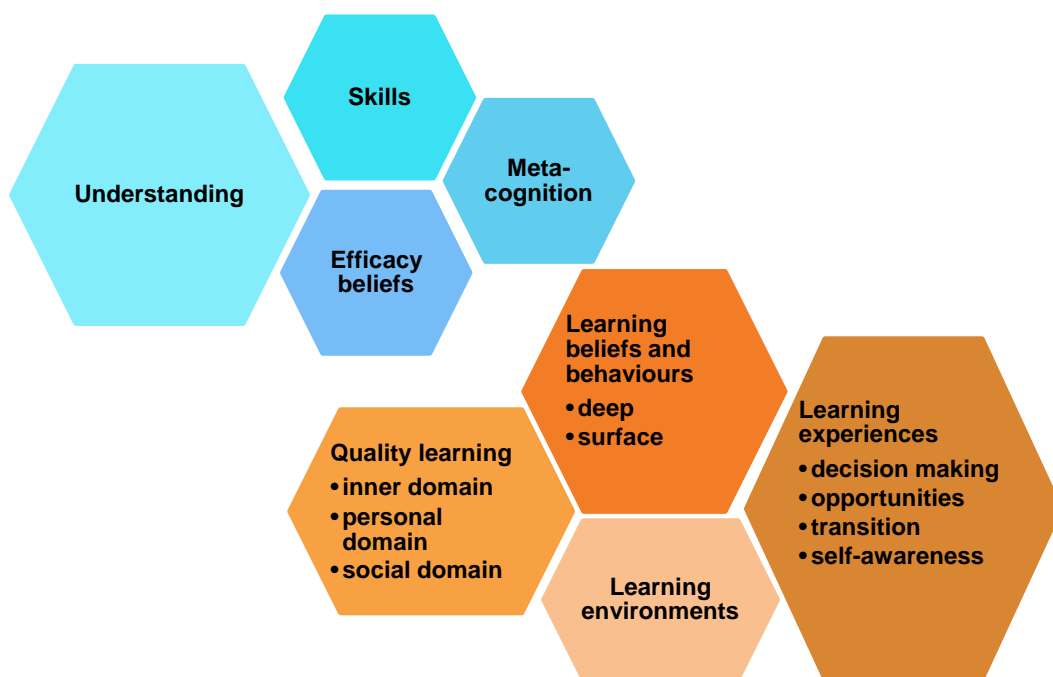
Source: Adapted from Knight & Yorke, 2003.

3.2.4   Pool and Sewell: The Key to Employability

The Key to Employability model not only combines the fundamental components of the construct of employability but also delivers a simple and understandable representation of the construct (Pool &Sewell, 2007; Sewell & Pool, 2010). Some of the elements of the Key to Employability model are interrelated and are also applicable to various elements of learning in higher education. The combination of the various components of the model provides the key that enables graduate adult learners to unlock the door of employability. The decision to embark on higher education is usually driven by the desire to become equipped for entry into a specific job market and, therefore, it is essential that any model of employability learning include the vital role of subject-related competence. Adult learners enrol in higher education

to gain the required knowledge that will ensure them a good job (Pool & Sewell, 2007; Sewell, & Pool, 2010). Accordingly, developing in adult learners the capacity to nurture and negotiate a career through a turbulent economic environment should always incorporate aspects such as subject-related competence, transferable competencies, career development competencies, experience (both work and life), emotional intelligence, meta-cognitive capacity, self-efficacy, self-confidence and self-esteem (Pool & Sewell, 2007; Sewell & Pool, 2010).

A well-developed subject-related competence (degree subject knowledge) forms the cornerstone of the development journey of the undergraduate adult learner (Pool & Sewell, 2007; Sewell & Pool, 2010). In order to ensure employability, it is vital that adult learners master the knowledge of their chosen field of study. On the other hand, it should also be understood that mastering the competencies related to a specific degree only will not be sufficient to ensure employability and, thus, the undergraduate should also develop transferable skills in order to become an employable graduate. Transferable skills include a lifelong learning orientation, team member competence, communication competence, self-management, technological competence, autonomy, agility and inventiveness (Pool & Sewell, 2007; Sewell & Pool, 2010). Career development competencies include exposing adult learners to learning experiences that engage their interests and that encourage self-awareness and inspire them as well as building in adult learners the capacity to identify and exploit relevant labour market opportunities, as well as to ensure the continued relevance of their competencies in unsettled environments. Work experience and the ability to apply theoretical competence to both work and life experience are highly valued by employers. Accordingly, life experiences and work contexts should be inculcated in adult learner learning in order to enhance their employability capacity (Pool & Sewell, 2007; Sewell & Pool, 2010). It would appear that work experience is a key factor in perceived employability competence (Jackson, 2012).

The nurturing of emotional intelligence in undergraduates forms part of the Key to Employability model. Beukes (2010) found that the advanced development of emotional intelligence capabilities in individuals enables them to demonstrate employability competencies more easily. People who are emotionally intelligent are not only capable of self-motivation, but are able to and will also motivate others and, thus, inspire greater achievement. Emotionally intelligent individuals are more successful academically, have more successful careers and are able to nurture more robust interpersonal relationships. Emotional intelligence may improve when adult learners are exposed to relevant experiences in higher education environments (Pool & Sewell, 2007; Sewell, & Pool, 2010).

The cultivation of the meta-cognitive ability (the ability to think about and assess personal learning experiences) flows logically from the nurturing of emotional intelligence and is a vital component of career management (Pool & Sewell, 2007; Sewell & Pool, 2010).

Graduates and employees should possess the capacity to assess how well they are prepared for the employment market in terms of subject competence and in the context of turbulence and change. Personal development plans may be utilised successfully for enhancing this capability (Pool & Sewell, 2007; Sewell & Pool, 2010). Self-efficacy, self-confidence and self-esteem are intricately interlinked and also highly relevant to employability. Self-efficacy, self-confidence and self-esteem may all be nurtured in higher education settings by exposing adult learners to mastery experiences, vicarious experiences provided by social models and social persuasion (Pool & Sewell, 2007; Sewell & Pool, 2010). This process was discussed comprehensively in chapter 2. Self-efficacy, self-esteem and self-confidence (the three s's) are essential prerequisites for self-reflection and, thus, meta-cognition (Pool & Sewell, 2007; Sewell & Pool, 2010). Conversely, according to Berntson, Naswall, and Sverke (2008), employability competencies may create feelings of self-efficacy. It would, thus, appear that employability may influence self-efficacy, but that self-efficacy does not influence employability (Berntson et al., 2008). The approach advocated by the Key to Employability model and which focuses on both specific skills and on certain values that should be cultivated, is also supported by Hinchliffe & Jolly (2011). According to Støren and Aamodt (2010), vocational exposure influences adult learners' evaluation of their qualifications in terms of their usefulness as regards enhancing employability, thus supporting the focus of the Key to Employability model on employment experience and competence-based employability. Figure 3.4 depicts the Key to Employability model developed by Pool and Sewell (2007).

FIGURE 3.4:   THE KEY TO EMPLOYABILITY MODEL

Developing self-esteem, self-efficacy, emotional intellingence and meta-cognition

Incorporating life experiences in learning

Application of theory in real world settings

Career development competence

Transferable competence

Subject related competence
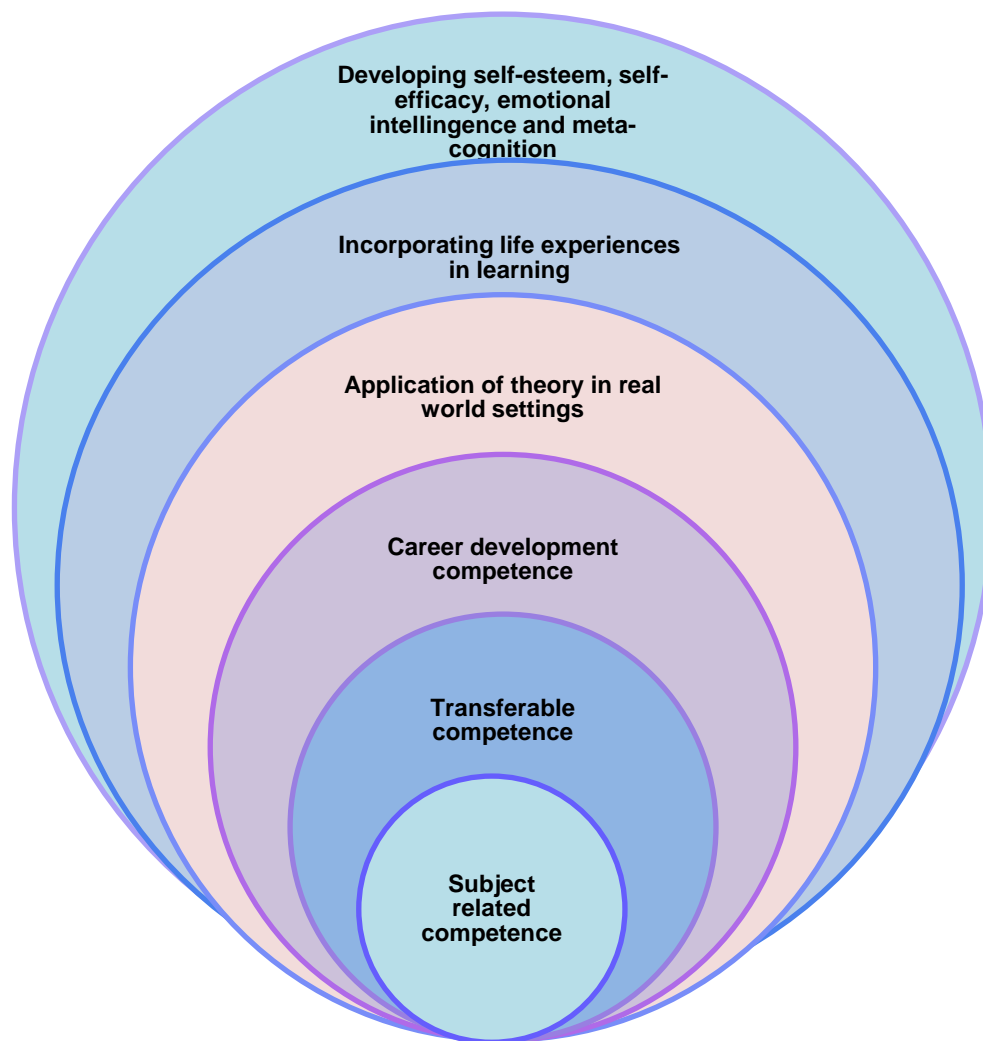
Source: Adapted from Pool & Sewell, 2007.

3.2.5   Van Dam: Employability Orientation

Both employee characteristics and personal interpretations of the work environment are significant precursors of the employability orientation of organisational personnel. Individualities may cause variations in staff employability orientations (Van Dam, 2004; Beukes, 2010). Openness and initiative are two individualities that are specifically worth mentioning in terms of employability orientation. Openness in this context is associated with an employee's willingness to accept unusual thinking and transformational initiatives. Employees who have high levels of openness are also more inclined to cultivate increased competence and are more accepting of a less structured work situation. On the other hand, initiative has to do with a personal orientation in terms of proactive self-management and the self-activation of events. Employees who display initiative will be actively involved in career-

related activities such as career planning. Such employees will be innovative and entrepreneurial in their attitude towards work projects (Van Dam, 2004; Beukes, 2010). Research indicates that there are significant associations between the Myers-Briggs Type Indicator personality preferences and cognitive assets such as creativity and flexibility (Potgieter et al., 2012). Employee career anchors impact on employability orientation. The effect of the career anchor depends on the anchor itself, for example, technical competence as a career anchor does not mediate the relationship between openness, initiative and employability orientation, while the career anchors of managerial competence, variety and security do mediate this relationship (Schreuder & Coetzee, 2011; Van Dam, 2004; Beukes, 2010).

On the other hand, organisational tenure has a negative effect on individual development, individual career planning and management and the intention to utilise mobility opportunities in order to improve employability. Consequently, employees with a longer tenure in organisations as less likely to value and engage in employability initiatives such as development opportunity and changes in job design (Van Dam, 2004; Beukes, 2010). Career development support plays a significant role in the employability actions of employees, but not in employability orientation. Career development support may be described as the extent to which managers inspire staff members to participate in development opportunities and enhance their careers. Perceived organisational support for employees relates to the perception of employees of the value the organisation places on their well-being and their individual input into organisational success. Research has found that a negative relationship exists between employee perceptions of organisational support and their employability orientation (Van Dam, 2004; Beukes, 2010).

However, a positive relationship exists between employability orientation and employability activities, as well as between openness and initiative and employability orientation (Beukes, 2010; Knight & Yorke, 2003; Van Dam, 2004). Consequently, an employee who manifests a high employability orientation and also high levels of initiative and openness will participate in employability activities. In addition, a positive relationship also exists between employability activities and aspects such as initiative, perceived organisational support and career development support. Nevertheless, career development support does not relate positively to employability orientation although it does relate positively to employability activities. Accordingly, career development support will enhance employee participation in employability activities but will not lead to a high level of employability orientation (Beukes, 2010; Knight & Yorke, 2003; Van Dam, 2004). A negative relationship exists between organisational tenure and employability activities, as well as between tenure and

employability orientation. This relationship is mediated by the continuance commitment of employees. The longer the employee stays with the organisation the less likely the employee is to engage in employability activities and also the less likely the employee is to wish to leave the organisation (Beukes, 2010; Knight & Yorke, 2003; Van Dam, 2004). The Employability Orientation Model developed by Van Dam (2004) is depicted in figure 3.5.

FIGURE 3.5:   EMPLOYABILITY ORIENTATION

Employability orientation

- Employability activities → Employee wellbeing
- Organisational support → Career development support
- Employee career anchors → Managerial competence
- Employee career anchors → Variety
- Employee career anchors → Security
- Employee characteristics → Openness
- Employee characteristics → Initiative
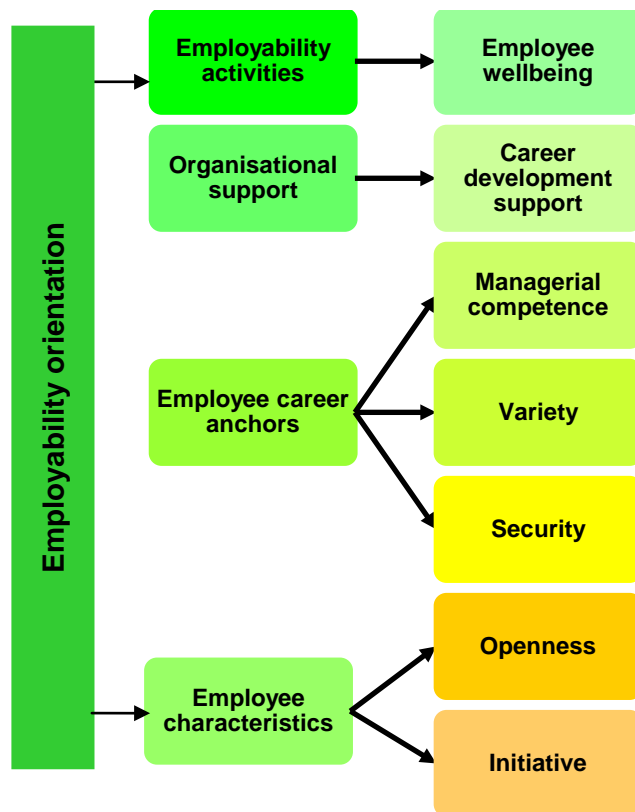
Source: Adapted from Van Dam, 2004.

3.2.6   Fugate, Kiniki and Ashforth: A Dispositional Approach to Employability

Employees who possess a multidimensional collection of personal individualities related to employability are inclined to adjust proactively to their work milieu (Fugate, Kinicki, & Ashforth, 2004; Fugate & Kinicki, 2008). Thus, in this sense, employability may be described as a disposition rather than as a set of competencies. An employability disposition encompasses individualities that foster adaptive work behaviour and, thus, positive employment outcomes (Beukes, 2010; Fugate & Kinicki, 2008). In terms of the dispositional model, it is more realistic to assume that employability is a personal disposition rather than a set of competencies because, in the highly uncertain and ever changing economic

environment of the post-modern era, individual characteristics will probably play a principal role in causing behaviour (Beukes, 2010; Fugate & Kinicki, 2008). Clark and Zukas (2013) are of the opinion that employability forms part of the personality and value system of an individual and, thus, it has a profound impact on behaviour. Individuals will, therefore, continue to display specific behaviours in particular circumstances. Employability dispositions are, thus, a result of specific experiences and are also confirmed by other experiences (Clark & Zukas, 2013).

Employability may be regarded as a three-dimensional concept consisting of career identity, personal adaptability and social and human capital (Fugate et al., 2004; Fugate & Kinicki, 2008). The model of Bezuidenhout and Coetzee (2010) contains more or less the same dimensions, namely, interpersonal, intrapersonal and career-related dimensions. A dispositional view of employability brings together the similarities between the three dimensions and, consequently, epitomises the theoretical and applied interconnectedness between these dimensions, facilitating proactive and agile work behaviour (Fugate et al., 2004; Fugate & Kinicki, 2008). Thus, employability turns out to be a set or series of proactive, ongoing and dynamic activities which are dictated by an environment. Accordingly, the construct of employability consists of dispositions such as the resilience related to work and career issues, pro-activity as it relates to work and career, career identity, career motivation and social and human capital (Beukes, 2010; Fugate et al., 2004; Fugate & Kinicki, 2008).

Employees who possess work and career resilience generally feel optimistic about their work and career prospects, they feel in control of their future careers and they are convinced that their work contributions are both valuable and valued. Individual work and career pro-activity results in employees who are able to better manage and adapt to unanticipated and stressful work-related vicissitudes (Fugate & Kinicki, 2008). In general, employees who possess high levels of dispositional employability are able to prepare themselves better to face and quickly recover from sudden changes. Receptiveness to organisational changes manifests in a positive orientation on the part of employees to work-related changes and in a willingness to adopt such changes in order to improve work and organisational performance (Beukes, 2010; Fugate & Kinicki, 2008). Career identity facilitates a coherent interpretation of past work-related experiences, future opportunities, aspirations and career-oriented behaviours, thus creating an unabridged picture for the individual and others to peruse and utilise in support of the individual's career ambitions. Career identities facilitate the creation of career trajectories in an age in which traditional career paths no longer exist, consequently

integrating the other dimensions of employability identified in the model (Beukes, 2010; Fugate & Kinicki, 2008).

People who possess high levels of career motivation usually formulate proactive, specific career plans and strategies for implementing such plans. Employees who are motivated in their careers will manage their own careers, set personal career goals and implement plans for career goal achievement (Beukes, 2010, Fugate & Kinicki, 2008). Social networking and the individual capacity to utilise these networks to facilitate personal career interests influence an employee's ability to recognise and utilise career opportunities. A person's social capital determines the amount and type of information available for decision-making, as well as the type of influence that may be used to advance career prospects (Beukes, 2010, Fugate & Kinicki, 2008). Human capital relates to individual aspects that fundamentally affect employability, including education, work experience, training and development, job performance, age and length of employment in an organisation (Beukes, 2010, Fugate & Kinicki, 2008). Figure 3.6 depicts the dispositional model of employability of Fugate et al. (2004).

FIGURE 3.6: EMPLOYABILITY AS DISPOSITION
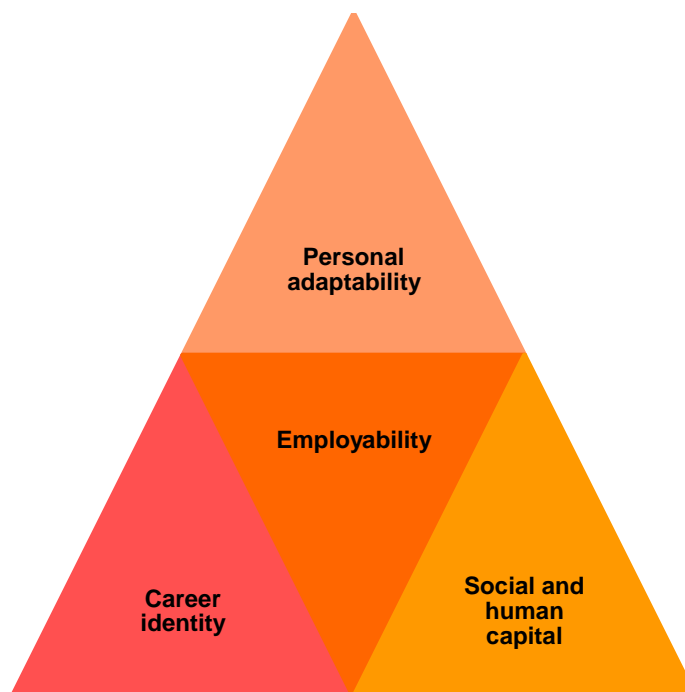
Source: Adapted from Fugate et al., 2004.

3.2.7 Van der Heijde and Van der Heijden: Competence-Based Employability

Post-modern organisations require employees who are capable of sustaining their own employability. At the same time, employable people are more able than those who do not possess employability attributes to weather fluid work environments successfully (Beukes, 2010; Van der Heijde & Van der Heijden, 2006). According to Van der Heijde and Van der Heijden (2006), employability produces positive results for both the employee and the organisation. With reference to the employee, employees who possess high levels of employability will perform better at their current jobs and will also have improved career prospects as compared with those employees with low levels of employability. In addition, Van der Heijde and Van der Heijden (2006) are of the opinion that employability entails subject or domain specific and generic competence, as well as personal attributes such as adaptive behaviour, disposition, capacity and personal drive (Beukes, 2010; Van der Heijde & Van der Heijden, 2006). The competence-based model of employability proposed by Van der Heijde and Van der Heijden (2006) is based on occupational know-how which is, in turn, augmented by four generic proficiencies, namely, expectation and enhancement (anticipation and optimisation); individual agility (personal flexibility); business nous (corporate sense) and equilibrium (balance). Mention is also made of the importance of competence in diverse groups and the capacity to adapt to changes.

Job-related expertise (occupational know-how) is a significant dimension of employability and may also contribute to organisational strength (Beukes, 2010; Van der Heijde & Van der Heijden, 2006), but only when these experts are also excellent performers and are recognised professionally. Individual expectation and enhancement and also individual agility focus on the ability to adapt successfully to changes individually, as changes relate to a specific job and also as they relate to a career. Expectation and enhancement are described as being internally driven and self-managed, while individual agility is perceived by Van Der Heijde and Van der Heijden (2006) as tending to be externally imposed and less proactive. Expectation and enhancement focus on the individual's resourceful preparation for the future, specifically future changes in the work context. On the other hand, personal agility focuses on the ability to accept and feel positive about changes in the work context that are not the result of personal choice (Beukes, 2010; Van der Heijden & Van der Heijde, 2006). Business know-how (corporate sense) includes the ability to work successfully as a member of a business team, sympathising with and adopting organisational goals and participating fully in decisions. The latter includes accepting responsibility for the consequences of decisions and their implementation. Knowledge sharing and the ability to create and utilise social networks are included in this concept of business know-how (Van der Heijde & Van der Heijden, 2006). Equilibrium (balance) relates to finding a compromise between

organisational goals and wellbeing and the employee's personal goals and ambitions. A position of equilibrium implies that a state of balance exists between organisational and employee investments and returns (Beukes, 2010; Van der Heijden & Van der Heijde, 2006). Jones (2013) is of the opinion that employability competence is situated in and formed by discipline-specific or domain competence. Figure 3.7 depicts the competence-based approach to employability developed by Van der Heijde and Van der Heijden (2006).

FIGURE 3.7: COMPETENCE-BASED EMPLOYABILITY
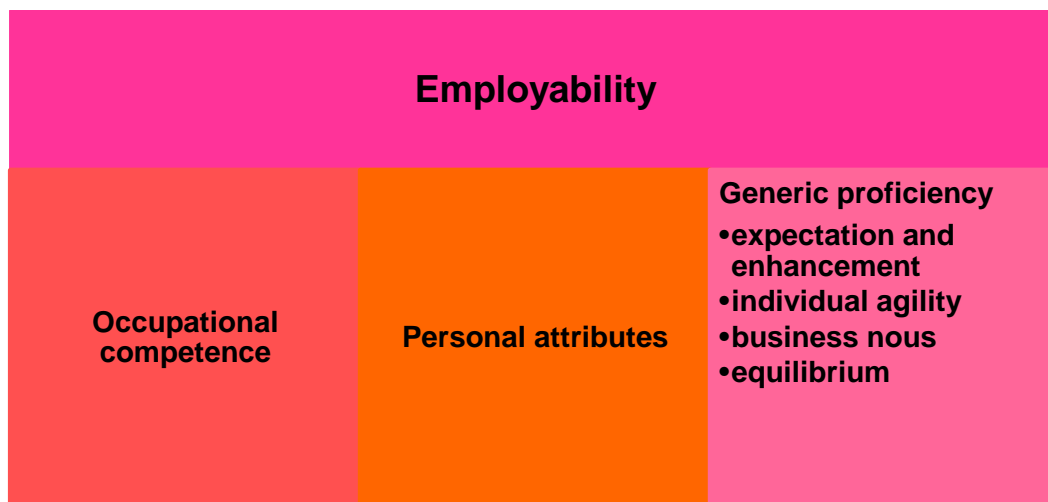
Source: Adapted from Van der Heijde & Van der Heijden, 2006.

3.2.8   Evaluation of the models

In this section the various models discussed in this chapter are scrutinised and their strengths and weaknesses compared.

3.2.8.1   The Employability Attributes Framework

The Employability Attributes Framework (Bezuidenhout & Coetzee, 2010) was designed specifically for South African adult learners. Eight fundamental attributes relating to the employability of adult learners in higher education are defined. These eight attributes may be grouped into one of three dimensions of employability, namely, the career dimension, the intrapersonal dimension and the interpersonal dimension. Each employability attribute consists of a set of traits that, together, form the attribute identified in the model (Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). The Employability Attributes Framework focuses on attributes that may be nurtured in the higher education milieu by creating an environment that is conducive to the cultivation of these attributes. Another advantage of the Employability Attributes Framework is that it is the only model which

focuses on attributes and that was designed specifically for the South African environment. However, a disadvantage of the Employability Attributes Framework is that little advice is given on how to cultivate and nurture the employability attributes of adult learners in tertiary education.

3.2.8.2 *Self-Regulatory model*

The Self-Regulatory model of employability (Beukes, 2010) depicts employees as active agents in the development of their own employability. Irrespective of which employability attributes the employee or adult learner wishes to develop, this model provides a useful guideline to the steps involved in the process of ensuring continued employment throughout one's career. Thus, the Self-Regulatory model facilitates the active development of employability and this is a distinct advantage of the model (Beukes, 2010). Coetzee and Esterhuizen (2010) found that the psychological career resources of unemployed graduates, such as social connectedness, self-esteem, agility and autonomy, are significantly related to their ability to cope in less ideal career conditions, for example, unemployment. Thus, people with less well-developed career resources may struggle to implement the steps of the Self-Regulatory model effectively. However, a distinct disadvantage of the model is the assumption that employees, and also adult learners in secondary and higher education, possess the agentic belief and capacity to participate actively and intelligently in their own employability creation and cultivation. This, in turn, may be compounded by the preference of adult learners to seek career advice from their parents first, and then to use other sources such as lecturers and career advisers. Parents may not possess the necessary labour market information to provide useful advice (Greenbank, 2011). The Self-Regulatory model of employability focuses on actions and was, therefore, not considered for the purposes of this study.

3.2.8.3 *USEM model*

The USEM model (Knight & Yorke, 2003) delves into the complexity of employability. The model indicates that employability is a multi-faceted construct and is influenced by various factors, including personality, environment and course content. The elements of the model comprise understanding, skills, self-efficacy and meta-cognition. The fact that the model explores both the complexity of employability and the development of employability increases the intricacy of the model and this, in turn, makes it difficult to discern clearly the possibilities for the practical application of the model in tertiary education scenarios, specifically the open distance learning environment (Knight & Yorke, 2003; Pool & Sewell, 2007). The model presupposes that employability does not depend on individual characteristics, but rather on competencies that may be acquired (Clark & Zukas, 2013).

However, the assumption that generic skills are generic across domains and professions is unsubstantiated (Clark & Zukas, 2013).

3.2.8.4 Key to Employability

The Key to Employability model (Pool & Sewell, 2007) takes the discourse on employability back to the basics of subject or domain competence, indicating that no one can be employable without a good grounding in subject-specific knowledge and skills (Pool & Sewell, 2007; Sewell & Pool, 2010). The model also highlights the importance of extending domain specific knowledge and skills to the working world, while also incorporating the life experiences of the learner into the learning experience (Pool & Sewell, 2007; Sewell & Pool, 2010). However, a major emphasis of the key to employability model is work experience and this is not a possibility for all tertiary qualifications while also posing specific problems in the open distance learning milieu. The concept of generic attributes is nebulous as various researchers formulate generic attributes in diverse ways, and also focus on diverse generic attributes (Jones, 2010). According to research, it is not possible to transfer generic skills from one context to another easily (Jones, 2010). The use of specific domain competence as a point of departure allows the key to the employability model to progress from the more fragmented approaches that focus on the separate entities of employability.

Jackson (2012) found that work experience is a vital contributor to the perceived employability of adult learners. Hinchliffe and Jolly (2011) support an approach that includes both the skills and the value-based perspective of employability. Research conducted by Støren and Aamodt (2010) supports the strong emphasis of this model on vocational exposure. The key to the employability model was developed in the United Kingdom and takes into account the needs and expectations of both employers and adult learners based in that country. However, in view of the fact that there is little research which explains the cultural transferability of the key to employability model, it was not considered for this study.

3.2.8.5 Employability Orientation

The Employability Orientation model (Van Dam, 2004) uses the employability of employed people as a point of departure. Employability orientation is depicted as a function of employee characteristics, employee career anchors, organisational support and employability activities (Van Dam, 2004; Beukes, 2010). The research indicates that both employee characteristics and career anchors have a strong influence on employability, although organisational support and employability activities do not have either a direct or a strong relationship with employability orientation (Potgieter & Coetzee, 2013; Schreuder &

Coetzee, 2011). The employability orientation model is focused specifically on the work environment and was, therefore, not deemed to be useful for the purposes of this study.

3.2.8.6   *Employability as Disposition*

The dispositional approach to employability (Fugate et al., 2004) takes, as its point of departure, the specific personality characteristics that employees possess and that facilitate their agility in the workplace (Fugate et al., 2004; Fugate & Kinicki, 2008). In this sense, employability will affect employee behaviour, and specifically in times of unexpected and disruptive change. Employability is described as a three-dimensional construct, comprising career identity, personal adaptability and social and human capital. When employability is viewed as a disposition, attention is drawn to the similarities between the three dimensions and, consequently, the interconnected nature of the three dimensions is emphasised. Potgieter and Coetzee (2013) found that strong relationships exist between personality types and employability, and also between the specific dimensions of employability such as intercultural competence, social expertise and emotional intelligence. Once again, this model assumes that employees and/or adult learners will possess the agentic ability and belief to nurture and cultivate all three of the dimensions of the employability disposition. There appear to be similarities between the career identity dimension of the dispositional model and the career dimension of the employability attributes framework. However, little research could be found that indicated whether the dispositional model is culturally transferable and, therefore, it was not considered for this study.

3.2.8.7   *Competence-Based Employability*

The competence-based model (Van der Heijde & Van der Heijden, 2006) uses occupational or domain competence as the point of departure for describing employability. However, it also brings occupational competence together with personal attributes and generic proficiency, thus assimilating the three facets of employability that are routinely discussed in the literature (Beukes, 2010; Van der Heijde & Van der Heijden, 2006). The generic proficiencies described in the competence-based employability model are similar to those discussed in the Employability Attributes Framework. Jones (2010) found that generic skills may be conceptualised in various ways while they are highly context dependent and notoriously difficult to assess. Jones (2010) investigated the specific generic competencies of problem-solving, critical thinking and communication. Disciplinary competence may be nurtured in a disciplinary context, specifically in the practice of university teaching (Jones, 2010). Current research on employability focuses on content competence or domain competence as well as on generic competence and, thus, content competence and generic competence are viewed as two separate sets of competence. However, Jones (2010) is of

the opinion that generic competence is entrenched in domain competence and is, therefore, an integral aspect of the domain. Essentially, the generic competence of each domain will be slightly different, implying that there would be difficulties in applying the principles of the competence-based model to all work scenarios. In view of the fact that it was not possible to establish the cultural viability of the model for the South African environment the model was not considered for the purposes of this study. Table 3.1 briefly summarises the basic premise of each model as discussed in the literature review, indicates whether the model was included or excluded in the statistical research of the study and the reasons why the model was either included or excluded.

TABLE 3.1   SUMMARY OF EMPLOYABILITY MODELS CONSIDERED FOR THE PURPOSES OF THE STUDY

Model	Basic premise	Reason for either including or excluding a model in the empirical research study
Employability Attributes Framework Bezuidenhout & Coetzee, 2010)	Eight employability attributes may be grouped into three dimensions of employability	This model was included in the empirical research study because it was designed specifically for the South African adult learner and was, therefore, appropriate for a study on adult learners in a higher education institution.
Self-Regulatory model (Beukes, 2010)	Employability may be practised using s set of self-regulatory steps	This model was not included in the empirical research study because it focuses on the actions that increase employability, and not on attributes.
USEM model Knight & Yorke, 2003)	Employability is complex, multi-faceted and organic	This model was excluded from the empirical research study because it was designed in the UK for the UK higher education environment. In addition, it was not possible to find evidence to confirm that the model would be applicable in all cultures.
Key to employability	Includes domain or subject specific competence and	This model was excluded from the empirical research study because it

(Pool & Sewell, 2007)	emphasises work experience, while attributes and skills are also incorporated in the model	was designed in the UK for the UK higher education environment. In addition, it was not possible to find evidence to confirm that the model would be applicable in all cultures.
Employability orientation (Van Dam, 2004)	Employability orientation is depicted as a function of employee characteristics, employee career anchors, organisational support and employability activities	This model was excluded from the empirical research study because it focuses on employed people, and not on the higher education environment.
Employability as disposition (Fugate, Kinicki & Ashforth, 2004)	Employability is a disposition, not a set of skills, and, as disposition, it affects employee behaviour	This model was excluded from the empirical research study because no evidence could be found to confirm that the model is culturally transferable.
Competence-based employability(Van der Heijde & Van der Heijden, 2006)	Occupational or domain competence is the point of departure of employability, coupled with personal attributes and generic proficiency, thus all three facets of employability that are routinely discussed in the literature are assimilated in the model	This model was excluded from the empirical research study because no evidence could be found to confirm that the model is culturally transferable.

3.3   VARIABLES INFLUENCING EMPLOYABILITY

This study will focus specifically on the demographic variables of age, gender and race and the way in which these variables interact with both self-directedness and employability. The demographics of both workplaces and higher education institutions have altered dramatically in the past decade and yet few of the researchers consulted had elaborated on whether variables such as gender and race influence graduate and/or worker employability. There is, however, some speculation in the literature as to whether these demographic variables may have an effect on *unemployment* (Coetzee & Esterhuizen, 2010; Jackson, 2012; McQuaid & Lindsay, 2002).

It is possible that age may influence employability. It would appear that older employees are less employable than younger employees, while employees who have been employed in the same position and/or the same organisation for more than seven years and who have entered the later career stages seem to display fewer employability behaviours (Clarke, 2009; De Grip, Van Loo, & Sanders, 2004; Van Dam, 2004; Van Der Heijden, 2002). Specifically in the South African economy, Kraak (2005) found that, of the adult learners graduating from Further Education and Training Colleges, more white graduates than African graduates were able to secure employment. However, it is unclear whether the inability of African graduates to find employment is related to their employability skills or to the lack thereof. Mason, Williams and Cranmer (2009) found that, in the United Kingdom, being male and belonging to a lower social stratum was significantly negatively related to the ability to find a job six months after graduation. However, this study also does not indicate whether the inability to secure employment was related to employability characteristics. Beukes (2010) found no significant differences between genders with reference to both employability and emotional intelligence. The sample used in this study did not allow for differences in race and, therefore, no inferences could be drawn with regard to race (Beukes, 2010). It is possible that employers may display an unfavourable attitude to older employees in terms of recruitment, retention and support for continued development and career growth (Billet, Dymock, Johnson, & Martin, 2011).

In a study conducted in Australia, Jackson (2013) found that adult learners, for whom English is a second language and adult learners of Asian and African origin, valued self-awareness as an employability skill higher than did other adult learners. Correspondingly, female adult learners scored significantly higher on the importance of employability skills in a higher education curriculum than did their male contemporaries. In a self-reported study on employability competence, Asian adult learners scored themselves lower in overall employability competence (Jackson, 2012). Males also recorded lower ratings in employability competence than did the female participants in the Australian study, although age appeared to have almost no effect on self-scored competence in employability (Jackson, 2012).

Potgieter et al. (2012) found that a significantly positive relationship exists between self-esteem and general employability attributes, indicating that employees who possess higher levels of emotional intelligence may also display higher levels of employability attributes, and that people with a well-developed self-esteem display their employability attributes confidently.

The scarcity of research on the influence of demographic variables on employability decontextualises the construct and more research should be conducted on the way in which demographic variables affect employability (Moreau & Leathwood, 2006, Morrison, 2012). Research has paid little attention to the limiting effect of gender, race and social status on labour market entry and mobility. In addition, it would appear that inequality has been ignored while success or failure on the labour market front is apparently completely within the control of the individual employee (Moreau & Leathwood, 2006; Morrison, 2013). Likewise, if securing employment is an indication of employability, then organisational employment processes may also influence employability (Messum, Wilkes, & Jackson, 2011; Morrison, 2013; Tomlinson, 2007). Specifically, graduate mobility, previous work experience, age, ethnicity, gender, social class, mode of study, type of higher education institution and subject studied may all be areas in terms of which prospective employees experience bias and, thus, these biographical determinants may influence employability (Messum et al., 2011; Tomlinson, 2007). Interestingly, adult learners appear to feel that gender and class may prove to be restraints when job hunting (Morrison, 2012). This study will focus specifically on the demographic variables of age, gender and race and the way in which these groups differ in terms of both their self-directedness and employability. It was not possible to find any research which had established specific correlations between self-directedness and employability.

3.4 THE IMPLICATIONS OF EMPLOYABILITY FOR OPEN DISTANCE LEARNING AND TRAINING AND DEVELOPMENT

Employers require employable workers, while most graduates of higher education fully realise the importance of actively managing their employability (Dabic, 2008; Griesel & Parker, 2007; Poropat, 2011; Tomlinson, 2007). Thus, securing a job not only involves acquiring a degree and achieving good marks, but also constructing and pursuing a personal career entry and management strategy. One of the roles of higher education in the post-modern society is to cultivate and nurture graduate employability (Coetzee, 2012; Poropat, 2011).

From the perspective of graduates employability relates to their own insight into the labour market and related changes and is augmented and facilitated by their developing identities as employees, their recognition that they are active agents in their own careers and their personalities as they relate to work and career (Tomlinson, 2007; Tymon, 2011; Wilton,

2008). Graduates may position themselves differently in the labour market and they may also adopt various action plans as regards finding employment as a result of, not only their comprehension of job markets, but also their implicit knowledge of specific job markets. Graduate dispositions influence their comprehension and perception of various job and career opportunities and options (Dabic, 2008; Tymon, 2011; Tomlinson, 2007). People associate their employability with the investment they make in their development through education and continued learning (Berntson, et al., 2008; Tymon, 2011; Wittekind et al., 2009).

Some of the implications of the focus on employability for higher education involve both curricula and teaching methods (Boden & Nedeva, 2010). The focus of higher education may also change from providing education to potential leaders in society to providing education that ensures employment. Universities nowadays are compelled to prove that they are utilising public funds effectively and efficiently. One of the methods used to supply this proof is by adopting a "learning outcomes" approach to teaching. Learning outcomes that require that adult learners perform in ways that are measurable may effectively be utilised to demonstrate the effectiveness of university education (Boden & Nevada, 2010). The preparation of adult learners for a turbulent world may be even more essential in the current economic climate of austerity and constricting economies. According to Furnham (2000), insufficient natural resources, globalisation, the growing demand for corporate social responsibility and ethical governance, as well as the increasing vulnerability of the business world to economic and political steadiness create a future workplace that may be anything but comfortable. Full-time employment may be replaced by part-time employment and/or shorter working days for most employees and employees will enjoy little job security. People will be forced to take more responsibility for their own future prosperity and satisfaction. A lucky few may be correctly equipped for such an environment (Furnham, 2000). An essential skill for all graduates is the ability to transfer the generic skills nurtured during higher education to the work milieu (Ehiyazaryan & Barraclough, 2009; Morrison, 2013).

From the organisational perspective, employability is a joint venture between the employer and the employee (Clarke, 2009; Van Emmerik, Schreurs, De Cuyper, Jawahar & Peeters, 2012). Training and development initiatives may facilitate and nurture employee competence development and agility while the employees are responsible for identifying which initiatives are relevant to their working futures. Employees who possess the ability to be active agents in their own working and learning lives will adopt either a protean or a boundaryless career management strategy in order to achieve their personal goals and ambitions (Billet, 2010b; Clarke, 2009; Von Emmerik, 2012). A protean career management strategy revolves around

the individual adjusting his or her career according to environmental changes. On the other hand, a boundaryless career management strategy focuses on utilising learning opportunities in order to remain employable in a volatile and uncertain business environment. Consequently, the career pattern adopted by individual employees will also reflect the extent to which they display employability behaviours (Billet, 2010b; Clarke, 2009; Von Emmerik, 2012). The adoption of a specific career management strategy implies self-awareness and also proactive planning and management of the personal career journey, as well as a commitment to lifelong learning – all characteristics associated with self-directedness.

Work involves individuals in goal-directed activities. The understanding of lifelong learning and creativity requires the ability to understand that learning comes about when employees become involved in meaningful work activities (Billet, 2010b; Von Emmerik, 2012). Involvement in work activities also implies the ability to adapt those work activities in meaningful ways. Learning in the workplace and from the workplace is an essential component for continued employment (Tones, Pillay, & Kelly, 2011). Workplace learning may be facilitated in various settings, either by providing programmes mediated by training providers, or by nurturing a workplace environment that inspires, prizes and enriches relevant learning experiences (Billet, 2010b; Candy, 2000). Conversely, it is not always possible to plan and control learning in the workplace because employees do not learn only when participating in formal programmes, but they also learn from observing others, by being exposed to different contexts and by making mistakes which are corrected in an appropriate way (Billet, 2010b; Candy, 2000). The workplace is considered to be a significant setting for learning in terms of the pursuit of lifelong learning – a vital element in both self-directedness and lifelong learning (Billet, 2010b; Botha, 2012; Reio & Wiswell, 2000).

Embedded in the concepts of lifelong learning and workplace learning is the concept of curiosity – the person who is curious will usually find a way to satisfy that curiosity by searching out new information in one way or the other (Slev & Pop, 2012; Ya-Hui, 2009). Coupled to this is intrinsic motivation with curiosity playing a crucial role in intrinsic motivation (Ya-Hui, 2009). However, developing adult lifelong learners implies more than just stimulating and harnessing curiosity (Slev & Pop, 2012). It is essential that employees understand both their specific, everyday job responsibilities as well as the broader organisation that employs them. In other words, they need to understand and be able to function effectively within the organisational culture and this, in turn, forms part of workplace learning and development (Billet, 2010b; Slev & Pop, 2012). Employees who are involved in

interesting and inspiring work contexts perceive themselves to be more employable (Berntson, et al., 2008; Van Emmerik, et al., 2012).

The purpose of training and development in an organisation is to provide employees with opportunities to acquire the competencies that will enable them to perform optimally in both their current and future jobs. Thus, training and development provides employees with workplace learning experiences in order to ensure a continued competitive advantage for the organisation (Coetzee et al., 2013; Du Toit et al., 2010). Training and development involves increasing the value employees may add to the organisation by also increasing employee agility (Coetzee et al., 2013). Consequently, the training and development function in the organisation focuses on fostering the long-term capacity for learning in the organisation, from the individual employee to the organisation as a whole. Training and development activities which are associated with employee development include training, individual development as well as career and organisational development (Coetzee et al., 2013).

In addition, training and development encompasses both the formal and informal learning that takes place at the workplace. The essence of training and development is the focus on increasing the capacity of employees and the organisation to improve performance (Cameron & Harrison, 2012; Coetzee et al., 2013). Training and development relates to employability orientations in organisations through the concept of goal-driven employee development in order to build improved organisational agility. Certain personality traits which are related to employability, such as openness (being willing and eager to accept changes and new ideas), may positively predict the success of training interventions (Van Dam, 2004). While workplace learning is often viewed as an extension of education, organisational learning is considered to be a sub-field of organisational renewal and change (Cameron & Harrison, 2012; Engstrom & Kerosuo, 2007). However, in view of the fact that an organisation is populated by people, and organisational modifications are originated and fostered by its employees, clearly workplace learning and organisational learning form two sides of the same whole (Cameron & Harrison, 2012; Engstrom & Kerosuo, 2007).

3.5   INTEGRATION AND FORMULATION OF RESEARCH HYPOTHESES

Various elements of self-directedness are similar to the elements of employability. Autonomy, self-efficacy, meta-cognition, critical thinking and lifelong learning are some of the elements that are associated with both self-directedness and employability (Botha, 2012; Brookfield, 1985; Clark & Zukas, 2013; Ellinger, 2004; Ross-Gordon, 2011; Potgieter et al., 2012). Research has shown that employable people are agile, future-directed and proactive

and that they take control of their career and continued learning (Bezuidenhout & Coetzee, 2010; Clark & Zukas, 2013; Potgieter et al., 2012; Jackson, 2012; Jones, 2010). In view of the fact that employability requires of adult learners and employees the ability to adopt an agentic approach to their working lives in order to anticipate and prepare for changes in the work and labour market environments, the following questions arises: Should employable people also be capable of self-direction? Or are employable people already self-directed? Table 3.2 summarises the research aims of this study and also the research hypotheses related to each research aim.

TABLE 3.2:   SUMMARY OF RESEARCH HYPOTHESES

Empirical research aim	Research hypotheses
Research aim 1: To investigate the empirical relationship between the self-directedness and employability attributes of adult learners as manifested in a sample of respondents who are pursuing distance learning further studies in the economic and management sciences field in South Africa.	H01: There is no significant and positive relationship between self-directedness and the employability attributes of adult learners. Ha1: There is a significant and positive relationship between self-directedness and the employability attributes of adult learners.
Research aim 2: To assess whether the self-directedness of adult learners significantly and positively predicts their employability attributes	H02: The self-directedness of adult learners does not significantly and positively predict their employability attributes. Ha2: The self-directedness of adult learners significantly and positively predicts their employability attributes.
Research aim 3: To investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes.	H03: Gender, race and age groups do not differ significantly regarding their self-directedness and employability attributes. Ha3: Gender, race and age groups differ significantly regarding their self-directedness and employability attributes.

Notes: H0: Null research hypothesis. Ha: Alternative research hypothesis.

3.6   SUMMARY

Employability, whether investigated from the perspective of the employer, the graduate or higher education, is a frequently discussed topic in research. It is essential that both employed people and adult learners be prepared for a constantly changing, unknown future. The consensus is that the cultivation of employability competencies would enable people to cope in such a setting (Beukes, 2010, Coetzee, 2012; Jackson, 2012; Newby, 2005; Potgieter & Coetzee, 2013). Employability competence encompasses, among others, attributes such as emotional intelligence, cultural competence, autonomy, proactivity, self-reflection, career management ability, initiative, openness and autonomy (Bezuidenhout & Coetzee, 2010; Beukes, 2010; Clark & Zukas, 2013; Pool & Sewell, 2007, Potgieter et al., 2012).

This chapter addressed the second, third and fourth literature research objectives, namely, to conceptualise the construct of employability attributes as discussed in the literature; to conceptualise the theoretical relationship between the self-directedness of adult learners and their employability attributes, and to identify the implications of the theoretical relationship between adult learner self-directedness and employability attributes for both organisational training and development (T&D) and ODL educator teaching and learning practices. The question that now needs to be investigated is whether a statistical relationship exists between self-directedness and employability attributes. In order to achieve the empirical research aims, chapter four will focus on explaining the research methodology and statistical procedures employed in the study in order to test the research hypotheses.

CHAPTER 4

EMPIRICAL RESEARCH

According to Aristotle (in Nisber, Elder, & Miner, 2009: 8), the highest achievement of the human intellect was to study the physical world. Aristotle further believed that it was possible to subdivide a complex system into its component pieces. These pieces could then be studied, defined and re-assimilated into a comprehensive whole. Aristotle believed that this process would lead to a thorough comprehension of the whole system and, thus, of the physical world (Salkind, 2012; Nisber et al., 2009). Plato, on the other hand, believed that ideas fuelled the natural world, and that studying ideas equalled the study of the intangible world which, according to Plato, constituted reality (Nisber et al., 2009). Whichever approach one favours, the necessity for business to purify data into usable knowledge in order to solve complex problems remains paramount (Salkind, 2012; Nisber et al., 2009). Accordingly, research in academia is used to formulate knowledge and theories which then form the foundation of accepted business principles. Deductive and inductive reasoning are the two approaches that may be used to establish either certainty or reality (Nisber et al., 2009). The point of departure for the deductive reasoning approach is a basic truism while the purpose of inductive reasoning is to describe a singularity and, thence, to deduce or infer basic truisms from this description. It was in this way that the scientific research methodology – which uses both deductive and inductive reasoning – evolved (Salkind, 2012; Nisber et al., 2009).

This chapter focuses on the empirical investigation or the research methodology used in the study. The chapter will, thus, present an overview of the population and sample used in the study. The measuring instruments will then be discussed and the choice of each justified. This will be followed by a description of the data gathering process and the data processing. Finally, the research hypotheses will be formulated. As stated in chapter 1, the empirical study was conducted within the domain of the positivist research paradigm. The positivist research paradigm has a scientific base and emphasises the measurement of independent facts about a single, comprehensive, reasonable certainty or truth (Krauss, 2005; McIlveen, Beccaria, Du Preez, & Patton, 2010). The purpose of research in the positivist paradigm is to describe the facts being observed without the researcher participating in the milieu in which the facts exist and, thus, the research itself does not influence the data collected. The purpose of such an approach is to understand a specific environment in order to facilitate foresight and management of that environment (Kim, 2003; Krauss, 2005; McIlveen et al.,

2010). The positivist research paradigm proposes that common, collective rules direct social experiences and interactions and that revealing these collective rules facilitates the prediction and control of social phenomena (Kim, 2003; Krauss, 2005; Mackenzie & Knipe, 2006; McIlveen et al., 2010).

The empirical research phase of the study consisted of the following steps:

Step 1: Determination and description of the sample

Step 2: Choosing the measuring instruments and motivating their use

Step 3: Administration of the measuring instruments

Step 4: Scoring of the measuring instruments

Step 5: Formulation of the research hypotheses

Step 6: Statistical processing of the data

Step 7: Reporting on and interpreting the research results

Step 8: Integration of the research findings

Step 9: Formulation of research conclusions, limitations of the study and recommendations

4.1   POPULATION AND SAMPLE OF THE STUDY

When a research question is investigated, data is gathered about either the population or a sample of the population being studied. In the majority of data analyses a sample of a population is used in the research study because of practical limitations and also for the sake of economy (Salkind, 2012; Welman & Kruger, 2001). The population refers to the entity or group of people being studied and from which a sample is drawn (Salkind, 2012; Welman & Kruger, 2001). On the other hand, sampling is a systematic, decision-making process which is aimed at selecting a sub-set of units of study which will be surveyed in order to collect data that will be representative of the entire population (Salkind, 2012; Welman & Kruger, 2001). The sampling process revolves around the following three elements: (1) familiarity with the population; (2) the individuals that constitute the population; and (3) the sample of individuals that is eventually decided upon (Uprichard, 2013).

The population in this research project comprised adult learners enrolled for undergraduate studies in the economic and sciences field at a comprehensive, open distance learning university. At the time of the study the total population constituted approximately N = 438 055 adult learners – the approximate number of adult learners registered in 2010 at the College of Economic and Management Sciences. The population is presented in Table 4.1.

TABLE 4.1: COMPOSITION OF TOTAL POPULATION FROM WHICH THE SAMPLE WAS DRAWN

School	Department	N	%
School of Accounting Studies	Auditing	22 937	5.2
	Financial Accounting	73 712	16.8
	Management Accounting	35 642	8.1
	Taxation	19 057	4.4
School of Economic Sciences	Decision Sciences	17 845	4.1
	Economics	59 848	13.7
	Transport Economics, Logistics and Tourism	7 899	1.8
School of Management Sciences	Business Management and Entrepreneurship	101 738	23.2
	Finance and Risk Management and Banking	19 404	4.4
	Human Resource Management	22 100	5.0
	Industrial and Organisational Psychology	18 019	4.1
	Marketing and Retail	22 569	5.2
	Public Administration	17 196	3.9
Total		438 055	100

Stratified random sampling, a form of probability sampling, was used to identify the research participants from the total population of adult learners. Probability and non-probability sampling are the two main sampling methods which may be used (Salkind, 2012; Welman & Kruger, 2001). When probability samples are used, the probability of any member of the population being included in the sample may be calculated. In addition, the method also allows for the estimation of sampling error (Leedy & Ormrod, 2005; Salkind, 2012; Welman & Kruger, 2001). Probability sampling is based on the premise that knowledge of the sample will lead to knowledge of the population (Uprichard, 2013). Probability samples may consist of simple random samples, stratified random samples, systematic samples or cluster samples. However, random sampling is usually the preferred type of sampling (Leedy & Ormrod, 2005; Salkind, 2012; Welman & Kruger, 2001). When simple random sampling is used, each population member has a probable equal opportunity of being included in the sample. In addition, each sample of a specific size has a probable equal opportunity of being selected. Stratified random sampling is used in populations comprising several dissimilar and easily distinguishable subpopulations that are mutually exclusive, for example, gender or age (Leedy & Ormrod, 2005; Salkind, 2012, Welman & Kruger, 2001).

In a stratified random sample, the members of a specific stratum will be more similar than the total population being studied (Salkind, 2012; Welman & Kruger, 2001). In order to draw a stratified random sample, the various strata should be clearly described using one or more variables, and a random sample should then be taken from each stratum identified. This allows for the taking of a random sample with more certainty than would be possible when simple random sampling is used (Salkind, 2012; Welman & Kruger, 2001). The use of a stratified random sample also allows for the use of an overall smaller sample size than would be possible if simple random sampling were used, but without reducing the representivity of specific, possibly important, strata. Proportional stratified random sampling allows for the taking into account of the possible different sizes or proportions of each stratum in a stratified sample while the various strata are proportionally represented in the sample (Leedy & Ormrod, 2005; Salkind, 2012).

Sample size is determined by population size, with the precept that the smaller the population to be studied, the bigger the sample should be in order to decrease the standard error. It is considered good research practice to select a sample of greater than 25 units of analysis. However, when random sampling is used, a sample of 400 to 500 units of analysis is deemed sufficient, irrespective of the size of the population (Leedy & Ormrod, 2005; Salkind, 2012; Welman & Kruger, 2001). Nevertheless, the size of the sample is not only predicated by the size of the population but also by the differences in the variables within the population. Usually the bigger the differences in the variables, the bigger the sample should be. A last consideration in the determination of sample size is the possible number of respondents. The number of respondents may be far smaller than the original sample size and, thus, it is advisable to use a larger sample (Leedy & Ormrod, 2005; Salkind, 2012; Welman & Kruger, 2001).

4.1.1 Composition of the sample group

A stratified, proportional, random sample of N = 10 500 of individuals from different gender, race and age groups was drawn from the total population. In addition, the sample was stratified according to module (year level), qualification, department and school. A full description of the sample is provided in Table 4.2. A response rate of 10.5% resulted in N = 1 102 returned, useable questionnaires.

TABLE 4.2: COMPOSITION OF THE SAMPLE PER DEPARTMENT AND SCHOOL

School	Department	Mailing list	Response rate %				
			0.01	**0.03**	**0.06**	**0.09**	**0.12**
School of Accounting Sciences	Auditing	547	5	16	33	49	66
	Financial Accounting	1 766	18	53	106	159	212
	Management Accounting	851	9	26	51	77	102
	Taxation	462	5	14	28	42	55
School of Economic Sciences	Decision Sciences	431	4	13	26	39	52
	Economics	1 440	14	43	86	130	173
	Transport Economics, Logistics and Tourism	189	2	6	11	17	23
School of Management Sciences	Business Management and Entrepreneurship	2 438	24	73	146	219	293
	Finance and Risk Management and Banking	462	5	14	28	42	55
	Human Resource Management	526	5	16	32	47	63
	Industrial and Organisational Psychology	431	4	13	26	39	52
	Marketing and Retail	547	5	16	33	49	66
	Public Administration	410	4	12	25	37	49
Total		10 500	105	315	630	945	1260

4.1.2 Composition of the gender groups

The composition of the gender groups in the sample is discussed in this section.

TABLE 4.3: COMPOSITION OF THE GENDER GROUPS

		Frequency	**%**	**Valid %**	**Cumulative %**
Valid	**Male**	409	37.1	37.2	37.2
	Female	690	62.6	62.8	100.00
	Total	1099	99.7	100.00	
Missing	**System**	3	.3		
Total		1102	100.00		

As indicated in Table 4.3, the gender groups consisted of 37.2% males and 62.8% females. This is also illustrated in Figure 4.1 below.

FIGURE 4.1: COMPOSITION OF THE GENDER GROUPS IN THE STUDY
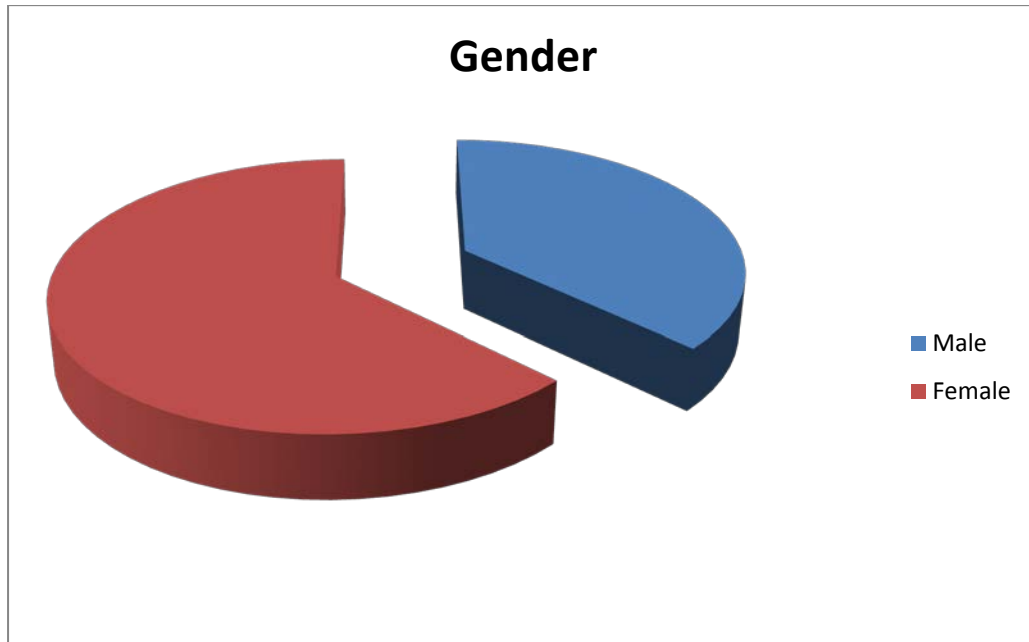
4.1.3   Composition of the race groups

In this section the composition of the race groups is discussed.

TABLE 4.4:   COMPOSITION OF THE RACE GROUPS

		Frequency	%	Valid %	Cumulative %
Valid	**Black (African)**	948	86.0	86.3	86.3
	Coloured	39	3.5	3.5	89.8
	Indian	30	2.7	2.7	92.5
	White	82	7.4	7.5	100.0
	Total	1099	99.7	100.0	
Missing	**System**	3	.3		
	Total	1102	100.0		

Table 4.4 indicates that the four race groups represented in this sample consisted of 86.3% black (African) learners, 3.5% coloured learners, 2.7% Indian learners and 7.4% white learners. These percentages are also illustrated in Figure 4.2 below.

FIGURE 4.2: COMPOSITION OF THE RACE GROUPS
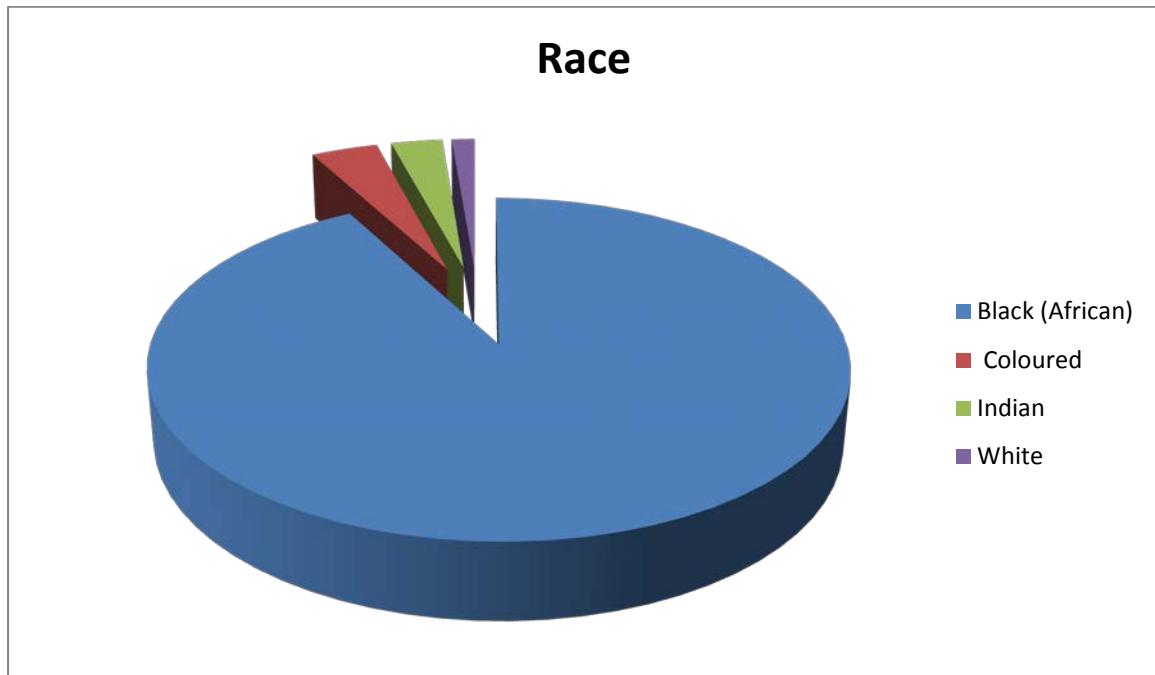
4.1.4 Composition of the age groups

In this section the composition of the age groups is discussed.

TABLE 4.5: COMPOSITION OF THE AGE GROUPS

		Frequency	%	Valid %	Cumulative %
Valid	**18–25**	413	37.5	39.9	39.9
	26–30	251	22.8	24.3	64.2
	31–40	252	22.9	24.3	88.5
	41–50	101	9.2	9.8	98.3
	Over 50	18	1.6	1.7	
	Total	1035	93.9	100.0	100.0
Missing	**System**	67	6.1		
	Total	1102	100.0		

Table 4.5 indicates that the age group consisted of 39.9% of learners aged between 18 and 25, 24.3% of learners aged between 26 and 30 and 24.3% of learners aged between 31 and 40. Table 4.5 also shows that 9.3% of learners were aged between 41 and 50 and 1.6% of learners were over 50 years of age. These statistics are also illustrated in Figure 4.3 below.

FIGURE 4.3: COMPOSITION OF THE AGE GROUPS
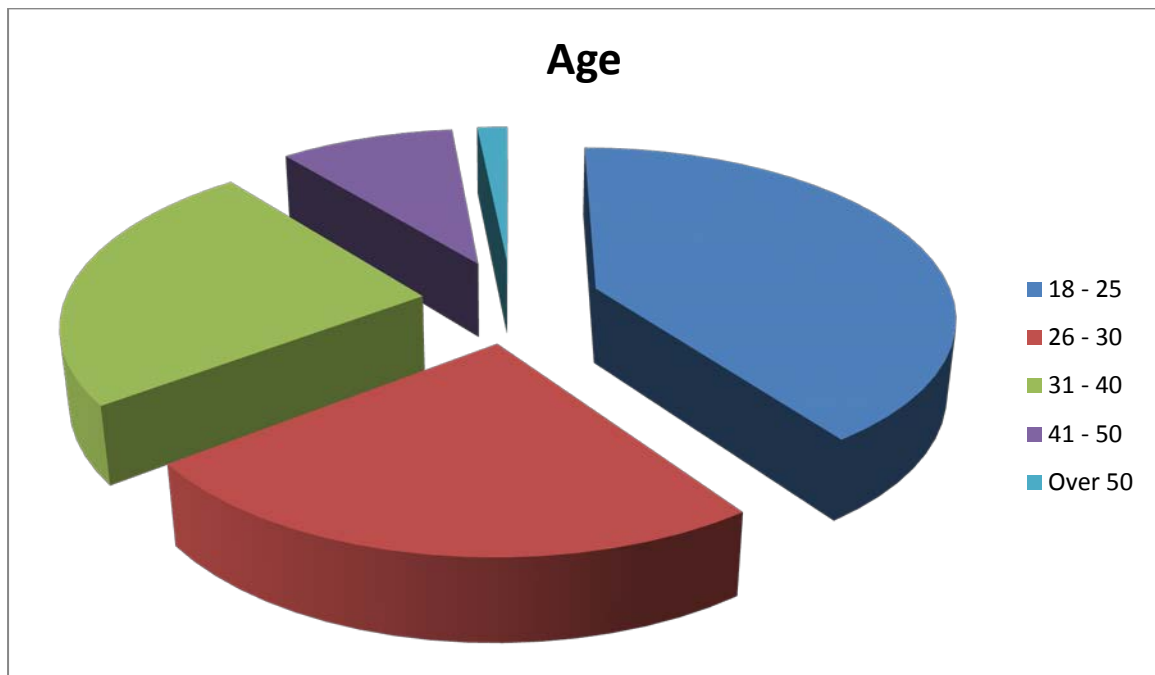
4.1.5 Summary: characteristics of the sample

The participants were all enrolled in further studies in the economic and management sciences field. The sample consisted predominantly of 86% black learners while 88.5% of these learners were between 18 and 40 years old. In addition, 62.8% of the participants were female.

4.2 THE MEASURING INSTRUMENTS

In view of the cross-sectional, survey design approach which was adopted in the study, self-report measures were used to collect the data. Measuring instruments are used in research in order to understand data and also to relate data to a specific qualitative standard (Leedy & Ormrod, 2005; Salkind, 2012; Welman & Kruger, 2003).

The selection of the measuring instruments for the purposes of the study was informed by the literature study. The following measuring instruments were used:

- A biographical questionnaire to determine data with regard to gender, race and age

- The newly developed Adult Learner Self-Directedness Scale (ALSDS)

- The Student Employability Attributes Scale (SEAS)

4.2.1   The biographical questionnaire

The biographical questionnaire was used to obtain the personal characteristics of the sample, namely, their race, age and gender.

4.2.2   The Adult Learner Self-Directedness Scale (ALSDS)

The ALSDS is a newly developed scale which was developed for the purposes of this research study. No South African instrument exists for measuring the construct of adult learner self-direction in open distance learning contexts and, thus, the researcher developed an instrument for the purpose of the study. The instrument was used to measure the construct of academic self-directedness in the open distance learning context in South Africa. The ALSDS is based on the Adult Learner Self-Directedness model (Coetzee & Botha, 2013) which was discussed in chapter 2.

4.2.2.1 The development of the ALSDS

In the context of open distance learning, adult learner self-directedness is defined as the association between an adult learner's ability to take charge of, successfully negotiate and participate in the structured learning environment provided by the higher education institution, on the one hand, and the learner's internal self-beliefs, motivational attitude and relevant study behaviours on the other (Billet, 2010(b), Candy, 1991; Coetzee et al., 2011; Karakas & Manisaligil, 2012; Knowles, 1984; Ross-Gordon, 2011, Taylor, 2005).

The questionnaire items were obtained through the exhaustive reading of research articles and subject matter books on the topic of self-directedness, as well as the researcher's personal experience with adult learner behaviour in an open distance, comprehensive university. The point of departure of the model was the principles of adult learning as expounded by Knowles (1984) and which are widely adopted in the workplace learning context, as well as the Self-Directed Learner Readiness scale of Guglielmino (Dynan, Cate, & Rhee, 2008). The research on self-directedness, with specific reference to the higher education, open distance learning environment, was analysed and assimilated in order to determine the relevance of various concepts to the open distance, higher education milieu. Particular areas of interest that were studied included the concepts of learner motivation, self-efficacy,   self-regulation,   learner   self-directedness   in   the   workplace,   learner

empowerment, determination to be self-directed, willingness as regards self-direction, persistence and coping with study-related problems (Callan & Perry, 2002; De Bruin & De Bruin, 2011; Dynan et al., 2008; Guglielmino, 2008; Li, Lee & Kember, 2000; Long, 2007; Ning & Downing, 2010; Pintrich, 2004; Ponton & Shuette, 2008; Zimmerman, 2002).

The assimilated principles of adult learning were integrated with what is known about the open distance learning environment in order to determine the types of behaviour adult learners should display in order to ensure successful learning in the higher education, open distance learning context. In view of the fact that no similar questionnaire currently exists, comparisons were made with models of self-directedness and not with measuring instruments. The principles of andragogy of Knowles (1984) formed the basis of the questions, but information from other models such as those of Garrison (1997) and Silen and Uhlin (2008) were also incorporated. A process of triangulation was used to establish both face and content validity with the elements and items of the scale being verified by three subject matter experts in the field of scale development and survey design.

As regards the development of a rating scale, a verbal label is usually attached to each response option on the scale in order to clarify the meaning of the rating for the respondents. Research has shown that respondents prefer clear descriptions for each response option and that the position and values of numerical rating options may influence the ratings given. As a result, the researcher decided to use specific behavioural descriptions to accompany each numerical label (Hartley & Betts, 2010; Weng, 2004). The focus of the measuring instrument was to enable adult learners to report on their behaviours and attitudes and not on their opinions and, thus, the decision was taken to use a behaviourally-anchored scale (see Appendix A).

A behaviourally anchored rating scale provides verbal descriptions of behaviours for each point of the rating scale (Ohland, Loughry, Carter, Bullard, Felder, Finelli, et al., 2005). Where other survey instruments may use numerical anchors as responses, behaviourally anchored rating scales use descriptions of the desired behaviours associated with specific critical incidents during the study process, such as completing assignments or preparing for examinations (Christ & Boyce, 2009; Jafari, Bourouni, & Amiri, 2009). The use of behaviourally anchored rating scales to assess a construct such as self-directedness is aligned with the approach used in the Occupational Learning System to base the design of skills development initiatives on the competencies required in specific occupations and may facilitate the inclusion of such a construct in the competency profiles of business-related occupations (Coetzee, Botha, Kiley, Truman, & Tshilongamulenzhe, 2013). The advantages

of using behaviourally anchored rating scales include the focus on defined behaviours by providing concrete descriptions of relevant behaviours and also by providing a clear focus for the attention of the participant. This, in turn, leads to more accurate reports of behaviour. However, the disadvantage of behaviourally anchored rating scales is that the respondents may lose sight of their overall study behaviours by paying too much attention to isolated instances of the behaviour described (Shapiro, Gardner, Godwin, Jay, Lindquist, Salisbury, et al., 2008).

In the case of the ALSDS, descriptions of the required adult learner behaviours and beliefs in the open distance learning scenario were used as basis for each scale item and the respondents were required to choose the description which most closely matched their own behaviours and beliefs. The ALSDS is a self-reporting instrument and, therefore, there was no need to restrict the descriptions that anchored the responses to behaviours only. As a result, beliefs were also included in the survey (Rushmer, Kelly, Lough, Wilkinson, Greig, & Davies, 2007). Although researchers do not always agree that behaviourally anchored rating scales are necessarily superior to other alternatives, it was deemed essential in this instrument to allow learners to choose between specific behaviours and not between specific opinions (Ohland et al., 2005). For example, an adult learner who spends two hours per week studying for a module may believe that those two hours are adequate, whereas the module requires 10 hours of study per week. Thus, requiring adult learners to indicate specifically how much time is spent studying a week will provide more accurate information on the study behaviours relevant to the open distance learning milieu in South Africa.

4.2.2.2   Rationale behind the ALSDS

The purpose of the ALSDS (Botha, 2013) is to assess the four aspects of adult learner self-directedness in an open distance learning milieu, namely, the strategic utilisation of officially provided resources, engaged academic activity, success orientation for open distance learning and academically motivated behaviour:

(a)   The strategic utilisation of officially provided resources relates to when and how adult learners utilise the official resources provided by the university in their role as active learners (Dynan et al., 2008; Fowler, 2008; Jones & Healing, 2010; Linnenbrink & Pintrich, 2003).

(b)   Engaged academic activity relates to the intentional, purposeful actions in which adult learners engage and that are directly related to furthering their studies or improving their competence (Basharina, 2009, Dynan et al., 2008; Jones & Healing, 2010; Long & Ageykum, 1983; Linnenbrink & Pintrich, 2003; Luckett & Luckett, 2009; Smith, Zsidisin, & Adams, 2005, Vansteenkiste, Lens, & Deci, 2006).

(c)   Success orientation for open distance learning relates to the self-reported behaviours of adult learners that display their level of self-confidence and the related behaviours in their ability to be successful in the pursuit of their studies in an open distance learning environment (Bashrina, 2009; De Ture, 2004; Long & Agyekum, 1983; Luckett & Luckett, 2009; Mishra et al., 2013; Moneta, Spada, & Rost, 2007; Ning & Downing, 2010; Richardson, 2002; Zimmerman, 2000; Vansteenkiste et al., 2006).

(d)   Academically motivated behaviour relates to the self-reported behaviour of adult learners that may be interpreted as indicating either intrinsic or extrinsic motivation in relation to their academic activities (Barker & McInerney, 2002; De Ture, 2004; Henderson-King & Smith, 2006; Long & Agyekum, 1983; Mishra et al., 2013; Ning & Downing, 2010; Richardson, 2002; Smith et al., 2005, Vansteenkiste et al., 2006; Zimmerman, 2000).

These four aspects of adult learner self-directedness identify the motivations and preferences for study in distance education learners, as well as their preference for open distance learning. The purpose of the ALSDS is to trigger the respondents' thoughts about their study behaviours and attitudes. The rationale behind the measure is to use the results in order to facilitate learner guidance and support.

4.2.2.3   Description of the ALSDS

The ALSDS (Botha, 2013) is a self-reporting, multi-factorial measuring instrument designed for adult learners involved in open distance learning in a Southern African context. The ALSDS consists of four sub-scales and 35 items. As shown in Appendix A, twenty-one of the questions (items 1 to 21) require single responses while multiple responses may be given to the remaining questions (items 22 to 35). The questionnaire uses a 5-point, behaviourally-anchored scale to measure the respondents' behaviours and/or attitudes as regards each of the items. The sub-scales include the following: The strategic utilisation of officially provided resources (5 items); engaged academic activity (5 items); success orientation for open distance learning (11 items) and academically motivated behaviour (14 items). Table 4.6 presents the four sub-scales of the ALSDS and the corresponding allocated items. The full scale for the ALSDS is provided in Appendix A. Chapter 5 discusses the statistical procedures for testing the construct validity and internal consistency reliability of the scale.

TABLE 4.6:   SUB-SCALE CONTENTS OF THE ALSDS (BOTHA, 2013)

Self-directedness scale factors	Question number	Questionnaire items
Strategic utilisation of officially provided resources	Q 3	According to the credits they carry, how many hours are you required to devote to each module per week?
	Q 7	When do you read tutorial letters?
	Q 8	When do you use your study guide?
	Q 9	How do you use the feedback tutorial letters in your studies?
	Q 19	How much information have you collected about open distance learning?

Example of behaviourally anchored scale format:

According to the credits they carry, how many hours are you required to devote to each module per week?

1	2	3	4
I don't know	One to two	Two to three	Three to four

Self-directedness scale factors	Question number	Questionnaire items
Engaged academic activity	Q 1	How many hours per week do you devote to your Unisa studies?
	Q 2	How much time do you devote to each module/course per week?
	Q 4	How do you plan your study time?
	Q 5	When do you submit assignments?
	Q 6	How much time do you allow yourself to prepare for examinations?

Example of behaviourally anchored scale format:

How many hours per week do you devote to your Unisa studies?

1	2	3	4

Self-directedness scale factors	Question number	Questionnaire items		
Less than one	One to two	Two to three	Three to four	More than four
Success orientation for open distance learning	Q 10	Which of the following describes the learning situation in which you are most comfortable?		
	Q 11	What do you do when you experience a problem such as a family crisis or unexpected heavy workload and are not able to submit an assignment on time?		
	Q 12	How would you describe your most preferred mode of study?		
	Q 13	How will you use the knowledge you have gained in your studies in your work situation?		
	Q 14	How confident are you that you will understand the learning material?		
	Q 15	How confident are you that you will master all the learning outcomes of your field of study?		
	Q 16	How confident are you that you will complete your qualification?		
	Q 17	How confident are you that you will be able to solve problems you encounter in your learning?		
	Q 18	How confident are you that you possess the skills necessary to cope in an ODL environment?		
	Q 20	How do you find studying in an open distance learning environment		
	Q 21	Who do you think is responsible for ensuring your success as a student?		

Self-directedness scale factors	Question number	Questionnaire items		
Example of behaviourally anchored scale format: **Which of the following describes the learning situation in which you are the most comfortable?**				
1	2	3	4	
When I am provided with specific content and questions that should be mastered, and work is scheduled on a daily basis	When I am given clear guidance on what I should do to succeed and clear time frames to which to adhere	When I am given sufficient guidelines to ensure success but am also able to work at my own pace	When I am given sufficient guidelines regarding the learning content and success factors but am able to study at my own pace, using my own methods and techniques	
Academically motivated behaviour	Q 22	What do you do when you struggle to understand the work?		
	Q 23	What do you do when you find that you have not received all the tutorial letters?		
	Q 24	What do you do when you encounter words or phrases in the prescribed book, study guide or tutorial letters that you do not understand?		
	Q 25	What do you do when you do not understand what is required in an assignment question?		
	Q 26	Why did you decide to study?		
	Q 27	What motivates you to study?		
	Q 28	Why do you use the study guide?		
	Q 29	How do you use the study guide?		

Self-directedness scale factors	Question number	Questionnaire items
	Q 30	How do you react when you do badly in an assessment (assignment or examination)?
	Q 31	What do you do when you become discouraged about your studies?
	Q 32	What do you do if you struggle to find sources and access to technology such as computers and the internet?
	Q 33	How do you prepare for examinations?
	Q 34	What do you do when you realise you have not worked sufficiently throughout the year/semester and are unprepared for the examination?
	Q 35	What do you do when you want to improve your knowledge and skills?

Example of behaviourally anchored scale format:

What do you do when you struggle to understand the work?

1	2	3	4
I become discouraged and stop working	I contact a friend for assistance	I contact the lecturer for assistance	I read through the material again and, if I still do not understand, I contact the lecturer

4.2.2.4   Administration and interpretation of the ALSDS

The ALSDS is a self-reporting questionnaire which is administered individually and which should not take more than 20 minutes to complete. However, it is not necessary to impose a time limit on the respondents. The respondents are requested to answer each question as quickly and honestly as possible by selecting the behaviour or attitude described on each scale that most accurately describes their behaviour or attitude as regards that question. The respondents are required to read both the question and the behaviours related to each of the

35 items and then choose the option or options that most accurately describe(s) their study behaviour or attitude. Twenty-one of the questions require one response only per question, while the remaining questions allow for more than one response per question. The instrument may be administered to individuals and to groups. Detailed instructions are provided on the questionnaire, thus ensuring that the questionnaire is self-explanatory and, thus, that no supervision is required.

Each respondent's assessment is scored electronically. The total scale scores are calculated by adding all the items for each subscale. The scores may range from 35 to 70; the higher the score, the higher the respondent's self-directedness for open distance learning.

4.2.2.5   Validity and reliability of the ALSDS

The results of the Exploratory Factor Analyses, as discussed in chapter 5, revealed that the ALSDS items satisfy the psychometric criteria of both content and construct validity. The internal consistency reliability of the ALSDS was determined using the Cronbach's alpha coefficient. For the purposes of this research the Cronbach's alpha coefficients only are reported in chapter 5.

The overall reliability (internal consistency) coefficients for the ALSDS are .92. Each subscale ranges from 0.60 to 0.83. Nunnaly and Bernstein (1994) use 0.70 as a directive, whilst Bartholomew, Antonia, and Marcia (2000) argue that between 0.60 and 0.80 is acceptable. The internal consistency reliabilities clearly fall within the range of directives. The lower internal consistency coefficients for some of the ALSDS variables may be attributed to the life stage and inexperience of the participants regarding the attributes being measured. In view of the fact that the aim of this study was not to make individual predictions based on the ALSDS, but rather to investigate broad trends and certain relations between variables, the instrument was considered to be psychometrically acceptable for the purpose of the study.

4.2.2.6   Motivation for choice

The ALSDS was used in this research study because it is the only scale that has been developed specifically for assessing the self-directedness of open distance adult learners in the South African, multi-cultural context.

4.2.3   The Student Employability Attributes Scale (SEAS)

In this section the development, rationale, description of the scales, administration, interpretation, validity and reliability of the SEAS (Bezuidenhout & Coetzee, 2010) will be

discussed. The section will conclude with an explanation of the reason why this measurement instrument was used in the study.

4.2.3.1   The development of the SEAS

The Student Employability Attributes Scale of Bezuidenhout and Coetzee (2010), which was developed for the South African higher education context, is used to measure the respondents' confidence in their self-perceived employability attributes.

4.2.3.2.   Rationale behind the SEAS

The SEAS (Bezuidenhout & Coetzee, 2010) assesses the employability attributes that a graduate requires in order to ensure continued employability in the post-modern working milieu. The following eight employability attributes are measured: career self-management, cultural competence, career resilience, proactivity, entrepreneurial orientation, sociability, self-efficacy and emotional literacy. Career self-management refers to the individual capacity to ensure continued employability by developing an ongoing learning orientation and autonomously planning and managing a career (Bezuidenhout & Coetzee, 2010; Coetzee, 2012). Career resilience comprises the capability to welcome organisational changes as a result of an ability to easily adjust to and take pleasure in the introduction of new work processes, technologies and colleagues and to adjust work behaviours to these changes. An entrepreneurial orientation revolves around viewing risks as potential opportunities, a tolerance for ambiguity, a preference for innovation, creativity and autonomous action in the career progression (Bezuidenhout & Coetzee, 2010; Coetzee, 2012). Proactivity is the capacity of the individual to be an active agent in career planning and management (Bezuidenhout & Coetzee, 2010; Coetzee, 2012). Self-efficacy comprises the individual belief in one's ability to deal with challenges, achieve personal goals and be successful in certain situations. Emotional literacy revolves around the awareness of and the capacity to change and manage personal emotions as well as the feelings of others (Bezuidenhout & Coetzee, 2010; Coetzee, 2012). Sociability describes the proclivity to cultivate and nurture social networks and optimally utilise both formal and informal career and social networks for the purposes of career progression while cultural competence is the ability to operate effectively in various cultural situations (Bezuidenhout & Coetzee, 2010; Coetzee, 2012).

4.2.3.3   Description of the SEAS

The SEAS is a self-reporting, multi-factorial measuring instrument, comprising 56 items which are collated in the following eight sub-scales: career self-management (10 items) – "I regularly reflect on what my career aspirations are", cultural competence (5 items) – "I know the customs of other cultures", self-efficacy (5 items) – "When I achieve something, it is

because of my own effort", career resilience (6 items) – "I regularly ask others' opinions regarding my strengths and weaknesses", sociability (7 items) – "I actively seek feedback from others to make progress in my career", entrepreneurial orientation (7 items) – "I am responsible for my own successes and failures in my career", proactivity (7 items) – "I am able to easily establish and maintain interpersonal relationships" and emotional literacy (7 items) – "It is easy for me to identify the emotions of others". The questionnaire uses a six-point Likert-type scale to measure the respondents' responses to each of the items.

4.2.3.4   *Administration and interpretation of the SEAS*

The SEAS (Bezuidenhout & Coetzee, 2010) may be administered both individually and in groups. The questionnaire may be completed in approximately 15 minutes. Detailed instructions are provided on the questionnaire and, thus, the questionnaire is self-explanatory and supervision is unnecessary.

Survey responses are scored electronically and the total scores are calculated by adding all the items for each subscale. The scores may range between 30 and 60. The higher the score, the higher the self-perceived ability of the respondent to demonstrate the employability attribute in question.

4.2.3.5   *Validity and reliability of the SEAS*

An Exploratory Factor Analysis (Bezuidenhout & Coetzee, 2010) confirmed the construct validity and inter-consistency reliability of the instrument. The Cronbach's alpha coefficients obtained for each scale are as follows: career self-management (0.88), cultural competence (0.89), self-efficacy (0.83), career resilience (0.75), sociability (0.79), entrepreneurial orientation (0.80), proactivity (0.87), and emotional literacy (0.83), indicating high internal-consistency.

4.2.3.6   *Motivation for the choice of the SEAS*

The SEAS was chosen for the purposes of this research study because it is the only scale that focuses on measuring the employability attributes of South African learners involved in higher education.

4.3   ETHICAL CONSIDERATIONS

According to the employment equity legislation in South Africa, equity should be established in the work environment by ensuring fair treatment, inter alia, by eradicating unfair practices and unfair discrimination. In order to address this issue with regard to psychological testing,

the following requirements are formalised in the Employment Equity Act 55 of 1998 (Coetzee et al., 2010):

The measuring instrument should be

- scientifically proven to be valid and reliable
- not biased against any employee or group
- fairly applied to all groups

4.4 PROCEDURE: DATA COLLECTION AND ADMINISTRATION OF THE MEASURING INSTRUMENTS

The study adopted a cross-sectional, correlational survey, design approach. Cross-sectional correlational research designs are used to measure each individual unit of analysis on one or a group of variables identified at approximately the same time and then to analyse the association between the variables identified (Welman & Kruger, 2001). The respondents may perceive that a survey is more likely to be anonymous and may, therefore, be prepared to participate more readily in the study. The drawbacks to a survey approach to research include the possibility of a low response rate, difficulties with the language used in the survey and also possible misunderstanding of the questions. Possibly the biggest disadvantage is the fact that the respondents who decide to participate may not be representative of the original sample which was identified and surveyed. In addition, the obvious limitation to the number of questions and also the type of questions asked may also distort the data gathered from the survey (Leedy & Ormrod, 2005). For the purpose of this study, it was decided to use a postal survey as the data collection method.

Ethical clearance and permission to conduct the study were obtained from the management and research ethics committee of the ODL higher education institution that participated in the study. The questionnaires were mailed to the participants, using the postal services of the research institution. Each questionnaire included a covering letter to obtain the informed consent of the participants to use their responses for research purposes only. The covering letter explained the purpose of the research, procedure, potential benefits, confidentiality, anonymity, voluntary participation and withdrawal. No participant involved in the research process was harmed in any way. The participants were requested to complete the questionnaires and return them by mail to the researchers, using an enclosed return envelope.

4.5   SCORING OF THE MEASURING INSTRUMENTS

The responses to each of the instrument measures were initially captured onto a Microsoft Excel spreadsheet. The completed questionnaires were scored by an independent statistician. All the data were imported and analysed using statistical methods, specifically the statistical programmes SPSS (Statistical Package for Social Sciences) Version 20.0 for the Microsoft Windows platform (SPSS Inc., 2011), SAS version 9.2 (SAS, 2008) .

4.6   FORMULATION OF THE RESEARCH HYPHOTHESES

Research is used to test hypotheses and, thus, the research is directed by the research hypotheses (Leedy & Ormrod, 2005; Welman & Kruger, 2003). Research hypotheses provide probable, but unproven, clarifications of the phenomenon that is being examined. Research data may either support a hypothesis or not support a hypothesis. A hypothesis that is not supported by the data is rejected by the researcher (Leedy & Ormrod, 2005).

A null hypothesis proclaims equality and, therefore, no relationship between two variables in a research study (Salkind, 2012). However, the null hypothesis provides a point of departure for the observation of the influence of an independent variable on a dependent variable. In this way, a yardstick is established for comparing significant differences between variables. Significant differences between variables are usually not coincidental. A research hypothesis (or alternative hypothesis) is a declaration of a relationship between two variables and, therefore, it is a statement of inequality between two variables. An equivalent research hypothesis is formulated for each null hypothesis (Salkind, 2012). Table 4.7 presents an overview of the research hypotheses that were formulated for the purposes of this research study and also of the statistical procedures that were performed to test the research hypotheses.

TABLE 4.7:   RESEARCH HYPOTHESES AND STATISTICAL PROCEDURES PERFORMED TO TEST THE RESEARCH HYPOTHESES

Empirical research aim	Research hypotheses	Statistical procedure
Research aim 1: **To investigate the empirical relationship between the self-directedness and employability attributes of adult learners as manifested in a sample of respondents who are pursuing further distance learning studies in the economic and management sciences field in South Africa.**	H01: There is no significant and positive relationship between the self-directedness and employability attributes of adult learners. Ha1: There is a significant and positive relationship between the self-directedness and employability attributes of adult learners.	Correlations
Research aim 2: **To assess whether the self-directedness of adult learners significantly and positively predict their employability attributes**	H02: The self-directedness of adult learners does not significantly and positively predict their employability attributes. Ha2: The self-directedness of adult learners significantly and positively predicts their employability attributes.	Structural equation modelling Multiple regression analysis
Research aim 3: **To investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes.**	H03: Gender, race and age groups do not differ significantly regarding their self-directedness and employability attributes. Ha3: Gender, race and age groups differ significantly regarding their self-directedness and employability attributes.	Test for normality to assess whether parametric or non-parametric procedures should be used to test for significant mean differences Tests for significant mean differences

Notes: H0: Null research hypothesis. Ha: Alternative research hypothesis.

4.7 STATISTICAL PROCESSING OF THE DATA

As discussed in chapter 1, a quantitative, cross-sectional, survey research design, focusing on descriptive, correlational and inferential statistical analysis, was used to realise the empirical research objectives. Survey research designs are utilised when a possible or potential relationship between two or more variables at a specific time is investigated (Welman & Kruger, 2003). A cross-sectional research study surveys a variety of respondents on a list of defined variables. Being both descriptive and explanatory in nature, this research study aimed to investigate a specific state of affairs as it existed at a specific point in time, without attempting either to determine causality or to transform the status quo (Leedy & Ormrod, 2005; Welman & Kruger, 2003).

The process of determining whether a relationship existed between the academic self-directedness of adult learners and their employability attributes and whether biographical groups differed significantly regarding the variables of gender, race and age may be described as follows:

Stage 1: Firstly, an Exploratory Factor Analysis was performed to assess the construct validity of the ALSDS. Thereafter, the categorical and frequency data (means and standard deviations), as measured by the ALSDS and SEAS, were determined for the total sample in order to apply the statistical procedures. Cronbach's alpha coefficients were also determined for the two scales to determine the internal consistency reliability of the instruments for the purpose of the study.

Stage 2: Secondly, correlation tests were conducted to investigate the direction and strength of the relationship between the variables measured by the ALSDS and SEAS. Pearson product-moment correlation coefficients were applied (research aim 1; Ha1).

Stage 3: Thirdly, inferential statistics were performed to enable the researcher to make inferences about the data. Structural equation modelling was carried out to assess the overall structural fit between the two constructs. Standard multiple regressions were then performed in order to determine the proportion of variance that was explained by the independent variable (adult learner self-directedness) regarding the scores of the dependent variable (employability attributes) (research aim 2; Ha2).

Stage 4: Fourthly, inferential statistical analyses (tests for significant mean differences) were performed to determine whether the gender, race and age groups differed significantly in

terms of the constructs measured. Based on the test for normality showing that the data were not normally distributed, the Mann-Whitney-U (gender) and Kruskall Wallis (race and age) tests were performed for this purpose (research aim 3; Ha3).

FIGURE 4.4: THE FOUR STAGES OF THE RESEARCH PROCESS AND STATISTICAL PROCEDURES PERFORMED IN EACH STAGE
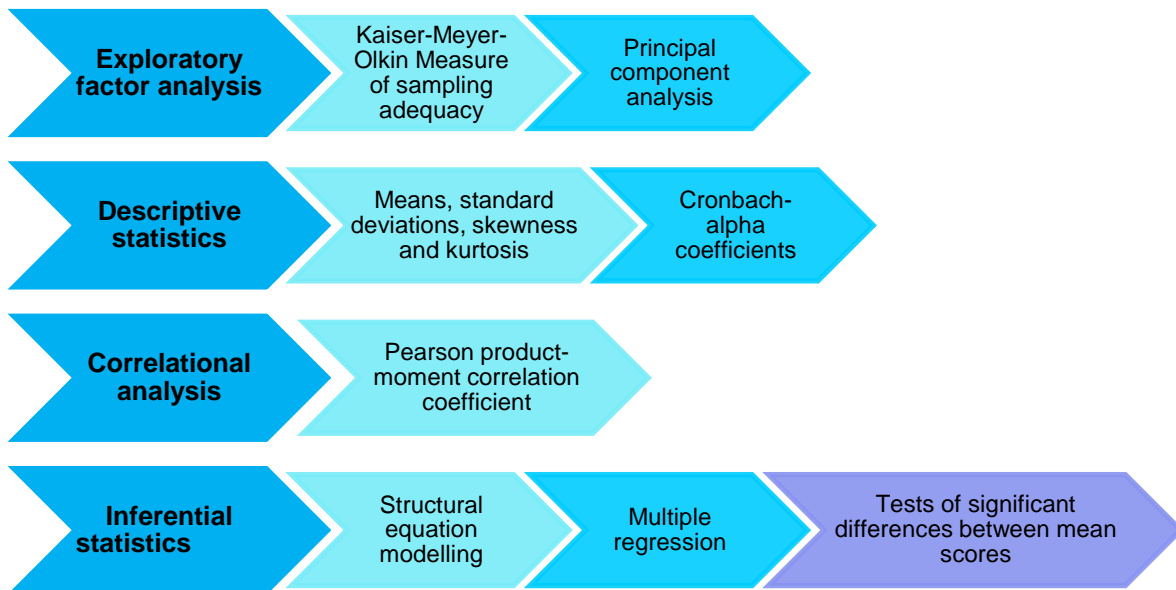
4.7.1   Exploratory factor analysis

The purpose of an exploratory factor analysis is to investigate the relationship between numerous variables by grouping the data into a smaller number of factors. Thus, exploratory factor analysis is used to reduce the data in order so as to be able to interpret it more easily for research purposes. The assumption underlying exploratory factor analysis is that common factors exist in the data but that these factors may be indirectly measured by the observed variables. Consequently, the common factors are concealed although they impact on the observed variable(s). Exploratory factor analysis may be effectively utilised without hypothesising about a possible covariate structure prior to the analysis (Salkind, 2012). The number of factors may be determined by using one or a combination of methods. In this study, a scree plot, communalities and the Keiser-Guttman Criterion were used to determine the factors. A scree plot provides a visual explanation of the eigenvalues ranging from large to small, thus providing a clear, visual indication of the point at which the eigenvalues start tapering off to the horizontal (Salkind, 2012). The Keiser-Guttman criterion applies the principle of using the number of factors that are equal to the number of eigenvalues in a

sample correlation matrix that are greater than 1. In this way the researcher may use those factors whose variance is, as a minimum, bigger than the variance of every observed variable (Salkind, 2012). Communalities are used to facilitate the decision about the number of factors to be included in the research study. The proviso is that the communalities should be satisfactorily large. Communalities in variables describe the amount of variance in each variable that may be explained by underlying common factors. When the communality value is high the observed variable is significantly influenced by at least one common factor (Salkind, 2012). Factor analysis results in factor loadings that explain the underlying correlations between the variables observed in the data.

4.7.2 Descriptive statistics

4.7.2.1 Cronbach's alpha coefficient (internal consistency reliability)
The Cronbach's alpha coefficient indicates the degree to which all the items in a survey assess the same attribute. Internal consistency reliability focuses on the way in which the data produced by a survey may be generalised across the survey items. Internal consistency is assessed by comparing the scores on each of the items of the assessment scale with the score on all the items of the assessment scale (Salkind, 2012). When the items on a survey show high internal consistency, a respondent who has achieved high scores on a few items will probably achieve high scores on most, or all, of the items (Salkind, 2012; Welman & Kruger, 2001).

The Cronbach's alpha coefficient is the most frequently used statistical measure to establish internal consistency reliability. The Cronbach's alpha has a range of 0 to 1, where 0 indicates no internal consistency and 1 is the maximum internal consistency. An internal consistency value of $\alpha = 0.70$ or higher that is obtained on a significant sample of responses indicates that a psychometric instrument may be used effectively. Nunnaly and Bernstein (1994) use 0.70 as a directive, whilst Bartholomew, Antonia, and Marcia (2000) argue that between 0.60 and 0.80 is acceptable.

4.7.2.2 Means, standard deviations, skewness, kurtosis and frequencies
Researchers use descriptive statistics to describe or summarise data in order to aid a detailed examination and in order to choose appropriate statistical analysis techniques (Elliott & Woodward, 2007; Leedy & Ormrod, 2005; Welman & Kruger, 2003). The descriptive statistics used to analyse data in this study included frequencies, means, standard deviations, skewness and kurtosis. The scores across these factors were created by obtaining an average across all the items in each of the factors. The use of the means

scores, instead of the total scores, made it is possible to obtain a better comparison between the various scale dimensions.

Frequencies are observations and recordings of the frequency with which certain data occur. Frequency distributions are often used to present research results and to reduce the influence of extraneous variables (Salkind, 2012; Welman, & Kruger, 2001). An extraneous variable is a variable that may affect the dependent variable, but which was not identified in the research hypothesis (Welman & Kruger, 2001).

The mean of a data set (M) is a measure of central tendency and is calculated by adding all the scores and dividing by the number of scores. The mean is considered to be the most reliable measure of central tendency and is, thus, the measure that is used the most often (Salkind, 2012). Data dispersion or variability is measured by calculating variance and standard deviation (Nisber et al., 2009). The calculation of the means in a set of data indicates the average values or central tendencies of the data, while the standard deviation provides an indication of the way in which the raw data are distributed around the mean (Nisber et al., 2009). The larger the standard deviation (SD) of a data set, the more variable the raw scores, while a low standard deviation indicates a low variability of the raw scores. When the standard deviation $SD = 0$, all the raw scores are the same. When the spread of the data is narrow (data are grouped closely around the mean), the variance and standard deviation of the data set are comparatively low, and vice-versa (Nisber et al., 2009). A variable with a fairly low mean score and, concomitantly, a fairly high measure of standard deviation should probably not be used to predict another variable (Nisber et al., 2009).

Skewness and kurtosis indicate the shape of the data set (Nisber et al., 2009). Data skewness is indicated by a data distribution which is mostly to one side of the mean, while kurtosis indicates the degree to which the data is distributed closely around the mean (Nisber et al., 2009).

4.7.3 Correlational statistics: Pearson product moment correlation coefficient

Correlations are used to establish the nature of the relationship between diverse variables (Leedy & Ormrod, 2005, Welman & Kruger, 2001). A correlation coefficient for two variables may indicate the direction and the strength of the relationship. In this study, Pearson product moment correlation was used to identify the direction and strength of the relationships between the self-directedness of adult learners and their employability attributes. The correlation coefficient carries a value of between $r = -1.00$ and $r = +1.00$. A value of $r = -$

1.00 indicates a perfect negative correlation while a value of r = +1.00 indicates a perfect positive correlation. A positive correlation indicates that one variable will increase as the other increases, while a negative relationship indicates that one variable will increase as the other one decreases. The size of the correlation coefficient indicates the strength of the relationship (Leedy & Ormrod, 2005). The validity and reliability of the measuring instruments used to assess the two variables will influence the correlation coefficient. It is essential to keep in mind that correlation provides no indication of cause (Leedy & Ormrod, 2005; Welman & Kruger, 2001).

In practice, a general level of significance at $p ≤ .05$ is chosen to test a hypothesis. This indicates that there is a likelihood that there are approximately five chances in 100 that the researcher could reject the hypothesis when it should be accepted. In other words, there is a 95 percent confidence that the sample results reflect the actual relationship in the population (Salkind, 2012). However, the researcher may make two types of errors, namely, Type I and Type II errors. A Type I error occurs when the researcher falsely rejects a null hypothesis by stating that a relationship exists when, in fact, no relationship exists. On the other hand, a Type II error occurs when the researcher falsely accepts a null hypothesis by stating that a relationship exists when, in fact, no relationship exists between the variables (Salkind, 2012). A significance level of $p ≤ 0.05$ was used in this study. All the p-values were compared with this value. When $p ≤ 0.05$ the results were treated as significant. In terms of practical significance, where statistically significant relationships ($p ≤ .05$) were found through correlation coefficients, r-values (equal to correlation magnitude) were interpreted according to the following guidelines (Cohen, 1992):

- $r ≥ .10$ (small practical effect);
- $r ≥ .30$ (medium practical effect); and
- $r ≥ .50$ (large practical effect).

4.7.4   Inferential statistics

Inferential statistics were performed to enable the researcher to make inferences about the data. These included structural equation modelling (SEM), standard multiple regression analyses and tests for significant mean differences between gender, race and age groups.

Inferential statistics describe and illustrate the inferences that a researcher may draw about a population according to the specified indices, based on the equivalent indices acquired

from random samples of the population (Salkind, 2012). Inferential statistics test for differences between variables and are used to make predictions, based on the data collected in the study. Inferential statistics are also used to generalise findings from a sample to a population (Salkind, 2012). Statistical significance is also an important concept in inferential statistics. Statistical significance focuses on the possibility of rejecting a null hypothesis that is, in effect, true (Type I error), or accepting a null hypothesis when it is actually false (Type 2 error). The possibility of a Type II error decreases as the sample size increases (Salkind, 2012).

4.7.4.1   *Structural Equation Modelling*

SEM is a multivariate procedure which combines multiple regression and factor analysis and is used to examine the research hypotheses of causality within a system. SEM is divided into two different parts, including a measurement model and a structural model. The measurement model deals with the relationships between the measured and latent variables whereas the structural model deals with the relationships between the latent variables only (Garson, 2008; Hoyle, 1995; Hair, Black, Babin & Anderson, 2010). The ability of the SEM procedure to distinguish between direct and indirect relationships between variables and to analyse relationships between latent variables without random error differentiates SEM from other simpler, rational modelling processes such as multiple regression (Garson, 2008; Hoyle, 1995). The SEM process focuses on the validation of the measurement model by obtaining estimates of the parameters of the model and by assessing whether the model itself provides a good fit to the data (Garson, 2008). The adequacy of the model is evaluated by means of goodness-of-fit measures which determine whether the model being tested should be accepted or rejected (Garson, 2008).

SEM with the maximum-likelihood (ML) estimation method was used to investigate the structural model fit between self-directedness and employability attributes. The goodness-of-fit statistics were evaluated by using the following absolute goodness-of-fit indices: the chi-square test, the root mean square error of approximation (RMSEA), and the standardised root mean square residual (SRMR). The following relative goodness-of-fit indices were also used to evaluate the model fit: the comparative fit index (CFI) and the Tucker-Lewis index (TLI). In line with guidelines provided by Garson (2008), it was assumed that an adequate fit of the structural model to the measurement data existed when CFI and TLI values of .90 or higher, a RMSEA of .08 or lower, and a SRMR of .05 or lower were obtained.

4.7.4.2   Standard multiple regression

Multiple regression analyses were used to forecast or predict performance of a dependent variable from various independent variables (Nisber et al., 2009). In statistics, regression analysis includes any techniques for modelling and analysing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps the researcher to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. Most commonly, regression analysis estimates the conditional expectation of the dependent variable, given the independent variables (Field, 2009), that is, the average value of the dependent variable (e.g. employability attributes) when the independent variables (e.g. adult learner self-directedness) are held fixed. The levels of statistical significance of multiple regressions used in this study were $F(p) \leq .001$; $F(p) \leq .01$; and $F(p) \leq .05$ as the cut-off for rejecting the null hypotheses.

In terms of practical significance, adjusted $R^2 \leq .12$ (small practical effect size); $R^2 \geq .13 \leq .25$ (moderate practical effect size) and $R^2 \geq 26$ (large practical effect size) were considered for interpreting the magnitude of the practical significance of the results (Cohen, 1992). Since a number of independent (SEAS) variables had to be considered, the value of adjusted R^2 was used to interpret the results.

However, a high degree of correlation between independent variables raises multi-collinearity concerns and this may, in turn, lead to difficulties in interpreting the beta coefficients as meaningful (Nisber et al., 2009). Prior to conducting the various regression analyses, collinearity diagnostics were examined to ensure that zero-order correlations were below the level of concern ($r \geq .80$), that the variance inflation factors did not exceed 10, that the condition index was well below 15, and that the tolerance values were close to 1.0 (Field, 2009)

4.7.4.3   Tests of significant differences between mean scores

Based on the test for normality showing that the data from the sample in this study were not normally distributed, nonparametric tests were used to test for significant mean differences between the gender (Mann-Whitney U) and race and age (Kruskall-Wallis test) groups regarding their self-directedness and employability attributes.

Nonparametric analyses are usually conducted on data for which the assumption of normality could not be verified (Nisber et al., 2009). In view of the fact that it is not possible

to use the raw data in these analyses, ordered values are used (Nisber et al., 2009). The Mann-Whitney U test is used for the comparison of two independent groups (e.g. gender), while the Kruskal-Wallis test is used for the comparison of two or more independent groups (e.g. race and age). The Mann-Whitney analysis may be used instead of a two-sample t-test while the Kruskal-Wallis test may replace the one-way analysis of variance (Nisber et al., 2009). The Mann-Whitney U test focuses specifically on determining whether observed data in one population is ranked higher than observed data in another population (Nisber et al., 2009). Although the Mann-Whitney U and Kruskal-Wallis tests are indicated where sample sizes are small (< 100), these tests were used in this study because it was not possible to verify the assumption of normality.

4.8   SUMMARY

Chapter 4 discussed the population and composition of the sample used in this study. Following this, the two measuring instruments, the data collection process, the administration of the measuring instruments and the data analysis process were described. The formulation of the hypotheses related to the investigation concluded the chapter. Chapter 5 will explore the data analysis as well as the interpretation and integration of the empirical findings.

CHAPTER 5

RESEARCH RESULTS

In this chapter, the statistical results pertaining to the following three research objectives are reported upon:

Research aim 1: To investigate the empirical relationship between the self-directedness and employability attributes of adult learners as manifested in a sample of respondents who are pursuing further studies via distance learning in the economic and management sciences field in South Africa. (Ha1: There is a significant and positive relationship between the self-directedness and employability attributes of adult learners).

Research aim 2: To assess whether the self-directedness of adult learners significantly and positively predicts their employability attributes. (Ha2: The self-directedness of adult learners significantly and positively predicts their employability attributes).

Research aim 3: To investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes (Ha3: Gender, race and age groups differ significantly regarding their self-directedness and employability attributes).

A discussed in chapter 4, a quantitative, cross-sectional, survey research design, involving descriptive, correlational and inferential statistical analyses, was used to realise the empirical research objectives. In line with the various stages of the statistical analyses (as outlined in chapter 4), the statistical results will be reported in the following sequence:

- Reporting of the results of the exploratory factor analysis which was conducted to assess the construct validity of the ALSDS.
- Reporting of the descriptive statistics (means, standard deviations, kurtosis and skewness) and Cronbach's alpha coefficients (internal consistency reliability) of both the ALSDS and the SEAS.
- Reporting of the bivariate correlations (Pearson product-moment correlations) between the ALSDS and SEAS variables (research aim 1)
- Reporting of the results of the structural equation modelling in order to assess the overall structural fit between the ALSDS and SEAS variables (research aim 2).
- Reporting of the multiple regression analyses in order to assess whether the ALSDS variables significantly and positively predict the SEAS variables (research aim 2).

- Reporting of the tests for significant mean differences between the demographic variables (gender, race and age) as regards the ALSDS and SEAS variables (Research aim 3).

The results of the study will also be integrated with the literature review in the discussion section.

5.1   EXPLORATORY FACTOR ANALYSIS

The purpose of the exploratory factor analysis was to assess the construct validity of the ALSDS. In line with the guidelines proposed by Hair and others (2010), this was done by identifying the underlying latent variables present in the patterns of correlations in the set of measures and identifying the underlying factor structure. A principal-axis factor analysis was conducted. The items were rotated using direct, oblimin rotation with Kaiser normalisation to reveal the composite factors while accounting for the maximum variance in the original set of variables. Using the guidelines proposed by Hair et al. (2010) for minimal factor loadings, the factor loading for a significant level of .05 was set at .35.

5.1.1   Sampling adequacy: Adult Learner Self-Directedness Scale

The exploratory factor analyses (EFA) were conducted in the following two phases. In phase 1, an EFA was conducted on Items 1 to 21 only. As shown in Appendix A, the responses to these items were measured by using a 5-point Likert-type scale assessing the degree of responses to an item as varying from low (1) to high (5). In phase two, an EFA was conducted on items 22 to 35 only, because students were given the opportunity to provide more than one response to these questions. However, the results discussed in the current study focus on only one response as it was found that few students chose to provide more than one response to these questions, resulting in unacceptably high levels of missing data in the second response results. The responses to these items were measured on a behaviourally-anchored, 5-point Likert-type scale, measuring various types of behaviours relevant to the item in question.

Prior to performing the principal-axis factor analysis, the suitability of the data for factor analysis was assessed. As shown in Table 5.1, the Kaiser-Meyer-Olkin value was .83 for phase 1 of the EFA (items 1 to 21). This value exceeded the recommended minimum value of .60 (Child, 1990; Hair et al., 2010), while the Bartlett's Test of Sphericity (Bartlett, 1954) attained a statistical significance of $p<.001$, thus supporting the factorability of the correlation

matrix. These results indicate that the sample used in the study was adequate and that significant correlations existed between the variables of the correlation matrix.

Similarly, as shown in Table 5.1, the Kaiser-Meyer-Olkin value was .79 for phase 2 of the EFA (items 22 to 35). This value exceeded the recommended minimum value of .60 (Child, 1990; Hair et al., 2010), while the Bartlett's test of sphericity (Bartlett, 1954) attained a statistical significance of $p < .001$, thus supporting the factorability of the correlation matrix. These results also confirmed that the sample used in the study was adequate and that significant correlations existed between the variables of the correlation matrix.

TABLE 5.1:   KMO AND BARTLETT'S TEST: ADULT LEARNER SELF-DIRECTEDNESS SCALE

EFA: PHASE 1: ITEMS 1 to 21		
Kaiser-Meyer-Olkin measure of sampling adequacy		.83
Bartlett's test of sphericity	Approximate chi-square	3703.852
	Df	210
	Sig.	.000
EFA: PHASE 2 : ITEMS 22 to 35		
Kaiser-Meyer-Olkin measure of sampling adequacy		.79
Bartlett's test of sphericity	Approximate chi-square	1414.471
	Df	91
	Sig.	.000

5.1.2   Diagnostic statistics for principal-axis factor analysis: Adult Learner Self-Directedness Scale

5.1.2.1   EFA Phase 1: Items 1 to 21

The principal-axis factor analysis revealed the presence of three components with eigenvalues exceeding 1.50 (see Table 5.2), cumulatively explaining 36.94% of the variance in the data. An inspection of the scree plot (see Figure 5.1) revealed an inflection point at the fourth component. However, using Cattell's (1966) scree test and the criterion of eigenvalues of > 1.50, it was decided to retain three components only for further investigation.

The scree plot indicates strong support for one factor, slowly diminishing support for the next three factors, while the slope decreases to the horizontal after about four factors. The criteria

mentioned below guided the number of factors to be extracted (Hair et al., 2010; Owen, 1995):

- statistical criteria used conventionally, such as Kaiser's eigenvalue-larger-than-one-criterion. A highly rigorous criterion of eigenvalues larger than 1.50 was set for the purpose of this research study.
- the theoretical expectation regarding both the number of factors and the interpretability of the factors obtained
- the number of significant factors ($p < 0.01$) and the proportion of variance explained
- any given item being considered to belong to a particular factor if it had a factor loading of .35 or higher. (Theoretical expectations and the contents of factors and items were considered when decisions either to include or omit items were not clear-cut.)

FIGURE 5.1:   SCREE PLOT FOR THE PRINCIPLE COMPONENT ANALYSIS ON THE ALSDS (ITEMS 1 TO 21)
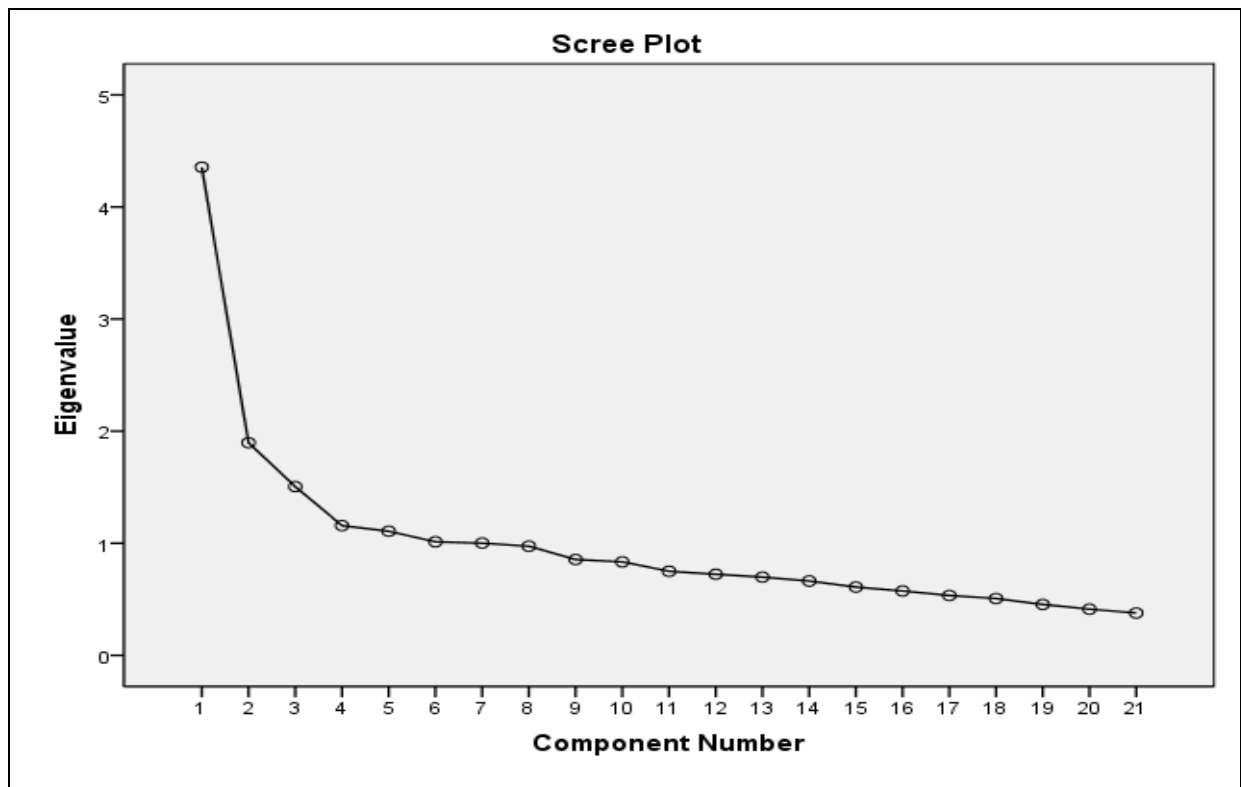
In order to assist in the interpretation and scientific utility of these three components, a Varimax rotation was performed. The rotated solution revealed the presence of a simple structure (Thurstone, 1947), with all three components showing a number of strong loadings (≥ .35) (see Table 5.2). The subscales for the three extracted factors were obtained by

calculating the mean of the items loading on each of the subscales or factors. This resulted in three factor loadings being calculated, with the three factors being named as follows:

Factor 1: Strategic utilisation of officially provided resources

Factor 2: Engaged academic activity

Factor 3: Success orientation for open distance learning

TABLE 5.2:   PRINCIPAL-AXIS FACTOR ANALYSIS RESULTS FOR THE ADULT LEARNER SELF-DIRECTEDNESS SCALE: ITEMS 1 TO 21

Item number	Item	Factor 1	Factor 2	Factor 3
Q1	How many hours per week do you devote to your studies at Unisa?		.78	
Q2	How much time do you devote to a module/course per week?		.80	
Q3	According to the credits they carry, how many hours are you required to devote to each module per week?	.46		
Q4	How do you plan your study time?		.70	
Q5	When do you usually submit assignments?		.82	
Q6	How much time do you allow yourself to prepare for the examination?		.39	
Q7	When do you read your tutorial letters?	.77		
Q8	When do you use your study guide?	.69		
Q9	How do you use the feedback tutorial letters in your studies?	.53		
Q10	Which of the following describes the learning situation in which you feel the most comfortable?			.76
Q11	What do you do when you experience a problem such as a family crisis or unexpected heavy workload?			.78
Q12	How would you describe your preferred mode of study?			-.71
Q13	How will you use the knowledge you have gained in your studies in your work situation?			.47
Q14	How confident are you that you will understand the learning material?			.65

| Item number	Item	Factor 1	Factor 2	Factor 3
Q15	How confident are you that you will master all the learning outcomes of your field of study?			.69
Q16	How confident are you that you will complete your qualification?			.74
Q17	How confident are you that you will be able to solve problems you encounter in your learning?			.76
Q18	How confident are you that you possess the skills to cope in an open distance learning environment?			.78
Q19	How much information have you collected about open distance learning?	.53		
Q20	How do you find studying in an open distance learning environment?			.56
Q21	Who do you think is responsible for ensuring your success as a student?			.36
Eigenvalues		4.36	1.90	1.51
Individual total variance %		20.74	9.03	7.17
Cumulative total variance %		20.74	29.77	36.94

5.1.2.2 *EFA Phase 2: Items 22 to 35*

The principal-axis factor analysis revealed the presence of one component only with eigenvalues exceeding 1.5 (see Table 5.3), cumulatively explaining 20.80% of the variance in the data. An inspection of the scree plot (see Figure 5.2) revealed an inflection point at the third component. However, using Cattell's (1966) scree test and the criterion of eigenvalues of > 1.50, it was decided to retain one component for further investigation. The scree plot indicates strong support for one factor, slowly diminishing support for the next two factors, while the slope decreases to the horizontal after about the third factor.

FIGURE 5.2 SCREE PLOT FOR PRINCIPLE COMPONENT ANALYSIS ON THE ALSDS (ITEMS 22 TO 35)
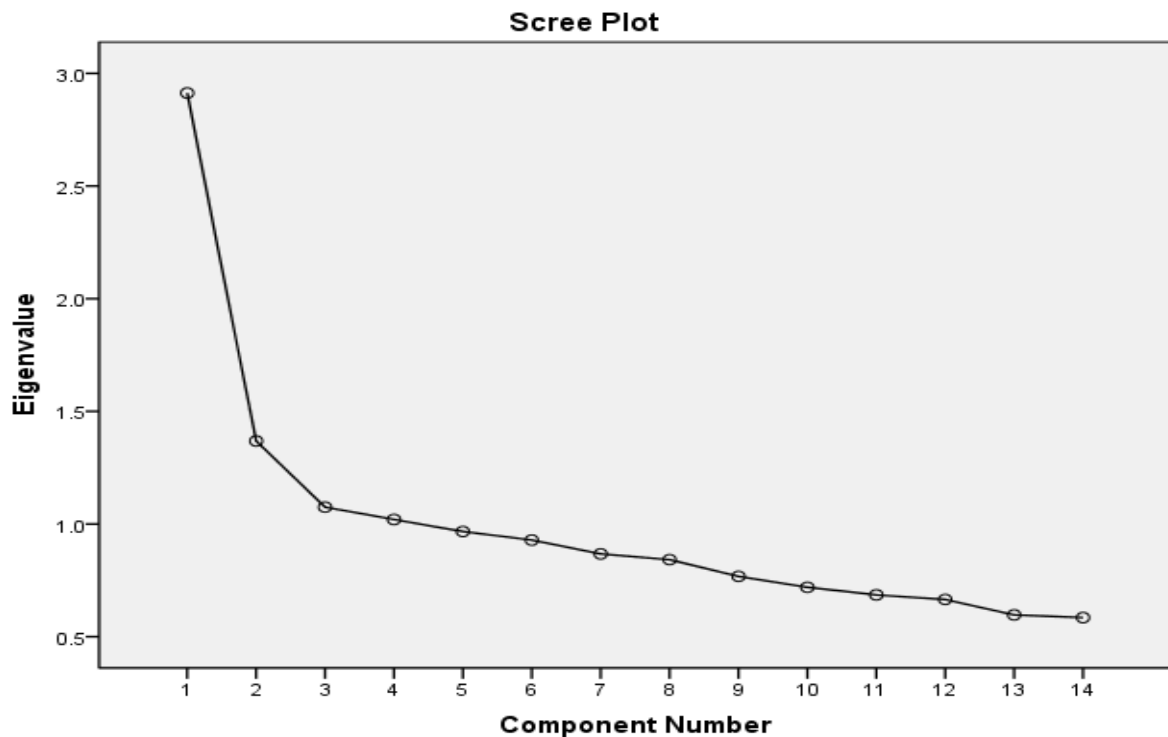
In order to assist in the interpretation and scientific utility of the one component, a varimax rotation was performed. The rotated solution revealed the presence of a simple structure (Thurstone, 1947), with the component showing a number of strong loadings (≥ .35) (see Table 5.3). The subscale for the one extracted factor was obtained by calculating the mean of the items loading on the subscale or factor. This resulted in one factor loading being calculated, with the one additional factor of the ALSDS being named as follows:

Factor 4: Academically motivated behaviour

TABLE 5.3:   PRINCIPAL-AXIS FACTOR ANALYSIS RESULTS FOR THE ADULT LEARNER SELF-DIRECTEDNESS SCALE: ITEMS 22 TO 35

Item number	Item	Factor 4 (Component 1 of EFA Phase 2)
Q22	What do you do when you struggle to understand the work?	.55
Q23	What do you do when you find that you have not received all the tutorial letters?	.58
Q24	What do you do when you encounter words or phrases in the prescribed book, study guide or tutorial letters that you do not understand?	.40
Q25	What do you do when you do not understand what is required in an assignment question?	.49
Q26	Why did you decide to study?	.41
Q27	What motivates you to study?	.50
Q28	Why do you use the study guide?	.59
Q29	How do you use the study guide?	.58
Q30	How do you react when you do badly in an assessment (assignment or examination)?	.49
Q31	What do you do when you become discouraged about your studies?	.50
Q32	What do you do if you struggle to find sources and access to technology such as computers and the internet?	.48
Q33	How do you prepare for examinations?	.54
Q34	What do you do when you realise you have not worked sufficiently throughout the year/semester and are unprepared for the examination?	.44
Q35	What do you do when you want to improve your knowledge and skills?	.35
Eigenvalue		2.91
Individual total variance %		20.80
Cumulative total variance %		20.80

5.1.3   Summary: Adult Learner Self-Directedness Scale Four factor model solution

Table 5.4 provides a summary of the final four factor solution for the ALSDS.

TABLE 5.4:   ALSDS: FINAL FOUR FACTOR SOLUTION

Statistical Identity	Dimension name	Dimension description	Items per dimension
Factor 1	Strategic utilisation of officially provided resources	Relates to when and how adult learners utilise the official resources provided by the university in their role as active students	3, 7, 8, 9, 19 (5 items)
Factor 2	Engaged academic activity	Relates to the intentional, purposeful actions in which students engage and that are directly related to furthering their studies or improving their competence	1, 2, 4, 5, 6 (5 items)
Factor 3	Success orientation for open distance learning	The self-reported behaviours of adult learners that display their level of self-confidence and related behaviours in their ability to be successful in the pursuit of their studies in an open distance learning environment	10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21 (11 items)
Factor 4	Academically motivated behaviour	The self-reported behaviour of adult learners that may be interpreted as displaying either intrinsic or extrinsic motivation in relation to their academic activities	22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 (14 items)
	Total number of items:		35 items

5.2   RELIABILITY ANALYSIS

The reliability analysis focused on assessing the internal consistency reliability of the two measurement instruments, namely, the Adult Learner Self-Directedness Scale (ALSDS) and the Student Employability Attributes Scale (SEAS). The Cronbach's alpha coefficients of the two instruments are reported in the following sections.

5.2.1   Reporting of internal consistency reliability: ALSDS

Table 5.5 presents the internal consistency reliability of the ALSDS. The strategic utilisation of officially provided resources and engaged academic activity sub-scales obtained lower Cronbach's alphas than the other two sub-scales. Nunnaly and Bernstein (1994) use Cronbach's alpha values of 0.70 as a directive, whilst Bartholomew, Antonia, and Marcia (2000) argue that between 0.60 and 0.80 is acceptable for broad survey research purposes. The internal consistency reliability clearly fall within the prescribed range of directives. The lower internal consistency coefficients for some of the ALSDS variables may be attributed to the life stage and inexperience of the participants regarding the attributes measured. However, in view of the fact that the purpose of this study was not to make individual predictions based on the ALSDS, but rather to investigate broad trends and certain relationships between variables, the instrument was considered to be psychometrically acceptable for the purpose of the study.

TABLE 5.5:   INTERNAL CONSISTENCY RELIABILITY COEFFICIENTS OF THE ALSDS

Factor	Name	Cronbach's alpha	Number of items
Factor 1	Strategic utilisation of officially provided resources	. 60	5
Factor 2	Engaged academic activity	.60	5
Factor 3	Success orientation for open distance learning	. 77	11
Factor 4	Academically motivated behaviour	.71	14
Overall scale		.91	35

Table 5.5 shows that acceptable internal consistency reliabilities were obtained for the ALSDS. The reliabilities for the four scales vary between .60 and .77. The total ALSDS scale obtained a Cronbach's alpha coefficient of .91 which was considered adequate for the purpose of this study.

5.2.2 Reporting of internal consistency reliability: SEAS

Table 5.6 reports the internal consistency reliability of the SEAS.

TABLE 5.6: INTERNAL CONSISTENCY RELIABILITY COEFFICIENTS OF THE SEAS

Sub-scale	Cronbach's alpha	Number of items
Career self-management	.93	11
Cultural competence	.93	5
Self-efficacy	.81	6
Career resilience	.81	6
Sociability	.82	7
Proactivity	.90	7
Entrepreneurial orientation	.82	7
Emotional literacy	.85	7
Overall scale	.98	56

Table 5.6 shows that acceptable internal consistency reliability were obtained for the SEAS. The reliabilities for the eight scales vary between .81 and .93. The total SEAS scale obtained a Cronbach's alpha coefficient of .98 which was considered adequate for the purpose of this study.

5.3 DESCRIPTIVE STATISTICS

Once the internal consistency reliability of the two scales had been identified, a descriptive analysis was conducted in order to investigate the distribution of the scores. The means (M) and standard deviations (SD), skewness and kurtosis were computed for each scale.

5.3.1 Adult Learner Self-Directedness Scale (ALSDS)

Table 5.7 summarises the means, standard deviations, skewness and kurtosis of each of the four sub-scales of the Adult Learner Self-Directedness Scale. The means for the four sub-scales ranged between 2.68 and 3.75. As shown in Table 5.7 and Figure 5.3, the highest mean score was M = 4 (SD = .68) for the sub-scale strategic utilisation of *officially provided resources*, while the lowest mean was obtained for the sub-scale *engaged academic activity* (M = 2.68; SD = .65). The skewness values show that the scores were positively skewed (bounded to the left). Skewness for the four sub-scales ranged between −.11 to −.73 while the kurtosis values ranged between −.08 and −.51.

TABLE 5.7:   MEANS, STANDARD DEVIATIONS, SKEWNESS AND KURTOSIS OF THE ALSDS

Construct	Mean	Std deviation	Skewness	Kurtosis
Strategic utilisation of officially provided resources	3.96	.69	−.734	−.194
Engaged academic activity	2.68	.65	−.11	−.514
Success orientation for open distance learning	3.75	.63	−.382	−.341
Academically motivated behaviour	3.63	.49	−.427	−.082

FIGURE 5.3:   MEANS OF THE FOUR FACTORS OF THE ALSDS
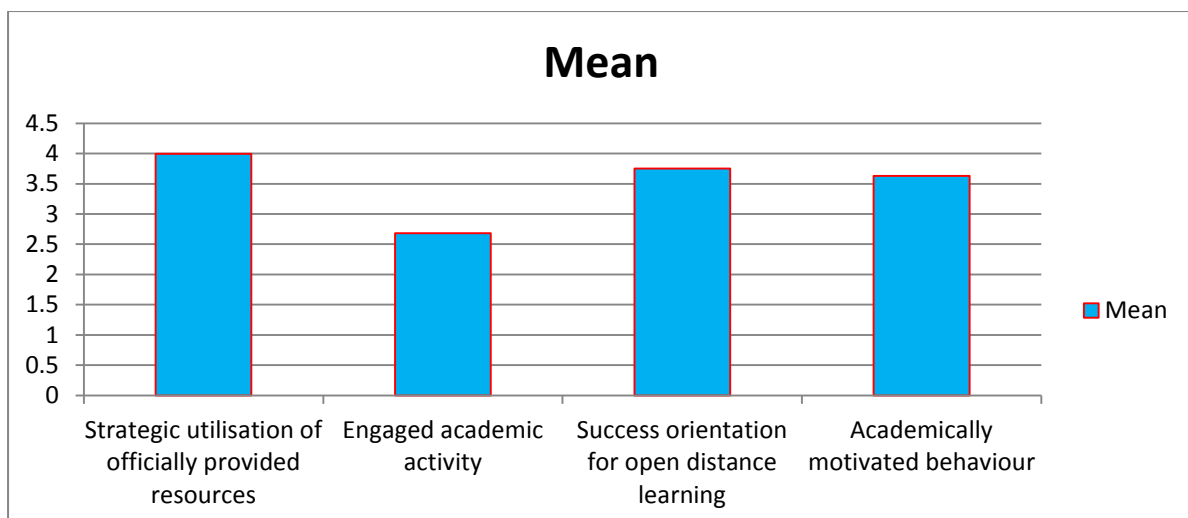
5.3.2   Student Employability Attributes Scale (SEAS)

Table 5.8 summarises the means, standard deviations, skewness and kurtosis of each of the four sub-scales of the Student Employability Attributes Scale. The means for the eight sub-scales ranged between 4.27 and 4.80. As shown in Table 5.8 and figure 5.4, the highest mean score was M = 4.80 (SD = .82) for the sub-scale *career self-management*, while the lowest mean was obtained for the sub-scale *sociability* (M = 4.27; SD = .92). Skewness for the eight sub-scales ranged between -.370 and −.75, thereby falling within the −1 and +1 normality range recommended for these coefficients (Howell, 2004). The kurtosis values ranged between .051 and .584.

TABLE 5.8: MEANS, STANDARD DEVIATIONS, SKEWNESS AND KURTOSIS OF SEAS

Construct	Mean	Std. deviation	Skewness	Kurtosis
Career self-management	4.80	.82	−.746	.585
Cultural competence	4.38	1.06	−.370	−.498
Self efficacy	4.81	79	−.701	.447
Career resilience	4.46	.87	−.470	.284
Sociability	4.27	.92	−.374	−.064
Entrepreneurial orientation	4.69	.77	−.558	.165
Proactivity	4.65	.86	−.546	.051
Emotional literacy	4.55	.88	−.480	−.032

FIGURE 5.4:   MEANS OF THE EIGHT FACTORS OF THE SEAS
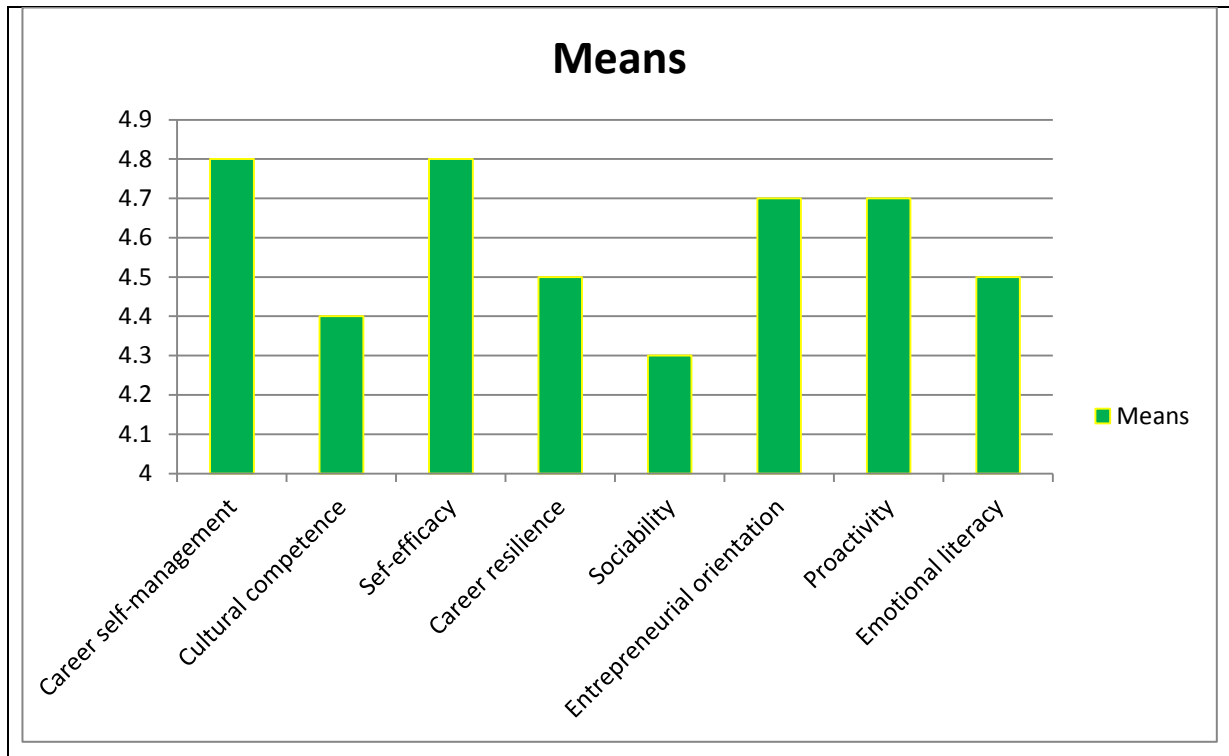
5.4   CORRELATIONAL STATISTICS

After finalising the reliabilities of the ALSDS and conducting the descriptive analysis, a Pearson product-moment correlation analysis with casewise deletion of missing data was conducted. This was done in order to assess the relationship between the ALSDS and SEAS variables. The zero-order correlations between the sub-scales of the ALSDS and the SEAS were also investigated in terms of possible multi-collinearity concerns in interpreting the results.

As regards the ALSDS, Table 5.9 shows that the sub-scales correlated positively (r ≥ .08 ≤ .41; p ≤ .01), thus indicating construct validity of the ALSDS. As regards the SEAS, the sub-scales correlated positively (r ≥ .47 ≤ .81; p ≤ .001), thus indicating construct validity of the SEAS. The magnitude of the significant interrelationships (r ≤ .81) indicated that each subscale assessed a distinctive construct and that the subscales of the two scales were valid measures of the two constructs, namely, adult learner self-directedness and employability attributes.

TABLE 5.9: CORRELATIONS BETWEEN SUB-SCALES OF THE ALSDS AND SEAS

ALSDS	ALSDS				EAS							
	Strategic Utilisation of officially provided resources	Success Orientation for ODL	Engaged Academic Activity	Academically Motivated Behaviour	Career self-management	Cultural competence	Self-efficacy	Career resilience	Sociability	Entrepreneurial orientation	Proactivity	Emotional literacy
Strategic utilisation of officially provided resources r	1											
Success orientation for ODL r	.41 ***	1										
Engaged academic activity r	.28 ***	.26 ***	1									
Academically motivated behaviour r	.17 ***	.29 ***	.09 ***	1								
Career self-management r	.23 ***	.29 ***	.16 ***	.25 ***	1							
Cultural competence r	.09 ***	.16 ***	.07 ***	.13 ***	.55 ***	1						
Self-efficacy r	.14 ***	.19 ***	.12 ***	.14 ***	.69 ***	.47 ***	1					
Career resilience r	.19 ***	.23 ***	.11 ****	.18 ***	.73 ***	.56 ***	.65 ***	1				
Sociability r	.18 ***	.24 ***	.10 **	.20 ***	.70 ***	.65 ***	.60 ***	.74 ***	1			
Entrepreneurial orientation r	.19 ***	.24 ***	.15 ***	.16 ***	.70 ***	.52 ***	.72 ***	.69 ***1	.66 ***	1		
Proactivity r	.21 ***	.28 ***	.15 ***	.22 ***	.81 ***	.58 ***	.70 ***	.79 ***	.76 ***	.76 ***	1	
Emotional literacy r	.16 ***	.22 ***	.10 ***	.1 2***	.62 ***	.56 ***	.61 ***	.62 ***	.60 ***	.63 ***	.66 ***	1

Notes: N = 1 102. *** $p \leq 0.001$, ** ; $p \leq 0.01$; * $p \leq 0.05$. Correlation values ≤ .29 are practically significant (small effect). Correlation value ≥ .30 ≤ .49 are practically significant (medium effect). Correlation values ≥ .50 are practically significant (large effect).

As regards the relationship between the ALSDS and SEAS variables, Table 5.9 shows that the associations were all positive and significant, ranging between r ≥ .07 ≤ .30 (small to medium practical effect, $p \leq .001$). It was anticipated that multicollinearity would not pose a problem as the Pearson product-moment coefficients (see Table 5.9) showed a small to medium practical effect, and this is well below the level of concern for multicollinearity ($r \geq .80$) to be present (Field, 2009).

Table 5.9 shows that success orientation for open distance learning (ODL) had significant positive associations with almost all the variables of the EAS. Career self-management (r = .29; $p = .00$; small practical effect) and proactivity (r = .28; $p = .00$; small practical effect) showed the strongest associations. Other significant positive associations between success orientation for ODL and the SEAS were sociability (r = .24, $p = .00$; small practical effect) and entrepreneurial orientation (r = .24; $p = .00$; small practical effect). Career resilience correlated positively with success orientation for ODL (r = .23; $p = .00$; small practical effect), while emotional literacy correlated less strongly (r = .22; $p = .00$; small practical effect).

Engaged academic activity correlated positively with both career self-management (r = .6; $p = .00$; small practical effect) and proactivity (r = .22; $p = .00$; small practical effect). Other significant positive correlations were between engaged academic activity and sociability (r = .10, $p = .00$; small practical effect) and engaged academic activity and career resilience (r = .11; $p = .00$; small practical effect).

Significant positive correlations were found between strategic utilisation of officially provided resources and all of the variables of the EAS, with career self-management (r = .23; $p = .00$; small practical effect) showing the strongest correlation. Positive but less strong correlations were found between strategic utilisation of officially provided resources and proactivity (r = .21; $p = .00$; small practical effect).

Strong positive correlations were found between academically motivated behaviour and some of the variables of the EAS. Once again the strongest correlation was found between academically motivated behaviour and career self-management (r = .25; $p = .00$; small practical effect). Academically motivated behaviour also correlated strongly with both proactivity (r = .21; $p = .00$; small practical effect) and sociability (r = .20; $p = .00$; small practical effect).

The results provided supportive evidence for the research hypothesis Ha1: There is a significant and positive relationship between the self-directedness and employability attributes of adult learners.

5.5   INFERENTIAL STATISTICS

This section addresses research aims 2 and 3. The following inferential statistics are reported in this section: Structural equation modelling, multiple regression analyses and tests for significant mean differences.

5.5.1   Structural equation modelling

Structural equation modelling was used to further test the overall structural model fit between the ALSD and SEAS variables. The test statistics and goodness-of-fit indices generated by AMOS 18 (Arbuckle, 1995–2009) were inspected and, as shown in Table 5.10, produced one model showing a good fit between the data.

TABLE 5.10: STRUCTURAL EQUATION MODELLING RESULTS: FIT STATISTICS

Model	CMIN	*Df*	CMIN/*df*	*p*	NFI	RFI	IFI	TLI	CFI	RMSEA	SRMR
1	275.17	53	5.19	.000	.95	.95	.97	.96	.97	.065	.034

Note: CMIN(χ^2) = chi-square; df = degrees of freedom; *p* = significance level; NFI = Bentler-Bonett normed fit index; RFI = relative fit index; TLI = non-normed fit index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardised root-mean-square residual

The results of Table 5.10 are also presented in Figure 5.5.

**FIGURE 5.5:   STRUCTURAL MODEL LINKING THE ALSDS AND SEAS VARIABLES
AND SHOWING STANDARDISED PATH COEFFICIENTS**

Note: All standardised path coefficients were significant at p = .00.

Figure 5.5 indicates the standardised path coefficient estimates (p = .000) between the adult self-directed learning construct and its variables and also the standardised path coefficient estimates between the employability attributes construct and its variables. The standardised path coefficient estimates between the adult learner self-directedness and the employability attributes constructs are also specified.

In terms of relative importance, the variance in the adult learner self-directedness construct is explained mostly by the success orientation variable (.73) and the least by the academically moivated behaviour (.36) and strategic utilisation of officially provided resources (.39) variables. Although all the SEAS variables (with the exception of the cultural competence variable = .66) contributed strongly as regards explaining the variance in the employability attributes construct, the proactivity variable (.91) contributed the most in explaining the variance in the overall SEAS construct. The adult learner self-directedness construct significantly explained the variance in the employability attributes construct (.42). The squared multiple correlations data revealed that the model explains 18% (R^2 = .18; moderate practical effect; p = .000) of the variance in the employability attributes construct.

The correlation analysis and the structural equation modelling results provided adequate indication that further analyses in the form of multiple regression analysis to assess the ability of adult learner self-directedness to predict employability attributes were warranted.

5.5.2   Multiple regression analyses

This section is relevant to research aim 2, namely, to assess whether the self-directedness of adult learners significantly and positively predicts their employability attributes. (Ha2: The self-directedness of adult learners significantly and positively predicts their employability attributes).

Eight separate, simple multiple regression analysis models were calculated, one model for each of the eight SEAS dependent variables. Age, gender and race were used as control variables. Age was coded as follows: ≤ 25 years = 1; ≥ 26 ≤ 31 years = 2; ≥ 31 ≤ 40 = 3; ≥ 41 ≤ 50 = 4; ≥ 50 = 5. Gender was coded as 1 = males and 2 = females while race was coded as black = 1; coloured = 2, Indian = 3 and white = 4.

TABLE 5.11: MULTIPLE REGRESSION ANALYSIS: CAREER SELF-MANAGEMENT AS DEPENDENT VARIABLE

	Unstandardised coefficients		Standardised coefficients	t	Sig	Semi-partial r²
	B	**Std Error**	**β**			
Career Self-Management (constant)	18.111	2.914		6.214	.000	
Age	−.643	.935	-.021	−.688	.492	.04
Gender	.062	.623	.003	.099	.921	.00
Race	2.090	1.128	.056	1.852	.064	.00
Strategic utilisation of officially provided resources	.322	.093	.115	3.448	.001	.01
Success orientation for open distance learning	.296	.053	.192	5.543	.000	.03
Engaged academic activity	.166	.080	.067	2.081	.038	.00
Academically motivated behaviour	.232	.043	.169	5.356	.000	.03

Model summary						
Model	R	R square		Adjusted R square	Std error of the estimate	F
1	.373	.139++		.133	9.1958	22.04***

Notes: ***$p \leq 0.001$ **$p \leq 0.01$ *$p \leq 0.05$. + $R^2 \leq 0.12$ (small practical effect size) ++ $R^2 \geq 0.13 \leq 0.25$ (moderate practical effect size) + ++ $R^2 \geq 0.26$ (large practical effect size)

Table 5.11 indicates that the regression of the ALSDS variables on the SEAS career self-management variable produced a statistically significant model ($F = 22.04$; $p \leq .001$), accounting for 14% ($R^2 = .139$) (moderate practical effect) of the variance in the career self-management variable. The ALSDS success orientation variable ($ß = .19$; p = .00) and the academically motivated behaviour variable ($ß = .17$; $p = .00$) contributed the most in

explaining the variance in the career self-management variable. The ALSDS engaged academic activity variable ($ß = .07$; $p = .04$) contributed the least in explaining the variance in the career self-management variable. Apart from the standardised beta coeffcients, the semi-partial r²'s, which may be interpreted as the incremental variance of each of the ALSDS variables separately, were also investigated. Table 5.11 shows that engaged academic activity did not explain any incremental variance in career self-management, as compared with the other three ALSDS variables, which did explain an incremental variance in career self-management.

The results showed that gender, age and race did not significantly predict career self-management.

TABLE 5.12: MULTIPLE REGRESSION ANALYSIS: CULTURAL COMPETENCE AS DEPENDENT VARIABLE

	Unstandardised coefficients		Standardised coefficients	t	Sig	Semi-partial r²
	B	**Std Error**	**β**			
Cultural competence (constant)	10.268	1.701		6.036	.000	
Age	.046	.549	.003	.083	.934	.00
Gender	−.137	.364	−.012	−.376	.707	.00
Race	2.276	.656	.111	3.472	.001	.01
Strategic utilisation of officially provided resources	.029	.055	.019	.534	.594	.00
Success orientation for open distance learning	.131	.031	.154	4.176	.000	.02
Engaged academic activity	.025	.046	.018	.546	.585	.00
Academically motivated behaviour	.067	.025	.088	2.627	.009	.01

Model summary					
Model	R	R square	Adjusted R square	Std error of the estimate	F
2	.229	.053+	.046	5.3380	7.52***

Notes: ***p ≤ 0.001 **p ≤ 0.01*p ≤ 0.05. + R^2 ≤ 0.12 (small practical effect size) ++ R^2 ≥ 0.13 ≤ 0.25 (moderate practical effect size) + ++ R^2 ≥ 0.26 (large practical effect size)

Table 5.12 indicates that the regression of the ALSDS variables on the SEAS cultural competence variable produced a statistically significant model (F = 7.52; p ≤ .001), accounting for 5% (R^2 = .05) (small practical effect) of the variance in the cultural competence variable. The ALSDS success orientation variable (ß = .15; p = .00) and the academically motivated behaviour variable (ß = .09; p = .00) contributed the most to explaining the variance in the cultural competence. As shown by the semi-partial r²s, each of these two variables contributed in explaining the incremental variance in cultural competence.

The results showed that, apart from race (ß = .11; p = .001), the biographical variables gender and age did not significantly predict cultural competence.

TABLE 5.13:   MULTIPLE REGRESSION ANALYSIS: SELF-EFFICACY AS DEPENDENT VARIABLE

	Unstandardised coefficients		Standardised coefficients	t	Sig	Semi- partial r²
	B	Std error	β			
Self-efficacy (constant)	17.898	1.622		11.035	.000	
Age	-.689	.518	-.043	-1.331	.184	.00
Gender	-.219	.345	-.020	-.635	.526	.00
Race	.422	.625	.022	.675	.500	.00
Strategic utilisation of officially provided resources	.105	.052	.071	2.019	.044	.00

Success orientation for open distance learning	.109	.030	.134	3.663	.000	.01
Engaged academic activity	.053	.044	.040	1.192	.233	.00
Academically motivated behaviour	.063	.024	.086	2.607	.009	.01

Model summary					
Model	R	R square	Adjusted R square	Std error of the estimate	F
3	.232	.054+	.047	5.0922	7.75***

Notes: ***p ≤ 0.001 **p ≤ 0.01 *p ≤ 0.05. + R^2 ≤ 0.12 (small practical effect size) ++ R^2 ≥ 0.13 ≤ 0.25 (moderate practical effect size) + ++ R^2 ≥ 0.26 (large practical effect size)

Table 5.13 indicates that the regression of the ALSDS variables on the SEAS self-efficacy variable produced a statistically significant model (F = 7.75; p ≤ .001), accounting for 5% (R^2 =.054) (small practical effect) of the variance in the self-efficacy variable. The ALSDS success orientation variable (ß = .13; p = .00) and the academically motivated behaviour variable (ß = .09; p = .00) contributed the most in explaining the variance in the self-efficacy variable. The ALSDS strategic utilisation of officially provided resources variable (ß = .07; p = .04) contributed the least in explaining the variance in the self-efficacy variable. Table 5.13 further shows that strategic utilisation of officially provided resources did not explain any incremental variance in self-efficacy although success orientation and academically motivated behaviour did. The results showed that age, gender and race did not significantly predict self-efficacy.

TABLE 5.14: MULTIPLE REGRESSION ANALYSIS: CAREER RESILIENCE AS DEPENDENT VARIABLE

	Unstandardised Coefficients		Standardised Coefficients	t	Sig	Semi- partial r^2
	B	**Std Error**	**β**			
Career resilience (constant)	12.084	1.709		7.070	.000	
Age	−.122	.548	−.007	−.233	.824	.00
Gender	−.910	.365	−.078	−2.492	.013	.01
Race	.901	.662	.043	1.362	.174	.00
Strategic utilisation of officially provided resources	.159	.055	.100	2.896	.004	.01
Success orientation for open distance learning	.159	.031	.181	5.066	.000	.02
Engaged academic activity	.040	.047	.028	.858	.391	.00
Academically motivated behaviour	.079	.025	.101	3.113	.002	.01
Model summary						
Model	R	R square		Adjusted R square	Std error of the estimate	F
4	.289	.089+		.082	5.3932	13.31***

Notes: ***p ≤ 0.001 **p ≤ 0.01 *p ≤ 0.05. + R^2 ≤ 0.12 (small practical effect size) ++ R^2 ≥ 0.13 ≤ 0.25 (moderate practical effect size) + ++ R^2 ≥ 0.26 (large practical effect size)

Table 5.14 indicates that the regression of the ALSDS variables on the S SEAS career resilience variable produced a statistically significant model (F = 13.31; p ≤ .001), accounting for 9% (R^2 = .089) (small practical effect) of the variance in the career resilience variable. The ALSDS success orientation variable (ß = .18; p = .00), the academically motivated behaviour variable (ß = .10; p = .00) and the strategic utilisation of officially provided resources variable (ß = .10; p = .00) contributed in explaining the variance in the career

resilience variable. The semi-partial r²s further showed that these three variables also explained the incremental variance in career resilience. The results showed that, apart from gender (ß = -.08; p = .01), race and age did not significantly predict career resilience.

TABLE 5.15: MULTIPLE REGRESSION ANALYSIS: SOCIABILITY AS DEPENDENT VARIABLE

	Unstandardised coefficients		Standardised coefficients	t	Sig	Semi- partial r²
	B	**Std Error**	**β**			
Sociability (constant)	9.099	2.114		4.303	.000	
Age	−.462	.678	−.021	−.681	.496	.04
Gender	−.224	.452	−.016	−.496	.620	.00
Race	2.342	.819	.089	2.861	.004	.00
Strategic utilisation of officially provided resources	.190	.086	.096	2.797	.005	.00
Success orientation for open distance learning	.200	.039	.184	5.168	.000	.02
Engaged academic activity	.010	.058	.006	.168	.866	.00
Academically motivated behaviour	.134	.031	.138	4.275	.000	.01
Model summary						
Model	R	R square	Adjusted R square	Std error of the estimate	F	
5	.314	.099+	.092	6.6713	14.98***	

Notes: ***p ≤ 0.001 **p ≤ 0.01 *p ≤ 0.05. + R^2 ≤ 0.12 (small practical effect size) ++ R^2 ≥ 0.13 ≤ 0.25 (moderate practical effect size) + ++ R^2 ≥ 0.26 (large practical effect size)

Table 5.15 indicates that the regression of the ALSDS variables on the SEAS sociability variable produced a statistically significant model (F = 14.98; p ≤ .001), accounting for 10% (R^2 = .099) (small practical effect) of the variance in the sociability variable. The ALSDS success orientation variable (ß = .18; p = .00) and the academically motivated behaviour variable (ß = .14; p = .00) contributed the most in explaining the sociability variable. The

ALSDS strategic utilisation of officially provided resources (ß = .10; *p* = .001) contributed the least in explaining the variance in the sociability variable. The semi-partial r²s further showed that strategic utilisation of officially provided resources also did not explain the incremental variance in sociability. The results showed that, apart from race (ß = .09; *p* = .01), gender and age did not significantly predict sociability.

TABLE 5.16:   MULTIPLE REGRESSION ANALYSIS: ENTREPRENEURIAL ORIENTATION AS DEPENDENT VARIABLE

	Unstandardised coefficients		Standardised coefficients	t	Sig	Semi-partial r²
	B	**Std Error**	**β**			
Entrepreneurial orientation (constant)	17.387	1.779		9.772	.000	
Age	−.509	.568	−.028	−.896	.371	.02
Gender	.320	.379	.027	.843	.399	.00
Race	.715	.685	.033	1.044	.297	.00
Strategic utilisation of officially provided resources	.168	.057	.102	2.939	.003	.01
Success orientation for open distance learning	.155	.033	.171	4.769	.000	.02
Engaged academic activity	.084	.048	.058	1.745	.081	.00
Academically motivated behaviour	.074	.026	.091	2.799	.005	.01
Model summary						
Model	R	R square	Adjusted R square	Std error of the estimate	F	
6	.296	.087+	.081	5.5860	13.05***	

Notes: ***p ≤ 0.001 **p ≤ 0.01 *p ≤ 0.05. + R^2 ≤ 0.12 (small practical effect size) ++ R^2 ≥ 0.13 ≤ 0.25 (moderate practical effect size) + ++ R^2 ≥ 0.26 (large practical effect size)

Table 5.16 indicates that the regression of the ALSDS variables on the SEAS entrepreneurial orientation variable produced a statistically significant model (F = 13.05; p ≤ .001), accounting for 9% (R^2 = .087) (small practical effect) of the variance in the

entrepreneurial orientation variable. The ALSDS success orientation variable (ß = .17; p = .00) and the strategic utilisation of officially provided resources variable (ß = .10; p = .003) contributed the most in explaining the variance in the entrepreneurial orientation variable. The ALSDS academically motivated behaviour variable (ß = .09; p = .01) contributed the least in explaining the variance in the entrepreneurial orientation variable. The semi-partial r²s further showed that these three variables also explained the incremental variance in entrepreneurial orientation. The results showed that race, gender and age did not significantly predict entrepreneurial orientation.

TABLE 5.17: MULTIPLE REGRESSION ANALYSIS: PROACTIVITY AS DEPENDENT VARIABLE

	Unstandardised coefficients		Standardised coefficients	t	Sig	Semi-partial r²
	B	**Std Error**	**β**			
Proactivity (constant)	11.702	1.981		5.907	.000	
Age	-.212	.635	-.010	-.334	-.738	.00
Gender	.600	.423	.044	1.416	.157	.00
Race	1.127	.767	.045	1.469	.142	.00
Strategic utilisation of officially provided resources	.198	.063	.106	3.115	.002	.00
Success orientation for open distance learning	.192	.036	.186	5.285	.000	.02
Engaged academic activity	.079	.054	.047	1.454	.146	.00
Academically motivated behaviour	.132	.029	.143	.4.473	.000	.01
Model summary						
Model	R		R square	Adjusted R square	Std error of estimate	F
7	.340		.116+	.109	6.2513	17.89***

Notes: ***$p \le 0.001$ **$p \le 0.01$ *$p \le 0.05$. + $R^2 \le 0.12$ (small practical effect size) ++ $R^2 \ge 0.13 \le 0.25$ (moderate practical effect size) + ++ $R^2 \ge 0.26$ (large practical effect size)

Table 5.17 indicates that the regression of the ALSDS variables on the SEAS proactivity variable produced a statistically significant model (F = 17.89; $p \leq$ .001), accounting for 12% (R^2 = .116) (small practical effect) of the variance in the proactivity variable. The ALSDS success orientation variable (ß = .18; p = .00) and the academically motivated behaviour variable (ß = .14; p = .00) contributed the most in explaining the variance in the proactivity variable. The ALSDS strategic utilisation of officially provided resources variable (ß = .11; p = .002) contributed the least in explaining the variance in the proactivity variable. Contrary to the other two variables, the semi-partial r^2s showed that strategic utilisation of officially provided resources also did not explain the incremental variance in proactivity. The results showed that race, gender and age did not significantly predict proactivity.

TABLE 5.18:   MULTIPLE REGRESSION ANALYSIS: EMOTIONAL LITERACY AS DEPENDENT VARIABLE

	Unstandardised coefficients		Standardised coefficients	t	Sig	Semi- partial r^2
	B	**Std Error**	**β**			
Emotional literacy (constant)	17.441	1.979		8.815	.000	
Age	.317	.638	.016	.497	.619	.00
Gender	−.362	.422	−.027	−.858	.391	.00
Race	.735	.761	.031	.966	.334	.00
Strategic utilisation of officially provided resources	.126	.064	.069	1.976	.048	.00
Success orientation for open distance learning	.198	.036	.198	5.433	.000	.03
Engaged academic activity	.043	.054	.027	.799	.425	.00
Academically motivated behaviour	.054	.029	.060	1.827	.068	.00
Model summary						
Model	R	R square	Adjusted R square	Std error of estimate	F	
8	.266	.071+	.064	6.1980	10.32***	

Notes: ***$p \leq$ 0.001 **$p \leq$ 0.01 *$p \leq$ 0.05. + $R^2 \leq$ 0.12 (small practical effect size) ++ $R^2 \geq$ 0.13 $\leq$ 0.25 (moderate practical effect size) + ++ $R^2 \geq$ 0.26 (large practical effect size)

Table 5.18 indicates that the regression of the ALSDS variables on the SEAS emotional literacy variable produced a statistically significant model (F = 10.32; $p \leq$ .001), accounting for 7% (R^2 = .071) (small practical effect) of the variance in the emotional literacy variable. The ALSDS success orientation variable (ß = .20; p = .00) contributed the most in explaining the variance in the emotional literacy variable. The ALSDS strategic utilisation of officially provided resources varibale (ß = .07; p = .05) contributed the least in explaining the variance in the emotional literacy variable. The semi-partial r^2s show that strategic utilisation of officially provided resources also did not explain the incremental variance in emotional literacy. The results showed that race, gender and age did not significantly predict emotional literacy.

Overall, in terms of the eight multiple regression models, it would appear from the multiple R values and beta profiles that the self-directedness variables were more strongly associated with career self-management than with the other employability attributes. Model 1 (Table 5.11: Self-directedness – career self-management) obtained the highest multiple R value (R^2 = .14) in comparison to the other seven regression models. In order to empirically test this observation, a test of the difference of dependent multiple Rs after conversion to z-scores was performed. The results confirmed the observation by revealing a significant difference between the multiple Rs of the following models:

The self-directedness variables vs. career self-management multiple R and the self-directedness variables vs. cultural competence multiple R (z = .47; $p \leq$ .001).

The self-directedness variables vs. career self-management multiple R and the self-directedness variables vs. self-efficacy multiple R (z = 3.41; $p \leq$ .001).

The self-directedness variables vs, career self-management multiple R and the self-directedness variables vs. career resilience multiple R (z = 1.85; $p \leq$ .03).

The self-directedness variables vs. career self-management multiple R and the self-directedness variables vs. entrepreneurial orientation multiple R (z = 1.90; $p \leq$ .05).

The self-directedness variables vs. career self-management multiple R and the self-directedness variables vs.emotional literacy multiple R (z = 2.61; $p \leq$ .001).

The results further showed that success orientation obtained the highest beta values in each of the eight regression models (in comparison to the beta values of the other self-

directedness variables), with the beta weight for model 1 (self-directedness vs. career self-management) being the highest. These results indicate that success orientation contributed the most in explaining incremental variance in career self-management in comparison to the other employability attributes (cultural competence, self-efficacy, career resilience, entrepreneurial orientation and emotional literacy).

The results provided supportive evidence for the research hypothesis Ha2: The self-directedness of adult learners significantly and positively predicts their employability attributes. Table 5.19 summarises the core significant predictor variables in terms of each of the eight employability attributes.

TABLE 5.19: SUMMARY OF THE SIGNIFICANT PREDICTORS OF EMPLOYABILITY ATTRIBUTES

SIGNIFICANT PREDICTOR (INDEPENDENT) VARIABLES	CRITERION (DEPENDENT) VARIABLES
Strategic utilisation of officially provided resources Success orientation for open distance learning Engaged academic activity Academically motivated behaviour	Career self- management
Race Success orientation for open distance learning Academically motivated behaviour	Cultural competence
Strategic utilisation of officially provided resources Success orientation for open distance learning Academically motivated behaviour	Self-efficacy
Gender Strategic utilisation of officially provided resources Success orientation for open distance learning Academically motivated behaviour	Career resilience
Race Strategic utilisation of officially provided resources Success orientation for open distance learning Academically motivated behaviour	Sociability
Strategic utilisation of officially provided resources Success orientation for open distance learning	Entrepreneurial orientation

SIGNIFICANT PREDICTOR (INDEPENDENT) VARIABLES	CRITERION (DEPENDENT) VARIABLES
Academically motivated behaviour	
Strategic utilisation of officially provided resources Success orientation for open distance learning Academically motivated behaviour	Proactivity
Strategic utilisation of officially provided… resources Success orientation for open distance learning Academically motivated behaviour	Emotional literacy

5.5.3 Test for mean differences

This section is relevant to research aim 3, namely, to investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes. Tests for normality (one-sample Kolmogorov-Smirnov tests) revealed that the data were not normally distributed. Non-parametric tests were, thus, performed to assess whether the gender, race and age groups differed significantly regarding their mean scores for the ALSDS and SEAS sub-scales. The Mann-Whitney U test was used for the gender group while the Kruskal-Wallis test was used for the race and age groups.

TABLE 5.20: RESULTS OF THE MANN-WHITNEY U TEST: GENDER

	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)	ETA squared	Means	
					Male	**Female**
Strategic utilisation of officially provided resources	135610.000	−1.085	.278	.001	19.726	19.503
Success orientation for open distance learning	119947.000	−4.164	.000	.017	38.357	36.614
Engaged academic activity	127400.500	−2.702	.007	.008	16.311	15.588
Academically motivated behaviour	134805.000	−1.240	.215	.003	49.949	50.716

	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)	ETA squared	Means	
					Male	**Female**
Career Self-Management	120423.000	−.769	.442	.001	52.155	51.455
Cultural Competence	120145.000	−.361	.718	.000	21.712	21.504
Self-efficacy	122049.000	−.264	.792	.000	28.284	28.234
Career Resilience	114986.000	−1.938	.053	.003	25.879	26.477
Sociability	122466.500	−.311	.756	.000	29.470	29.187
Entrepreneurial Orientation	115838.000	−1.620	.105	.003	32.677	32.011
Proactivity	112926.500	−2.463	.014	.005	32.499	31.482
Emotional Literacy	120840.500	−.165	.869	.000	31.290	31.251

Notes: ***p ≤ 0.001 **p ≤ 0.01 *p ≤ 0.05. ETA squared values of ≤ .08 is small in practical effect. ETA squared values of ≥ .09 ≤ .24 is moderate in practical effect. ETA squared values of ≥ .25 is large in practical effect.

Table 5.20 shows that the males (M = 38.36) scored significantly higher than the females (M = 36.61) on the ALSDS success orientation for open distance learning variable (p = 0.00; ETA squared = .017; small practical effect), the males (M = 16.31) scored significantly higher than the females (M = 15.59) on the ALSDS engaged academic activity variable (p = 0.01; ETA squared = .01; small practical effect) while the males (M = 32.50) also scored significantly higher than the females (M = 31.48) on the SEAS proactivity variable (p = 0.01; ETA squared = .01; small practical effect). On the other hand, the females (M = 26.48) scored significantly higher than the males (M = 25.88) on the SEAS career resilience variable (p = .05; ETA squared = .003; small practical effect).

TABLE 5.21:   RESULTS OF THE KRUSKAL-WALLIS TEST: RACE

	Chi-square	Df	Asymp. sig. (2-tailed)	ETA squared	Means			
					A	C	I	W
Strategic utilisation of officially provided resources	23.196	3	.000	.020	19.462	18.641	21,467	20.793
Success orientation for open distance learning	14.293	3	.003	.013	37.014	37.256	38.633	39.659
Engaged academic activity	13.090	3	.004	.011	15.700	16.256	17.667	16.780
Academically motivated behaviour	4.039	3	.257	.003	50.560	48.718	49.933	49.805
Career Self-Management	3.979	3	.264	.002	51.789	49.513	52.897	51.215
Cultural Competence	14.659	3	.002	.012	21.676	21.368	23.690	19.848
Self-efficacy	0.343	3	.952	.000	28.215	28.500	28.552	28.367
Career Resilience	3.614	3	.306	.004	26.204	25.718	28.276	26.127
Sociability	7.968	3	.047	.005	29.452	28.077	29.488	27.835
Entrepreneurial Orientation	0.889	3	.828	.000	32.237	32.105	32.690	32.304
Proactivity	2.178	3	.536	.002	31.918	30.385	32.345	31.633
Emotional Literacy	0.114	3	.990	.000	31.249	31.605	31.414	31.190

Notes: ***p ≤ 0.001 **p ≤ 0.01 *p ≤ 0.05. ETA squared values of ≤ .08 is small in practical effect. ETA squared values of ≥ .09 ≤ .24 is moderate in practical effect. ETA squared values of ≥ .25 is large in practical effect. A = Africans; C = Coloureds; I = Indians; W = Whites.

Table 5.21 shows that the Indian participants scored significantly higher than the other race groups on the following ALSDS variables: strategic utilisation of officially provided resources (M = 21.47; p = .00; ETA squared = .02; small practical effect) and engaged academic activity (M = 17.67; p = .004; ETA squared = .011; small practical effect). However, the white participants scored significantly higher than the other race groups on the ALSDS variable

success orientation for open distance learning (M = 39.66; p = .003; ETA squared = .013; small practical effect).

The Indian participants also scored significantly higher than the other race groups on the SEAS variables cultural competence (M = 23.69; p = .002, ETA squared = .012; small practical effect) and sociability (M = 29.49; *p* = .05, ETA squared = .005; small practical effect).

The coloured participants scored significantly lower than the other race groups on the ALSDS strategic utilisation of officially provided resources variable (M = 18.641; p = .000, ETA squared = .013; small practical effect). The African participants obtained significantly lower scores than the other race groups on the variables success orientation for open distance learning (M = 37.01, *p* = .003; ETA squared = .013; small practical effect) and engaged academic activity (M = 15.70; *p* = .004; ETA squared = .011; small practical effect). The white participants obtained significantly lower scores than the other race groups on the SEAS cultural competence variable (M = 19.85; *p* = .002; ETA squared = .012; small practical effect) and the sociability variable (M = 27.84; *p* = .047, ETA squared = .005; small practical effect).

TABLE 5.22:   RESULTS OF THE KRUSKAL-WALLIS TEST: AGE

	Chi-square	df	Asymp. sig. (2-tailed)	ETA squared	Age Means				
					18–25	26–30	31–40	41–50	> 50
Strategic utilisation of officially provided resources	5.141	4	.237	.004.	19.475	19.394	19.683	19.624	21.00
Success orientation for open distance learning	19.911	4	.001	.019	36.501	37.127	37.929	38.208	41.667
Engaged academic activity	21.675	4	.000	.018	16.484	15.845	15.341	15.079	15.389
Academically motivated behaviour	4.063	4	.297	.003	50.709	49.912	50.702	49.871	51.667

Career Self-Management	5.873	4	.209	.007	51.077	52.864	51.861	50.926	54.056
Cultural Competence	1.637	4	.802	.002	21.652	21.668	21.340	21.848	20.556
Self-efficacy	10.521	4	.033	.010	27.860	28.936	28.640	27.526	28.944
Career Resilience	1.247	4	.870	.003	26.098	26.739	26.025	26.221	26.278
Sociability	2.894	4	.576	.003	29.058	29.715	29.407	28.684	31.111
Entrepreneurial Orientation	3.888	4	.421	.003	32.029	32.744	32.496	31.989	32.333
Proactivity	5.172	4	.270	.007	31.301	32.574	32.189	31.821	32.778
Emotional Literacy	2.520	4	.641	.003	30.898	31.517	31.548	31.641	32.389

Notes: ***$p \le 0.001$ **$p \le 0.01$ *$p \le 0.05$. ETA squared values of $\le .08$ is small in practical effect. ETA squared values of $\ge .09 \le .24$ is moderate in practical effect. ETA squared values of $\ge .25$ is large in practical effect.

Table 5.22 shows the age group > 50 scored significantly higher than the other age groups on success orientation for ODL (M = 41.67; p = .001; ETA squared = .019; small practical effect) and self-efficacy (M = 28.94; p = .03; ETA squared = .01; small practical effect). In terms of success orientation, the means for the age groups appeared to increase as the ages of the participants increased, with the age group 18 to 25 scoring significantly lower than the other age groups on success orientation (M = 36.501).

In terms of the variable engaged academic activity, the age group 18 to 25 scored significantly higher than the other age groups (M = 16.484, p = .000; ETA squared = .018; small practical effect).

The age group 41 to 50 scored significantly lower than the other age groups on self-efficacy (M = 27.53; p = .03; ETA squared = .01; small practical effect) while the age group > 50 scored significantly higher than the other age groups (M = 28.94; p = .03; ETA squared = .01; small practical effect).

The age group 18 to 25 scored significantly lower than the other age groups on success orientation for open distance learning (M = 26.50, p = .001; ETA squared = .019; small practical effect) while the age group 41 to 50 scored significantly lower than the other age groups on self-efficacy (M = 27.52, p = .033; ETA squared = .010; small practical effect).

The results provided supportive evidence for the research hypothesis Ha3: Gender, race and age groups differ significantly regarding their self-directedness and employability attributes. Table 5.23 provides an overview of the core differences observed between the gender, race and age groups in terms of the ALSDS and SEAS variables.

TABLE 5.23:   SIGNIFICANT DIFFERENCES BETWEEN THE GENDER, RACE AND AGE GROUPS IN TERMS OF ALSDS AND SEAS VARIABLES

Variable ALSDS SCALE	Gender		Race		Age	
	Highest	Lowest	Highest	Lowest	Highest	Lowest
Success orientation for ODL	Males	Females	Whites	Africans	> 50	18–25
Strategic utilisation of officially provided resources			Indians	Coloured		
Academically motivated behaviour	Males	Females				
Engaged academic activity			Indians	Africans	18–25	41–50
Proactivity	Males	Females				
Career resilience	Females	Males				
Cultural competence			Indians	Whites		
Self-efficacy					> 50	41–50
Sociability			Indians	Whites		

5.6   SUMMARY OF DECISIONS REGARDING THE RESEARCH HYPOTHESES

Table 5.24 presents an overview of the research hypotheses that were formulated for the purposes of this research study, the statistical procedures which were performed to test the research hypotheses and the final decisions reached.

TABLE 5.24:   SUMMARY OF DECISIONS REGARDING THE RESEARCH HYPOTHESES

Empirical research aim	Research hypotheses	Statistical procedure	Decision: Supportive evidence for Ha
Research aim 1: **To investigate the empirical relationship between the self-directedness and employability attributes of adult learners as manifested in a sample of respondents who** were **pursuing further studies via distance learning in the economic and management sciences field in South Africa.**	H01: There is no significant and positive relationship between the self-directedness and employability attributes of adult learners. Ha1: There is a significant and positive relationship between the self-directedness and employability attributes of adult learners.	Correlations	YES
Research aim 2: **To assess whether the self-directedness of adult learners significantly and positively predicts their employability attributes**	H02: The self-directedness of adult learners does not significantly and positively predict their employability attributes. Ha2: The self-directedness of adult learners significantly and positively predicts their employability attributes.	Structural equation modelling Multiple regression analysis	YES
Research aim 3: **Investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes**	H03: Gender, race and age groups do not differ significantly regarding their self-directedness and employability attributes. Ha3: Gender, race and age groups differ significantly regarding their self-directedness and employability attributes.	Tests for significant mean differences Mann-Whitney U test (gender) Kruskal-Wallis (race and gender)	YES

Notes: H0: Null research hypothesis. Ha: Alternative research hypothesis.

5.7   INTEGRATION AND DISCUSSION OF THE RESULTS

5.7.1   Descriptive statistics: Self-directedness and employability attributes profile

Overall, the results indicated a relatively high level of self-directedness on the part of the participants, with the exception of their engagement in academic activities. The findings suggest that the participants acknowledged the importance of using the official resources provided by the university as regards ensuring success in their studies. They also appeared to be confident about their ability to succeed in an ODL environment while they clearly felt motivated to achieve success. However, they appeared to be less confident about their ability to engage in purposeful academic actions (i.e. working consistently throughout the tuition period and planning their study and examination time) in order to ensure their success.

A lack of time spent studying may be an indication of the difficulties which adult learners with multiple life roles face when embarking on the tertiary education journey (Ross-Gordon, 2011; Klein-Collins, 2011; Knowles, 1984). Previous learning experiences, where learners were encouraged to be followers instead of active agents in their own learning may also influence this aspect of adult learner self-directedness (Beaten, Kyndt, Struyven, & Dochy, 2010; Klein-Collins, 2011; Knowles, 1984). In view of the fact learners learn quickly to adapt their learning behaviour to specific situations and also as learners would probably not become self-directed learners without some form of guidance or assistance, adult learners should be guided to spend time actively engaging with the study material (Beaten et al., 2010; Billet, 2010(a); Klein-Collins, 2011; Knowles, 1984). Knowles (1984) believed that self-directedness was a life journey, and that adult learners would progressively develop high levels of self-directedness as they progressed through their studies. It is, thus, incumbent on the learning facilitator to ensure that the learning environment nurtures the cultivation of self-directedness in adult learners (Billet, 2010(a)). It may also be possible that learners spend less time studying because they do not feel that what they should study is relevant to their working lives (Marchand & Gutierrez, 2011). Marchand and Guttierez (2011) found that learners displayed lower levels of negative emotions in courses where they were made aware of the relevance of the course content to their lives. However, this was not specifically measured in this research study.

The results further indicated a relatively strong employability attributes profile for the participants. Career self-management and self-efficacy appeared to be especially strong

attributes in comparison with the other employability attributes. These findings suggest that the participants acknowledge their own agentic contribution in ensuring career success. Career self-management refers to a tendency to manage one's career proactively by regularly collecting career-related information in order to enhance knowledge of both the self and the external environment, including the world of work. Self-efficacy refers to the individual's belief in his/her capabilities to cope with a wide range of challenging or stressful demands (Bezuidenhout, 2011). Employers nowadays require employees who can and do actively manage and control their own careers, with little help and/or input from the employer (Coetzee, 2012; Fugate, 2006; Potgieter & Coetzee, 2013; Sewell & Pool, 2010). The participants' strong levels of career self-management and self-efficacy suggest that they realised the importance of taking control of their own careers and that they felt confident about their ability to do so. Scholars in the field of adult learner self-directedness also emphasise that adult learners should not only be prepared to manage their careers actively, but they should also develop a knowledge of labour market conditions as well as an overall capacity to cope with the vagaries of life (Jackson, 2013; Lent, 2013).

Sociability appeared to be the participants' weakest attribute. Sociability refers to an openness both to establishing and maintaining social contacts and to utilising formal and informal networks to the advantage of one's career (Bezuidenhout, 2011). Sociability is seen as an aspect of the adult learner's social capital and employability and has been related to perceived career success (Bezuidenhout, 2011; Eby, Butts, & Lockwood, 2003). A lower confidence in one's sociability capabilities gives rise to concern in the light of modern-day work requirements that place a high value on team working and networking skills (Arnau-Sabates, Marzo, Jariot, & Sala-Roca, 2013; Hinchliffe & Jolly, 2011). In addition, lower levels of sociability may influence the adult learners' ability to cope successfully with the rigours of distance tertiary education. Alarcon, Edwards, and Menke (2011) found that social support was a strong predictor of the ability of tertiary learners to cope with the demands of tertiary education. The weak association between the participants' sociability and self-directedness may suggest that, as possibly the first generation to enrol for tertiary education, the learners may have poorly developed social capital and a concomitant reduced academic engagement, which influences self-directedness. Soria and Sebleton (2012) believe that first generation tertiary learners may have less well developed social capital and, thus, display lower levels of academic engagement. However, in view of the fact that this study did not specifically ascertain whether the participants were first generation tertiary learners, these results could not be confirmed.

Generally, the self-directedness profile and employability attributes profile suggest an inner drive and confidence in achieving success in terms of further studies and career progression. Poropat (2011) found a positive association between academic achievement and employee work performance. Internally driven and conscientious learners are, thus, highly likely to achieve high academic marks and will, consequently, exhibit high levels of employability than those learners who are mostly motivated by external motivators. Research indicates that a strong belief in the ability to succeed positively influences success in several spheres of life, not only as regards academic achievement (Soucy Chartier, Gaudreau, & Fecteau (2011). Low levels of engaged academic activity may impede the learner's academic achievement and, in conjunction with the lower levels of sociability, should receive attention in higher education, distance learning contexts.

5.7.2 The relationship between the self-directedness of adult learners and their employability attributes

Overall, the results showed that adult learner self-directedness related positively to the employability attributes of the participants in this study. Employability attributes were most strongly associated with the participants' success orientation for open distance learning but less strongly with their engagement in academic activities. De Vos, De Hauw, and Van der Heijden (2011) found a strong positive correlation between employability and career success. The findings of this study also provided evidence that the self-directedness of adult learners relates positively to the attributes that are associated with both their employability and their career accomplishments.

In this research study, the strongest associations were found between the success orientation for open distance learning of adult learners and the career self-management, sociability, emotional literacy and career resilience components of their employability attributes. Correlations, albeit less strong, were also found between the participants' academically motivated behaviour and the career self-management, sociability and proactivity components of their employability attributes. With the exception of career self-management and proactivity, none of the other employability attributes correlated strongly with strategic utilisation of officially provided resources and engaged academic activity. Career self-management and proactivity both correlated most strongly with strategic utilisation of officially provided resources. These findings are supported in the literature (Ashwin & Trigwell, 2012).

Success orientation for open distance learning may be described as the level of self-confidence of adult learners in their ability to be successful in the pursuit of their studies in an open distance learning environment (Bashrina, 2009; Luckett & Luckett, 2009; Moneta, Spada, & Rost, 2007). Success orientation for self-directed learning influences and nurtures the self-efficacy, resilience, persistence and innovative problem solving attitudes of adult learners as regards their academic activities. These attitudes are all seen as important aspects of the employability attributes of individuals (Bezuidenhout, 2011). Success orientation for open distance learning matches the autonomy, individual motivation, learner independence and personal self-sufficiency that are described in the different models of adult learner self-directedness (Christensen, 2004; Garrison, 1997; Silen & Uhlin, 2008).

Chan, Liu, Sung, Lin, Chen, and Cheng (2013) found a strong correlation between learners' self-efficacy and their confidence levels. In addition, learners with high confidence and self-efficacy levels found their courses of study highly relevant than those with lower self-efficacy. Research shows that there is a positive correlation between learner performance and self-efficacy, with those learners with well-developed self-efficacy obtaining higher marks in their courses than those with lower self-efficacy (Chang et al., 2013; Supi & Yaratan, 2012). Research by Phan (2012(a)) indicates that positive self-efficacy beliefs influence the willingness to take action. This study also found a positive link between the action-orientation, as discussed in Botha's (2013) model, and self-efficacy. In further research, Phan (2012(b)) found that self-efficacy, in conjunction with past learning experiences and academic success, mediate academic performance and achievement.

Lifelong learning and continued adjustment to changing circumstances are often perceived as crucial requirements of employability (De Vos, Hauw, & Van der Heijden, 2011; Lent, 2012). As a value, employability both influences and is influenced by self-efficacy beliefs, confidence and self-confidence (Clark & Zukas, 2013; Coetzee, 2012; Hinchliffe & Jolly, 2011; Knight & Yorke, 2003). According to Lent (2012), life-preparedness includes the cultivation and nurturing of attributes such as self-directedness, resilience, agility and anticipation of adverse events. The influence of success orientation for open distance learning and proactivity on self-directedness and employability is, therefore, supported by the literature.

As described by Subotzky and Prinsloo (2011), engaged academic activity relates to the individual, institutional and supra-institutional factors that influence learners' success in open distance learning. There may be many reasons for the lower levels of engaged academic activity found in this study, including poor academic achievement prior to tertiary education,

poorly thought out admission policies, lack of support for learners who are underprepared for tertiary education, lack of confidence in the language of instruction and also a lack of understanding and acceptance by the learners that there is a mutual responsibility for successful engagement in academic activity (Ramnarain & Molefe, 2012; Subotzky & Prinsloo, 2011). Lower levels of engaged academic activity may also be caused by the struggle of learners to create a balance between all the various demands on their time and psychological resources (Munro, 2011). In addition, adult learners may struggle to become fully immersed in studying content that they deem irrelevant to their own reality (Baron & Corbin, 2012). Soria and Stebleton (2012) found that the levels of learner engagement were significantly lower in those learners who were the first of their family to enrol for higher education. However, as this study did not specifically assess which of the participants were first-generation higher education learners, the results of Soria and Stebleton's (2012) study could not be confirmed but may be considered in future research.

In the light of the findings discussed above, namely, that self-efficacy beliefs strongly influence action orientation in learners, the less strong correlation between engaged academic activity and the employability attributes gives cause for thought. In view of the fact that this research showed that success orientation for open distance learning as a whole strongly influences learner action orientation and academic success, it is essential that distance tertiary institutions make every effort to address the lower levels of engaged academic activity as the learners may struggle to achieve success if the level of active engagement with the study material remains low. The amount of time which learners devote to their academic learning has been found to be positively associated with better academic performance (Jeffrey, 2009). According to the requirements of the South African Qualification Authority with regard to the registration of unit standards, modules, courses and/or qualifications as per the National Qualifications Framework, registration is guided by the concept of notional hours (Coetzee et al., 2013). In the open distance university that participated in the study, undergraduate courses are registered as a combination of 12 credit modules, which each require that the learner spend an average time of 120 notional hours in order to master the learning outcomes of the module. When learners spend less than the required 120 notional hours their likelihood of success will probably be adversely affected, as the modules are designed to utilise the required credits and, therefore, it is assumed that learners will spend the required 120 notional hours in mastering the learning material. Another complicating factor may be that learners do not allow for sufficient time to become fully engaged with the academic tasks. When there is too little time available to come to grips with the work, learning is less than optimal (Jeffrey, 2009).

The feelings of disjuncture experienced by learners in higher education may contribute to lower levels of academically motivated behaviour and engaged academic activity (Gibson, 2011). These feelings may be exacerbated by the open distance learning nature of the institution in this study (Subotzky & Prinsloo, 2011). Learners may feel distanced from their lecturers and peers, alienated from their families and may even feel dissociated from their chosen career choice (Gibson, 2011). These feelings may then influence the learners' ability to manage their individual learning journeys autonomously. In addition, the perceptions of their academic teachers of autonomous behaviour and their concomitant expectations of the learners in terms of autonomous behaviour may not correspond with the learners' perceptions of these issues and this also may create a disjuncture (Gibson, 2011). Academic expectations in terms of learner autonomy and self-directedness are communicated through the learning material and, therefore, it is essential that there be congruence between what is communicated orally and in the learning material. The learning environment, which is created primarily by the academic staff, impacts on both learner autonomy and self-directedness (Gibson, 2011).

One of the possible ways in which to address the lower level of academically motivated behaviour is to provide learners with the capacity to utilise execution objectives (Wieber, Odenthal, & Gollwitzer, 2010). Execution objectives pro-actively provide learners with strategies which they may implement when problems arise. For example, a learner may be prompted to think about what he/she would do if a postal strike prevented him/her from submitting an assignment on time (Wieber et al., 2010). In this way adult learners may be shown that they are able to manage their own behaviour in situations that are not within their control. Research has found that execution objectives have a positive effect on learner goal achievement (Wieber et al., 2010). Wieber and others (2010) also found that the perceived difficulty of a task and the learners' self-efficacy beliefs strongly improved learners' execution objectives where those learners had higher self-efficacy beliefs. On the other hand, low to moderately difficult tasks did not require specific execution goals as the learners' learning goals already endorsed execution (Marchand & Gutierrez, 2011). Phan (2011(a)) reiterated that self-efficacy positively influences academic achievement, and also that academic success positively influences self-efficacy. However, the ability of academic success to increase academic self-efficacy is mediated by time and it takes longer to improve lower academic self-efficacy through academically successful behaviours (Phan, 2011(a)).

Research has found that it is vital that learners are positively engrossed in both the academic work and social aspects of tertiary study if they are to be fully engaged in the learning journey (Richardson, 2011). The less strong correlations between the self-

directedness factor of engaged academic activity with the employability factor of sociability is, therefore, a concern, although it may be explained by a lack of integration of the distance learners in both the social and academic aspects of engagement. In the context of distance education, social assimilation involves the ability of the learner to integrate all the various demands on their time and cognitive involvement successfully (Richardson, 2011).

5.7.3 The self-directedness of adult learners as a predictor of their employability attributes

Overall, the results indicated self-directedness to be a significant and positive predictor of the participants' employability attributes and, especially, their career self-management. A causal relationship exists between self-efficacy and self-directed learning (Ponton, Derrick, Hall, Rhea, & Carr, 2005). Derrick, Ponton, and Carr (2005) also found that learners participating in online courses enjoyed higher levels of autonomy in learning than learners attending residential higher education institutions. Adult learners in part-time study face difficulties that influence their ability to devote time to their studies. These adult learners often have dependents and are in fulltime employment and, thus, they perceive themselves first as employees, who are also studying, and, second, as learners (Ross-Gordon, 2011). The demands on their time require that adult learners plan ahead for study time and, thus, time management skills are essential for successful studies in distance education (Klein-Collins, 2011). A lack of support from peers, friends and family and work commitments are two important underlying forces that influence the adult learners' capacity to devote time to their studies (Gibson, 2011; Merrill, 2010; Prinsloo & Subotzky, 2011). The lack of support may be exacerbated by a lack of confidence in their ability to succeed while the concomitant fear of academic failure may also prove to be a constraint for adult learner success (Klein-Collins, 2011). The inherent ability of the adult learner to remain positive and confident in his/her ability to succeed will, therefore, add a positive dimension to the dynamics of the learning environment.

5.7.3.1 General observations
Strategic utilisation of officially provided resources was shown to positively predict the participants' career self-management, self-efficacy, career resilience, sociability, entrepreneurial orientation, proactivity and emotional literacy. Strategic utilisation of officially provided resources describes how, when and for what purpose adult learners in open distance tertiary education use the official resources provided by the university in their learning journey (Fowler, 2008; Garrison, 2000; Gibson, 2011; Jones & Healing, 2010;). Strategic utilisation of officially provided resources delineates the learning environment

created by the university and the use which learners make of the learning environment. The learner's interactions with the learning environment indicate early self-managing behaviours such as setting learning goals, self-assessment and the use of feedback as a learning resource (Gibson, 2011; Jungert & Rosander, 2010; Silen & Uhlin, 2008).

Success orientation for open distance learning appeared to be the strongest contributor to increased levels in the participants' employability attributes. The results also indicated success orientation to open distance learning as the strongest contributor in explaining the self-directedness construct. These findings suggest that higher levels of success orientation for open distance learning will help to strengthen the attributes which learners require to develop and manage their employability and, especially, their career self-management. The results of this study support the findings of De Bruin and De Bruin (2011), Karakas and Manisaligil (2012) and Li, Lee, and Kember (2000) that the self-directedness of adult learners entails the four facets of personal self-sufficiency, self-administration, adult learner control and autonomous learning. Personal self-sufficiency is also known as individual self-efficacy.

Engaged academic activity strongly and positively predicted career self-management only. Engaged academic activity refers to the intentional, purposeful learning actions of adult learners that directly influences both the improvement of their knowledge and skill in a specific subject area and the successful completion of their academic studies (Bashrina; 2009; Jones & Healing, 2010; Luckett & Luckett, 2009; Lombardi et al., 2011; Van den Bogaard, 2012). Engaged academic activity illustrates the adult learners' direct and active involvement in and with the learning material focusing specifically on the learners' construction and implementation of a learning strategy. Engaged academic activity describes the intentional, purposeful learning actions in which that students engage and that are directly related to furthering their studies or improving their knowledge and skill (Bashrina; 2009, Jones & Healing, 2010; Luckett & Luckett, 2009; Lombardi, Seburn, & Conley, 2011; Van den Bogaard, 2012). Engaged academic activity illuminates the way in which the students involve themselves with the learning material focusing specifically on the students' construction of a learning strategy and its subsequent implementation.

Academically motivated behaviour positively predicted the participants' employability attributes, with the exception of their emotional literacy. Academically motivated behaviour describes the self-motivated behaviours of adult learners in a distance learning, tertiary environment. This element of self-directedness indicates whether the adult learners are sufficiently resilient and adaptable to find unique solutions to academically-based problems

(Garrison, 2001; Silen & Uhlin, 2008, Vansteenkiste et al., 2006; Zimmerman, 2002). Academically motivated behaviour is the visible behaviour of the student that make apparent the beliefs and attitudes of the element of success orientation for open distance learning because it highlights specific behaviours that demonstrate the presence of certain of the psychological components of self-directedness. Thus, academically motivated behaviour involves the learners putting their self-confidence and autonomy beliefs into action by pro-actively and creatively dealing with the challenges that may arise during the learning journey and persisting with the learning journey even when difficulties arise. These challenges and difficulties may include personal problems, work-related problems, problems with mastering the work and administrative problems related to learning.

5.7.3.2 *Predictors of career self-management*

Strategic utilisation of officially provided resources, success orientation for open distance learning, engaged academic activity and academically motivated behaviour all strongly predicted career self-management. Career self-management refers to the capacity to ensure continued employability through pro-active, agentic career planning and management and also lifelong learning (Coetzee, 2012; Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). Bridgstock (2010) found a strong positive correlation between a highly developed graduate career self-management capacity and career success after graduation. The same study also found a positive link between intrinsic motivation, career success and career management ability. The strong association found between strategic utilisation of officially provided resources and career self-management suggests that learners who effectively use the strategic resources provided by the university will also be strong in the career self-management factor of employability. The strong association between success orientation for open distance learning and career self-management suggests that adult learners who are confident in their ability to achieve success in their academic ventures will also possess well-developed career self-management capacity. On the other hand, the strong associations between academically motivated behaviour and career self-management suggests that the adult learners in open distance tertiary education who posses high levels of academically motivated behaviour will also posses high levels of career self-management. The findings of this study support the findings of Bridgstock (2010) that a strong positive correlation exists between a well-developed graduate career self-management capacity and career success after graduation. Raabe, Frese, and Beer (2007) found that career self-management strongly influenced subsequent career satisfaction. The present findings also support the research findings of Jungert and Rosander (2010) that a strong positive association exists between adult learners' autonomy in the learning environment and their academic motivation.

5.7.3.3 Predictors of cultural competence

Success orientation for open distance learning as well as academically motivated behaviour strongly and positively predicted cultural competence. Cultural competence describes an individual's capacity to function successfully in culturally diverse milieus. Cultural competence includes the capacity to accept and become familiar with the customs, values and beliefs of other cultures, self-confident participation in inter-cultural exchanges and embracing the notion of cultivating culturally diverse associations (Coetzee, 2012; Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). The strong predictive capacity of success orientation for open distance learning as well as that of academically motivated behaviour for cultural competence suggests that those adult learners with both a well-developed success orientation for open distance learning and a well-developed academically motivated behaviour will also possess high levels of cultural competence and may, subsequently, be highly comfortable in culturally diverse environments. The findings of this study support the findings of Chuprina and Durr (2006) who found a significant association between self-directedness and cross-cultural adaptability. The latter involves emotional resilience, flexibility and personal autonomy. It must be noted that this study of Chuprina and Durr (2006) was conducted specifically with citizens of the United States working abroad and no evidence exists as to whether the findings may be applicable to other cultures. Potgieter and Coetzee (2013) found a significant and positive correlation between employability attributes and personality preferences. The research by Potgieter and Coetzee (2013) found that sociable, culturally competent personality types who have cultivated a well-developed interpersonal dimension specifically relish the notion of intercultural interaction. On the other hand, those personality types that prefer to follow a deliberately planned and well-thought-out life and career plan may have a less developed capacity for intercultural competence (Potgieter & Coetzee, 2013). Lloyd and Hartel (2010) suggest that individual intercultural competence may influence individual job satisfaction, trust and affective commitment to the job as well as the individual's assessment of team effectiveness. The results of this study may have been influenced by race, as significant differences as regards cultural competence were observed between the four race groups who participated in the study.

5.7.3.4 Predictors of self-efficacy

Strategic use of officially provided resources, success orientation for open distance learning and academically motivated behaviour all strongly and positively predicted self-efficacy. Self-efficacy describes the individual's perception of the difficulty level involved in the pursuit of career-oriented actions, his/her belief in the personal ability to implement the required actions successfully and the persistence of his/her beliefs in adverse situations. Self-efficacy is also associated with the personal belief of individuals in their ability to set goals

successfully and to attain these goals in specific circumstances (Potgieter et al., 2012). Individual autonomy and self-management, goal-directed behaviour, perseverance, pro-active pursuit of learning opportunities and implementing creative solutions to problems comprise the construct of self-efficacy (Coetzee, 2012). The strong association found between strategic utilisation of officially provided resources and self-efficacy suggests that learners who effectively use the strategic resources provided by the university will also display highly developed self-efficacy. The strong association between success orientation for open distance learning and self-efficacy suggests that adult learners who are confident in their ability to be successful in open distance tertiary education will possess high levels of self-efficacy. This result may have been influenced by gender as this study found significant differences between the gender groups in terms of their self-efficacy and self-directedness, with the females obtaining high scores for self-efficacy while the males obtained high scores for success orientation to open distance learning. The strong association between academically motivated behaviour and self-efficacy suggests that adult learners in open distance, tertiary education who display high levels of academically motivated behaviour will also possess high levels of self-efficacy. Schreuder and Coetzee found that high levels of employability positively influence the self-efficacy beliefs of individuals (Schreuder & Coetzee, 2011).

Positive, well-developed self-efficacy is positively associated with job satisfaction and successful careers (Choi, Park, Yang, Lee, Lee, & Lee, 2011; Guan, Deng, Sun, Wang, Cai, Ye, et al., 2013; Tews, Michel, & Noe, 2011). Regh and Gundlach (2011) found that military and government officials from the United States who routinely accepted assignments abroad and who possessed high levels of specific self-efficacy (self-efficacy related to their jobs) demonstrated high levels of cultural competence, indicating that individuals with well-developed self-efficacy also tend to fare better in culturally diverse situations. Choi et al. (2011) found a strong positive association between career self-efficacy and career outcome expectations, while Guan et al. (2013) found that career adaptability, career concern and career control strongly predicted the job search self-efficacy of and, eventually, the outcomes of job searching Chinese college graduates. Hirschi, Lee, Porfeli, and Vodracek (2013) found that self-efficacy, together with self-managed career goals, positively affect career engagement, while Potgieter et al. (2012) found a significantly positive relationship between general self-esteem and employability attributes. One may, therefore, conclude that self-efficacy positively influences work success.

In terms of learning, Tews et al. (2011) found a positive relationship between the perceived ability to learn and solve problems successfully and subsequent job performance. High

levels of self-efficacy in adult learners may, therefore, lead to better job performance as employees. Well-developed self-efficacy is associated with job satisfaction and continued career success (Choi et al., 2011; Guan et al., 2013). A positive relationship exists between academic self-efficacy and self-management of the learning situation (Jungert & Rosander, 2010). Thus, it would appear that the findings of this study support the findings of Jungert and Rosander (2010). Marchand and Guttierez (2011) found that learners' positive beliefs in their ability to succeed influence their learning behaviours and, thus, the findings of this study also seem to support the findings of Marchand and Gutterrez (2011).

5.7.3.5 *Predictors of career resilience*

Strategic utilisation of officially provided resources, success orientation for open distance learning and academically motivated behaviour all strongly and positively predicted career resilience. Career resilience describes the capacity of an individual to embrace unexpected changes in the global and organisational context. Individuals with highly developed career resilience are sufficiently flexible to enjoy exposure to new work processes, technologies, and colleagues while they are also able to adopt and maintain new work behaviours successfully (Potgieter et al., 2012). The strong association found between strategic utilisation of officially provided resources and career resilience suggests that learners who effectively use the strategic resources provided by the university will also display high levels of career resilience. In addition, the strong association between success orientation for open distance learning and career resilience suggests that adult learners who possess high levels of confidence in their ability to achieve success in distance tertiary education will be highly resilient in their careers. The strong association between academically motivated behaviour and career resilience suggests that adult learners in distance tertiary education who display high levels of academically motivated behaviour will also display high levels of career resilience. It is possible that gender may have influenced the results as significant differences were found between the two gender groups, with female participants displaying high levels of career resilience than the male participants. Well-developed career resilience is positively associated with the effective use of a range of job-seeking strategies as well as with high levels of self-efficacy (Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010; Restubog, Florentino & Garcia, 2010). The adult learners' realisation of the importance of effectively utilising the officially provided resources in their academic ventures appears to mirror this finding. According to Lent (2012), career resilience is akin to preparing for life as it is not always possible to foresee all the changes and issues that may impact on continued employment. Restubog et al. (2010) found that high self-efficacy leads to greater career persistence but that the relationship is mediated by improved career decidedness. Koen et al. (2010) found that career resilience positively predicted the willingness and capacity of job

seekers to utilise varied job-seeking strategies to secure employment after a period of unemployment.

5.7.3.6   Predictors of sociability

Strategic utilisation of officially provided resources, success orientation for open distance learning and academically motivated behaviour all positively and strongly predicted sociability. Sociability is the capacity to create and nurture formal and informal social networks and utilise them effectively for career evolution (Coetzee, 2012; Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). The strong association found between strategic utilisation of officially provided resources and sociability suggests that learners who effectively use the strategic resources provided by the university will also display a highly well developed capacity for sociability while the strong association between success orientation for open distance learning and sociability suggests that adult learners with a highly developed confidence in their ability to be successful in distance tertiary education may also be highly socially connected and more able to utilise social connections to advance in their careers. In addition, the strong association between academically motivated behaviour and sociability suggests that adult learners who display high levels of academically motivated behaviour will also display high levels of sociability. A highly developed sociability capacity is positively correlated with positive academic achievement and high levels of career decision self-efficacy (Choi et al., 2011; Gore & Rogers, 2010). It would appear that the results of this study support the results of Gore and Rogers (2010) who found that learners who have the capacity to build relationships easily with others tend to attain high academic achievements. However, in view of the fact that this study found significant differences between the Indian and White participants, race may have influenced the results. Choi et al. (2011) found that support from peers significantly and positively predicted career decision self-efficacy. Sociability as a construct of employability may, thus, be a success indicator in terms of career decision making.

5.7.3.7   Predictors of entrepreneurial orientation

Strategic utilisation of officially provided resources, success orientation for open distance learning and academically motivated behaviour all positively and strongly predicted entrepreneurial orientation. An entrepreneurial orientation entails valuing risks as opportunities, a tolerance for ambiguity as well as a preference for innovation, creativity and autonomous action in career management and advancement. Entrepreneurial individuals acknowledge the value of creating something of significance (Potgieter et al., 2012). The strong association found between strategic utilisation of officially provided resources and entrepreneurial orientation suggests that learners who effectively use the strategic resources

provided by the university will also display high levels of entrepreneurial orientation. The strong association between success orientation for open distance learning and entrepreneurial orientation suggests that those learners in open distance learning who are confident in their ability to be successful in their studies will display a high propensity for entrepreneurial orientation. The strong correlation between academically motivated behaviour and entrepreneurial orientation suggests that adult learners in open distance learning who display well developed academically motivated behaviour will also possess high levels of entrepreneurial orientation. Entrepreneurial orientation is strongly and positively associated with the organisational capacity to grow and utilise new knowledge effectively (Wales, Parida,& Patel, 2013). A study by Obshonka, Silberstein, Scmitt-Rodermund, and Steutzer (2011) confirmed earlier research findings that entrepreneurial capacity in adolescents predicts successful entrepreneurial ventures in their later working life as adults. Thus, the cultivation and nurturing of an entrepreneurial orientation in adult learners may lead to entrepreneurial behaviour when they are established employees.

5.7.3.8 *Predictors of proactivity*

Strategic utilisation of officially provided resources, success orientation for open distance learning and academically motivated behaviour all strongly and positively predicted proactivity. Proactivity describes the ability of employees to adopt an agentic, active role in their employment career (Coetzee, 2012; Bezuidenhout & Coetzee, 2010; Potgieter et al., 2012). The strong association found between strategic utilisation of officially provided resources and proactivity suggests that learners who effectively use the strategic resources provided by the university will also display high levels of proactivity while the strong association between success orientation for open distance learning and proactivity suggests that adult learners in distance tertiary education who are confident in their success as learners will possess high levels of proactivity. In addition, the strong association between academically motivated behaviour and proactivity suggests that adult learners in distance tertiary education who display high levels of academically motivated behaviour will also be highly proactive in their employability. There is a strong positive relationship between proactivity and extrinsic career success (Converse et al., 2011; Maurer & Chapman, 2013). In a study on Lebanese entrepreneurs who lived and worked abroad, Zgheib and Kowatley (2011) found that that proactivity was a strong predictor of internal locus of control and, thus, also self-directedness and a desire for proactive behaviour. Thus, in this regard, it would seem that the findings of this study support the findings of Zgheib and Kowatley (2011).

5.7.3.9   Predictors of emotional literacy

Strategic utilisation of officially provided resources, success orientation for open distance learning and academically motivated behaviour all strongly and positively predicted emotional literacy. Emotional literacy is the individual capacity to be conscious of the emotions of the self and others, and to adjust own emotions and adapt and successfully cope with the emotions of others in both work and social settings (Potgieter et al., 2012). The strong association found between strategic utilisation of officially provided resources and emotional literacy suggests that learners who effectively use the strategic resources provided by the university will also display high levels of emotional literacy while the strong association between success orientation for open distance learning and emotional literacy suggests that adult learners in open distance learning will possess high levels of emotional literacy when they also possess high levels of success orientation to open distance learning. In addition, the strong, positive relationship found between academically motivated behaviour and emotional literacy suggests that students who display behaviours associated with academic motivation will also be highly emotionally literate as regards their employability. Potgieter et al. (2012) found that individuals with well-developed emotional intelligence may exhibit highly well-developed employability attributes while those with a strongly developed self-esteem will also display their employability attributes highly confidently. Converse, Pathak, DePaul-Haddock, Gotlib, and Merbedone (2012) found a strong positive relationship between self-control and positive career outcomes, while Coetzee and Harry (2013) found that emotional intelligence was an important career competence in predicting individual career agility, inter alia, because of enhanced persistence in the face of challenges. With regard to the self-awareness component of emotional literacy, Verbruggen and Sels (2008) found that self-awareness may be cultivated by career counselling and self-awareness, in turn, may improve career self-directedness.

5.7.4   Significant differences between gender, race and age groups regarding their adult learner self-directedness and employability attributes

Overall, the results showed that the gender, race and age groups differed significantly regarding their self-directedness and employability attributes. However, the results of the present study contradict the findings of Rothwell, Jewell, and Hardie (2009) that learners' perceived employability was not influenced by either their cultural background or their gender.

5.7.4.1 Gender

This study found that the male participants had significantly high levels of success orientation to open distance learning than the females while the female participants showed high levels of academically motivated behaviour as compared to the males. Reio and Davis (2005) found no significant relationship between gender and self-directed learning readiness. Thus, the findings of this study appear to contradict the results of Reio and Davis (2005), given the significant differences between males and females as regards the variables of success orientation for open distance learning and academically motivated behaviour. However, the study conducted by Reio and Davis (2005) focused mainly on learners in North American universities. Huang (2013) found that adult female learners possessed lower academic self-efficacy than men, but Huang's (2013) study included mostly samples from North America and Europe. Mackay and Parkinson (2008) found in a South African study that the self-efficacy of female learners taking electricity as a subject in a technology teacher programme was lower than that of their male peers, but that the women learners were culturally not encouraged to participate in technology- or science-oriented subjects, while their male counterparts were actively encouraged to participate in such subjects and also culturally expected to perform well.

According to Chang and others (2013), female learners possess meaningfully lower perceived levels of internet self-efficacy than male learners; while, conversely, the female learners received significantly high marks in their final assessments than the male learners. This finding appears to be supported by the reported differences in the means of males and females with regard to success orientation for open distance learning and academically motivated behaviour in this study. Vieira and Grantham (2011) found that female learners set more difficult goals than men, although male learners would be more willing than female learners to take on challenging tasks because of their well-developed self-efficacy beliefs. The finding that males scored significantly higher on the variable of success orientation for open distance learning, while scoring lower on academically motivated behaviour seems to support the finding of Vieira and Grantham. Interestingly, the findings of this study do not support the findings of Tison, Bateman, Steven, and Culver (2011) who found significant differences in the academic engagement of male and female learners, with the academic engagement of females being significantly than that of the males. In a study conducted by Enache, Sallan, Simo, and Fernadez (2011) women's career success was found to be positively related to their self-directedness. Thus, in this regard, it would appear that the findings of this study do not support current reported research.

In terms of employability attributes, males and females differed significantly regarding their level of entrepreneurial orientation, proactivity and career resilience with the males scoring significantly higher than the females on the entrepreneurial orientation and proactivity variables, while the females scored significantly higher than the males on the career resilience variable. Moreau and Leathwood (2006) and Morrison (2013) indicated that the paucity of research findings on the possible influence of biographical variables on the construct of employability influences the existing perspective of the construct and, thus, more research focusing on biographical variables should be encouraged. In addition, the paucity of research created challenges in the interpretation of the findings of this study, although the findings do make a contribution to the existing body of knowledge on employability and the possible influence of socio-biographical variables on the employability of individuals.

5.7.4.2   Race

It emerged from the study that the race groups differed significantly in terms of their self-directedness. The white participants scored significantly higher than the African participants on success orientation for open distance learning, while the Indian participants scored the highest of all the race groups on strategic utilisation of traditionally provided resources and engaged academic activity. The coloured participants scored significantly lower than the other race groups on strategic utilisation of traditionally provided resources while the African participants scored the lowest on engaged academic activity. These findings appear to be in agreement with the research findings of Reio and Davis (2005) who found a statistically significant association between culture and readiness for self-directed learning. However, the study by Reio and Davis (2005) was conducted using participants from mainly North American backgrounds. The findings also seem to be in agreement with the findings of Dekker and Fisher (2008) who conducted a study on various cultural groups and their respective attitudes to performance approach or performance avoidance goals. The study found that performance approach goals were higher in those cultures in which individuals were likely to perceive themselves as more embedded in a group, while performance approach goals were lower in those societies in which individuals saw themselves as highly self-directing (Dekker and Fisher, 2008).

The race groups also differed significantly as regards their cultural competence and sociability with the Indian participants scoring the highest of all the race groups on both constructs and the white participants scoring the lowest on both. However, various socio-biographical variables such as age, ethnicity, gender, social class, mode of study, type of higher education institution and subject studied may influence employability (Messum et al.,

2011; Tomlinson, 2007). Unfortunately the paucity of relevant research created challenges in establishing whether any relationships do exist between socio-biographical elements such as age, race and gender and employability (Moreau & Leathwood, 2006, Morrison, 2012). Thus, this study definitely makes a contribution in the South African context, indicating that race relates significantly to the cultural competence and sociability of individuals and that race groups differ significantly regarding these attributes.

Marambe and others (2012) found significant differences in the self-directedness of Sri Lankan and Dutch learners, with the Sri Lankan learners scoring significantly higher in self-directedness than the Dutch learners. Thus, this study does not appear to support the findings of Marambe, Vermunt and Boshuixen (2012).

5.7.4.3 Age

The age groups differed significantly regarding their success orientation for open distance learning with the participants older than 50 years obtaining the highest mean score and the participants in the 18 to 25 age group obtaining the lowest mean score. This finding supports the finding of Reio and Davis (2005) that age relates significantly to readiness for self-directed learning, and that readiness for self-directed learning increases significantly as age increases.

The participants in the age group 18 to 25 obtained the highest mean score on engaged academic activity while the participants in the age group 41 to 50 obtained the lowest mean score. This may possibly be explained by the multi-faceted life roles and responsibilities of the learners in the age group 41 to 50 as opposed to the learners in the age group 18 to 25, but it may also be explained by previous learning experiences which may have influenced the participants' learning behaviours. The age group 18 to 25 who find themselves in their early career stage may be highly interested in and motivated for further study in order to advance their careers than the other age groups (Ferreira & Coetzee, 2010). Another reason for this finding may be the perception of older adults that they are not suitable candidates for tertiary education in terms of the economic impact studying may have on them, as well as in terms of the social risk they may feel they are taking when enrolling in tertiary education (Boeren, 2011; Howard & Davies, 2012).

The older than 50 years age group obtained the highest mean score on self-efficacy while the age group 41 to 50 obtaining the lowest mean score. In this study, success orientation for open distance learning strongly predicted self-efficacy with the older than 50 age group obtaining the highest scores in both constructs. It would, thus, appear that both self-efficacy

and self-directedness increase with age. In view of the fact that self-efficacy is a strong component of self-directedness this finding is not surprising. The fact that the older participants were stronger in both self-efficacy and self-directedness indicates that the older workers should not be neglected as regards the provision of development opportunities, irrespective of whether these opportunities are provided via the education, training or development route. Older employees will probably be highly successful than their younger counterparts in their educational endeavours. Tones, Pillay, and Kelly (2010) found that older employees in workplaces compensated for the discrimination with regard to the availability of education, training and development opportunities offered to them with their internal resources such as self-efficacy and agency beliefs. Once again the paucity of research on the way in which biographical variables may influence employability created difficulties in integrating the results of this study with existing research.

5.8   SUMMARY

This chapter discussed the descriptive, correlational and inferential statistics relevant to the study in order to integrate the findings of the literature study with the findings of the empirical research study which had been conducted.

Thus, the empirical research aims of the study were achieved. Chapter 6 contains the conclusions, limitations and recommendations regarding this research, thereby concluding the empirical study.

CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter discusses the conclusions, limitations and recommendations regarding this research project, thereby concluding the empirical study.

6.1   CONCLUSIONS

The following conclusions were drawn regarding both the literature review and the empirical research study.

6.1.1   Conclusions regarding the literature review

In terms of the literature review, the study had four aims. The first aim was to conceptualise adult learner self-directedness in an ODL context as discussed in the literature. This aim was realised in chapter 2. The second aim was to conceptualise the construct of employability attributes as discussed in the literature while the third aim was to determine the theoretical relationship between the self-directedness of adult learners and their employability attributes. The fourth aim was to identify the implications of the theoretical relationship between adult learner self-directedness and employability attributes for organisational training and development (T&D) and for ODL educator teaching and learning practices. Aims two to four were realised in chapter 2 and chapter 3.

The section that follows outlines the conclusions which were drawn with regard to each of the four research aims.

6.1.1.1 Conclusions regarding the first research aim: to conceptualise adult learner self-directedness in an ODL context as discussed in the literature.

According to Tough (cited in Merriam, 2001; Botha, 2012), the notion of self-directed learning is a normal, inherent characteristic that is expressed in a person's daily life and is autonomous both in terms of the teacher or trainer and the scholastic background of the individual. Billet (2010(b)), on the other hand, indicated that it would be substantially impossible for any self-directed learning to transpire in the absence of all assistance from resources other than the adult learner. Thus, self-directed adult learners depend on external resources in their learning endeavours. Adult learners deliberately locate their learning in a

collective perspective. Nevertheless, adult learners may accomplish significant learning through autonomous efforts that are deliberately situated within informal learning systems and it is for that reason that the learning takes place in a social context (Billet, 2010(b); Brookfield, 1985; Ellinger, 2004).

Self-directed learning is underpinned by humanism and centres on individual development which is driven by learner autonomy with the lecturer or trainer as the facilitator (De Bruin & De Bruin, 2011; Merriam, 1993). The theoretical approach to self-directedness revolves around the development of pro-active behaviour with the purpose of cultivating autonomous, self-directed learning. Transformational learning is closely related to self-directedness in learning. Transformational learning emphasises the development of self-knowledge through the process of critical introspection in order to promote autonomy in learning (meta-cognitive capacity). According to Billet (2010(a)), the definitive purpose of self-directedness in learning is both the advancement of human insight in terms of personal freedom and also the advancement of society as a whole.

Self-directedness in adult learners is closely related to their life roles and includes planning and managing their diverse roles, including their learning and career evolution (Coetzee et al., 2011; Cretchley & Castle, 2001; Brookfield, 1985; Knowles, 1984). According to Knowles (1984), self-directedness develops along a continuum and is, therefore, not a static state. In this regard self-directedness is closely related to individual flexibility in relation to the contemporary, turbulent environment (Botha, 2012; Cretchley & Castle, 2001; Knowles, 1984).

Knowles (in Botha, 2012) represents self-directedness in adult learners as the capacity of learners to manage their personal learning journeys autonomously, either with or without the assistance of others. Self-directedness is a natural result in the development of the individual into adulthood and is secured by the deep, inner desire of adult learners to be perceived and treated by their peers as people who are capable of self-direction (Ellinger, 2004; Ross-Gordon, 2011). Consequently, learner autonomy or personal responsibility may be regarded as the essence of self-directedness (Bruin & De Bruin, 2011; Ellinger, 2004). Fully developed, self-directed adult learners are critical thinkers who utilise their meta-cognitive ability actively in any learning situation and, consequently, they manage to navigate the road of learning successfully (Carr, 2000; De Bruin & De Bruin, 2011). According to Brookfield (1985), self-directed adult learners possess the capacity to perceive themselves as independent from others and are confidently aware of their individual power to be both active and pro-active agents in their lives (Botha, 2012). In this regard self-directed adult learners

have the responsibility to foster a changing world view that is inclined to analysis and transformation so as to develop fully their individual knowledge of their personal environment and of the distinctive situation of each human being (Billet, 2010(a); Taylor, 2005).

Candy (1990) links up with the transformative learning view by defining self-directedness as an independently originated and motivated pursuit of personal progression and autonomy (De Bruin & De Bruin, 2011). In this regard self-directedness comprises the following four facets, namely, personal self-sufficiency, self-administration, adult learner control and autonomous learning (De Bruin & De Bruin, 2011; Karakas & Manisaligil, 2012). The cultivation of self-directedness is a life-long process and can consequently be enhanced by every learning encounter. An adult learner's cultivation of self-directedness is informed by both the teaching and learning process and the learner's familiarity with learning in specific environments (Karakas & Manisaligil, 2012). Candy's approach to self-directedness may be more compatible with and applicable to the notion of 'open learning'.

Self-directedness in learning is specified by the learners' preparedness for and willingness to be autonomous in all aspects of their learning, including formulating personal learning goals, utilising learning activities, searching for information and using information to cultivate knowledge (Ainoda, Onishi, & Yashuda, 2005; Botha, 2012; Christensen, 2004; De Bruin & De Bruin, 2011). It is possible that human beings progressively evolve into self-directed beings throughout their lifespan and, therefore, self-directedness should not be viewed as a fixed situation but rather as an evolutionary process that enable individuals to become accustomed to increasingly unpredictable surroundings (Botha, 2012; Cretchley & Castle, 2001; Knowles, 1984).

It is clear from the above that the notion of self-directedness in adult learning is nebulous (Botha, 2012; Garrison, 1997). The one common component of learner self-directedness which is found in the literature is that it apparently applies primarily to adult learners although all adult learners do not necessarily share the same level of or skill in self-directedness (Silen & Uhlin, 2008). A learner who possesses higher levels of self-directedness will, however, display higher levels of autonomy in the learning situation (Botha, 2012).

In the context of open distance learning, adult learner self-directedness is viewed as the association between the learners' control of and active participation in the university's created learning context which is represented by officially provided resources, on the one hand, and, on the other, the learners' study-related self-beliefs as well as the manifestation of the adult learner self-beliefs via a motivational orientation, creative, innovative study and

study-related, problem-solving behaviours (Ainoda et al., 2005; Billet, 2010(b), Brookfield, 1985; Candy, 1991; Coetzee et al., 2011; Christensen, 2004; Ellinger, 2004; Garrison, 1997; Karakas & Manisaligil, 2012; Knowles, 1984; Merriam, 1993, Ross-Gordon, 2011, Taylor, 2005).

Adult learner self-directedness in open distance learning environments consists of four facets which are independent but interrelated. These facets are:

1   *Strategic utilisation of officially provided resources.* This construct describes when and how adults as active learners make use of the official study resources provided by the university (Fowler, 2008; Garrison, 2000; Gibson, 2011; Jones & Healing, 2010). This facet describes the learning environment shaped by the university and the way in which adult learners choose to work actively within it. The resources provided by the university provide an indication of the control the university exercises over the learning environment, while the way in which the learners choose to participate in the learning environment provides an indication of their personal study behaviours (Gibson, 2011; Jungert & Rosander, 2010; Silen & Uhlin, 2008).

2   *Engaged academic activity.* This construct describes the goal-directed study behaviours of adult learners that focus on study progress through the development of relevant knowledge and skills (Bashrina, 2009, Jones & Healing, 2010; Luckett & Luckett, 2009; Lombardi, Seburn, & Conley, 2011; Van den Bogaard, 2012). Engaged academic activity involves on the learners' study behaviours, including the development and implementation of a personal learning strategy. This component is, therefore. the contra point of the facet of strategic utilisation of traditionally provided resources (Garrison, 1997; Long, 1989; Lombardi et al., 2011; Silen & Uhlin, 2008). Engaged academic activity describes the way in which adult learners delineate and autonomously manage the learning environment (Garrison, 1997; Lombardi et al., 2011; Silen & Uhlin, 2008; Van den Bogaard, 2012; Vansteenkiste et al., 2006).

3   *Success orientation for open distance learning.* This construct describes the inherent characteristics of adult learners as regards their feelings of confidence in their ability to attain their goals successfully in a tertiary distance education environment (Bashrina, 2009; Luckett & Luckett, 2009; Moneta, Spada, & Rost, 2007). Thus, success orientation for open distance learning describes the personal orientation in terms of self-efficacy, resilience, persistence and innovative problem in academic activities (Christensen, 2004; Garrison, 1997; Silen & Uhlin, 2008).

4   *Academically motivated behaviour*. This construct describes the behaviours of adult learners that may provide an indication of their motivational orientation, resilience and problem-solving behaviours in relation to their academic activities (Henderson-King & Smith, 2006; Silen & Uhlin, 2008; Vansteenkiste et al., 2006; Smith, Zsidisin & Adams, 2005). Thus, the construct assesses the individual behaviours which are expected of learners in an open distance learning environment and who are psychologically self-directed, intrinsically motivated, personally self-sufficient and possess a strong desire for personal development (Garrison, 2001; Silen & Uhlin, 2008, Vansteenkiste et al., 2006; Zimmerman, 2002). Academically motivated behaviour is the behavioural contra point for the element of success orientation for open distance learning.

Open distance learning encompasses the principles of Knowles's (1984, cited in Botha, 2012:87) concept of andragogy. According to andragogy, adult learners should be able to access tertiary education opportunities as the desire for improving their education arises. Tertiary institutions may facilitate the cultivation and nurturing of adult learner self-directedness and, in this way, prepare graduates for autonomous, lifelong learning *as employable employees* (Candy, cited in Dynan et al., 2008; Donald, 2002).

Online courses specifically may enable the creation of the ideal environment for the cultivation and nurturing of self-directedness in adult learners because electronic delivery methods such as e-learning, online or web-based learning, social media, social networking and digital devices may create learning milieus that are accessible, collaborative, and easily adjusted to the needs of individual learners (Karakas & Manisaligil, 2012). Thus, online learning environments create opportunities for adult learners to take control of and manage their personal learning experience in a self-directed manner, while at the same time allowing adult learners to cultivate and nurture their meta-cognitive and knowledge construction ability. The ability to be a self-directed learner who confidently participates in knowledge construction is one of the desired outcomes of the National Qualification Framework level descriptors for levels five to ten (Coetzee et al., 2013). It is, therefore, incumbent on tertiary institutions to actively cultivate and nurture both self-directedness and the meta-cognitive capacity in graduates.

Firstly, tertiary institutions may cultivate and nurture self-directed learning in adult learners by ensuring alignment between the level of self-directedness required in the learning environment and the adult learners' own level of self-directedness (Hiemstra, 2011). The adult learners should be exposed to increased expectations and opportunities for self-

directedness in learning by gradually replacing mainly lecturer directed offerings with mainly self-directed offerings over the course of a programme. In addition, learning activities should cultivate not only subject-specific knowledge but should concurrently nurture adult learner self-directedness (Hiemstra, 2011). In the open distance learning context, adult learner self-directedness may be facilitated by the following lecturer actions (Hiemstra, 2011):

- searching for and pointing adult learners to learning resources that will assist with the meeting of personal learning needs and the achievement of course outcomes
- finding and disseminating information from a variety of knowledge sources
- looking for and utilising a variety of learning activities that will draw and retain the interest of adult learners and, thus, motivate the full participation of the adult learners
- providing positive feedback that will create and cultivate positive learning encounters for adult learners
- facilitating and guiding adult learner self-assessment and reflective practices
- setting free and fostering innovative, critical thinking

The predisposition for self-directedness in learning is governed by both external circumstances and internal preferences. Continued learning is internally motivated and managed. Ii is, thus, essential that adult learners be allowed to manage their own learning journey individually by creating opportunities for active involvement in the development and execution of learning activities. In tertiary open distance learning where set curricula have to be followed and specific learning goals have to be achieved, the intrinsic worth or significance of specific learning goals and activities should be explained to the learners so that they be aligned to personally meaningful goals. Alternatively, a variety of learning activities may be provided that will lead to the mastery of a learning goal or a set of goals. Learners may then be allowed to choose those learning activities that are more individually varied. Another approach is to provide a number of alternative learning goals and activities so that learners may choose those that are more personally favoured or significant to them (Garrison, 1997; Kasworm, 2011). It is important to state clearly the personal value of achieving a specific set of educational learning goals or to create learning activities that allow learners to discover the personal value of achieving a set of learning goals. In addition, the learning capacities of adult learners should be built up so that they are empowered to formulate their own learning goals and assess their personal advancement towards goal achievement (Silen & Uhlin, 2008).

6.1.1.2   Conclusions regarding the second research aim: to conceptualise the construct of employability attributes as discussed in the literature

Employers require employable workers. Most graduates of higher education fully realise the importance of actively managing their own employability (Dabic, 2008; Griesel & Parker, 2007; Poropat, 2011; Tomlinson, 2007). Thus, securing a job is not only about acquiring a degree and achieving good marks, but it is also about constructing and pursuing a personal career entry and management strategy. One of the roles of higher education in the post-modern society is to cultivate and nurture graduate employability (Coetzee, 2012; Poropat, 2011).

Employability refers to a set of inherent capabilities that predispose individuals to specific behaviours that include the intellectual alteration of personal goals and behaviours (Lent, 2012; Potgieter et al., 2012). Employability attributes are related to different personalities, but include qualities such as self-esteem, emotional intelligence, intrinsic motivation, self-efficacy and autonomy (Coetzee, 2012, Lent, 2012). In terms of career management and advancement, an employee's employability attributes, such as career resilience, career self-management, pro-activity and self-efficacy, may have a positive impact on job performance, career outcomes and organisational performance (Lent, 2012).

Self-esteem describes a person's self-perception as regards being a real, honourable and acceptable person in both the personal and the societal context. Emotional intelligence revolves around the capacity to utilise individual frames of mind to monitor perceptions and behaviour effectively. Individuals with a positive self-esteem have a tendency to exhibit advanced emotional intelligence (Potgieter et al., 2012). Intrinsic motivation relates to personal feelings of inspiration that are not informed by apparent external rewards (Van Emmerik, Schreurs, De Cuyper, Jawahar, & Peeters, 2012). Intrinsically motivated individuals tend to become involved in an activity for the sake of the activity itself and not for the apparent reward being offered. There is a strong, positive relationship between intrinsic motivation and the desire for self-development and continued learning (Van Emmerik et al, 2012).

Career self-management refers to the capacity of an employee to willingly become an active agent in his/her own career evolution. Pro-active career behaviour is closely linked to career self-management (Akkermans, et al., 2013). Career self-management encompasses career insight (cognitive component), career planning and an awareness of career opportunities (behavioural component) (Akkermans et al., 2013). In relation to employability these

competencies are clustered together as 'career competencies'. Career competencies include 'knowing why' (reflective competence), 'knowing whom' (communicative competence) and 'knowing how' (behavioural competence) (Akkermans et al., 2013). Inherent in the construct of career self-management is the suggestion of individually managed development (Enache, Sallan, Simo, & Fernandez, 2011). The notion of a boundaryless career embraces the belief that sustained employability should not focus on employment in one organisation only. Employees who cultivate a boundaryless career are said to possess a boundaryless mindset, which is also associated with self-directedness and career self-management (Enache et al., 2011).

As a personal attribute self-efficacy revolves around a personal belief in the individual ability to contend with difficult situations successfully and, thus, career self-efficacy is about the personal confidence of employees in their ability to be successfully involved in career-oriented activities and to cope with difficulties associated with their careers (Grier-Reed & Ganuza, 2012; Koivistu, Vinokur, & Vuori, 2011). There is a positive relationship between career self-efficacy and career persistence (Koivistu et al., 2011). Resilience refers to the personal ability to grow and recover from disruptions in life, for example, unforeseen hardship or adversity and even to view these as affirmative experiences. Resilience has been shown to significantly affect the ability of employees to weather life's storms effectively (Bimrose & Hearne, 2012; Youssef & Luthans, 2007). Career resilience refers to the individual ability to adapt to disruptive career changes. Career adaptability goes hand-in-hand with career resilience, and focuses on a pro-active approach to negotiating career changes effectively (Bimrose & Hearne, 2012; McMahon, Watson, & Bimrose, 2012). Self-perceived employability kindles positive career self-management beliefs and career self-efficacy (Potgieter et al., 2012).

Life preparedness is positively associated with attributes such as autonomy, flexibility, dexterity and proactivity (Lent, 2012). Career adaptability involves the ability to cope with both the expected and the unexpected in one's career in order to establish an optimal fit between the individual's capabilities and the fluctuating working environment (Lent, 2012). Preparedness underpins career planning and career amendments. Potgieter et al. (2012) found a significant relationship between employability attributes and the personality preferences as indicated by the Myers-Briggs Type Indicator.

For the purpose of this research study, employability was defined as a psycho-social construct that refers to the ability of employees to regulate and change the beliefs, feelings and actions germane to their career evolution in order to build an agile organisation with the

capacity to survive and, even to thrive, in the uncertainties of the global economy of the new millennium (Coetzee, 2012).

Graduates view employability in terms of their insight into the labour market and related changes. In addition, their employability is improved and enabled by their emerging identities as employees, their acknowledgment of their agency in their own career evolution and their personal disposition as it is associated with work and career (Tomlinson, 2007; Tymon, 2011; Wilton, 2008). The way in which graduates position themselves in the labour market and how they implement diverse strategies to move into employment is affected by both their grasp of the labour job market as a whole and by their unspoken awareness of particular job markets. The personal dispositions of graduates also influence their comprehension of and insight into the various job and career opportunities available to them (Dabic, 2008; Tymon, 2011; Tomlinson, 2007). In addition, graduates relate their individual employability to their investment in personal development through their educational endeavours and sustained learning (Berntson et al., 2006; Tymon, 2011; Wittekind, Raeder & Grote, 2010).

Organisations view employability as a joint venture between the employer and the employee (Clarke, 2009; Van Emmerik, 2012). Training and development interventions may facilitate and nurture the development of both employee competence and employee adaptability. However, the employees are responsible for identifying those initiatives that are personally relevant in terms of their current and future working lives. Self-directed employees who want to realise their personal goals and ambitions will adopt a boundaryless or protean career management (Billet, 2010b; Clarke, 2009; Van Emmerik, 2012). As a result (or as a prerequisite) the preferred career pattern displayed by employees will reflect their employability behaviours (Billet, 2010b; Clarke, 2009; Van Emmerik, 2012). The individual implementation of a particular career management strategy suggests self-awareness, proactivity in the planning and management of career evolution and a lifelong learning orientation. All these characteristics are associated with self-directedness.

6.1.1.3 *Conclusions regarding the third research aim: to determine the theoretical relationship between the self-directedness of adult learners and employability attributes*

The integration of all the research findings of this study suggests that employers in the new millennium require employees who are able to be innovative, manage their own career progression autonomously, identify and solve work-related problems creatively and work well in groups composed of various cultural, race, age and gender groups as well as be active

agents in their lifelong learning endeavours and also both resilient and agile. The requirement to continue learning and growing autonomously as an individual employee has created a situation in which an increasing number of adult learners are participating in open distance education. This increased participation of adults in formal learning opportunities has resulted in the need to explore the way in which adults learn best and to identify the approaches to be adopted by tertiary institutions which offer tertiary programmes to these adult learners. Thus, in the light of employer requirements for increased autonomy in learning and career management, and the increased participation of adults in tertiary institutions, an operational definition was developed for adult learner self-directedness, using Botha's (2013) model of adult learner self-directedness in open distance learning environment as a point of departure.

Employees who possess the attribute of self-directedness in learning will be lifelong learners who are capable of guiding their own learning and development opportunities while, at the same time, manifesting an enhanced capacity for critical thinking and inquiry, problem identification and solution finding, the sharing and dissemination of knowledge and organisational citizenship behaviours. In addition, self-directedness in employees generates positive operational returns such as improved work performance and reduced spending on training and development (Guglielmino & Guglielmoni, 2011; Karakas & Manisaligil, 2012). Accordingly, workplace training and development interventions should comprise the ideal milieu for employees to practise self-directed learning. It is, thus, essential that workplace training and development opportunities be more adaptable, specifically adjusted to individual learning needs, future-driven, contextual, pro-active and continuous (Karakas & Manisaligil, 2012). Such an approach will enable business organisations to cultivate and nurture self-directed learning by becoming learning organisations. In a learning organisation the culture and structures effortlessly support continued employee learning through a tolerance for mistakes, encouragement of risk-taking and support for innovative ideas (Karakas & Manisaligil, 2012).

The integration of the literature study research findings suggest that, although the current research literature has not established a definite relationship between the self-directedness of adult learners and their employability attributes, some of the employability attributes may be influenced by adult learner self-directedness.

6.1.1.4 Conclusions regarding the fourth research aim: to identify the implications of the theoretical relationship between adult learner self-directedness and employability attributes for organisational training and development (T&D) and ODL educator teaching and learning practices

The current emphasis on employability implies that tertiary institutions and workplace learning professionals should rethink both their programme content and their teaching or training methods (Boden & Nedeva, 2010). The use of learning goals or outcomes that require the measurement of learner performance instead of the memorisation of factual knowledge may be a future option for these institutions if they are to prove their effective and efficient utilisation of public funds (Boden & Nedeva, 2010). In the current, turbulent, unpredictable working environment in which full-time employment for life is no longer guaranteed, it is essential that all graduates develop generic skills which have been carefully cultivated and nurtured during their tertiary education and which are transferable to the world of work (Ehiyazaryan & Barraclough, 2009; Morrison, 2013).

Work involves individual involvement in the execution of goal-directed activities while understanding lifelong learning and creativity requires the capacity to appreciate that learning transpires from involvement in significant work events (Billet, 2010b; Van Emmerik, 2012). The immersion of individual employees in important work activities also suggests the capacity of the incumbent to significantly adjust work activities when required. Workplace learning, both as learning in the workplace and from colleagues, is an indispensable element of continued employment (Tones, Pillay, & Kelly, 2011). Workplace learning may be expedited in various situations, either by providing programmes which are facilitated by training providers, or by fostering a work atmosphere that stimulates, honours and enhances pertinent learning experiences (Billet, 2010b; Candy, 2000). The value of informal workplace learning through the medium of observing colleagues, exposure to various environments and being allowed to make mistakes that are then appropriately corrected should not be ignored (Billet, 2010b; Candy, 2000). Workplaces may be important locations for learning in the quest of lifelong learning which is an important component of both self-directedness and employability (Billet, 2010b; Botha, 2012; Reio & Wiswell, 2000).

Employees are required to understand both their job responsibilities and also the organisational setting of their jobs. In addition, employees should appreciate and be able to function successfully within the organisational culture. A thorough understanding of the organisation's philosophy, values and norms is built through both formal and informal workplace learning and development (Billet, 2010b; Slev & Pop, 2012). Employees who are

involved in interesting and inspiring work think of themselves as being more employable (Berntson et al., 2008; Van Emmerik, 2012).

The purpose of training and development within the organisation is the provision of learning and development opportunities that broaden and deepen employee competencies for optimal performance of both current and future job tasks. In this way the organisation hopes to ensure a continued competitive advantage by increasing the value which employees add to the organisation and also by developing employee adaptability (Coetzee et al., 2013; Du Toit et al., 2010).

Training and development include both formal and informal learning workplace learning opportunities. The focus is of such training and development is increased capacity and performance on the part of employees with its concomitant benefit for the organisation (Cameron & Harrison, 2012; Coetzee et al., 2013). Training and development is associated with employability in organisations because of its focus on goal-driven employee training and development in order to enrich organisational dexterity. Specific dispositional traits in employees, such as openness (being willing and eager to accept changes and new ideas), are positively associated with employability and may be used to predict the success of training interventions (Van Dam, 2004). Workplace learning may be depicted as an addition to education. However, because an organisation exists as a consequence of the people employed there and because organisational change processes are initiated (Cameron & Harrison, 2012; Engstrom & Kerosuo, 2007) and organisational modifications originated and promoted by the organisation's employees, it is possible to say that workplace learning and organisational learning are complementary sides of the same whole (Cameron & Harrison, 2012; Engstrom & Kerosuo, 2007).

The definitive goal of adult learner self-directedness may be to cultivate and nurture the capacity of adult learners for autonomous behaviour. Thus, a pro-active approach, which empowers learners to autonomously manage and be responsible for their own learning, is advocated. The culmination of autonomous behaviour is the development of the critical meta-cognitive capacity which nurtures the growth of self-knowledge in order to realise the agentic capacity of each individual to take charge of his/her own life experiences and change his/her personal reality (Billet, 2010(b); Ellinger, 2004; Merriam, 2001).

6.1.2 Conclusions regarding the empirical research

The general empirical aim of the study was to carry out the following four principal tasks:

(1) To investigate the empirical relationship between the self-directedness and employability attributes of adult learners as manifested in a sample of respondents who were pursuing distance learning, further studies in the economic and management sciences field in South Africa. This aim was realised in chapter 5 by empirically testing research hypothesis Ha1 (There is a significant and positive relationship between the self-directedness and employability attributes of adult learners).

(2) To assess whether the self-directedness of adult learners significantly and positively predicts their employability attributes. This was achieved in chapter 5 by empirically testing research hypothesis Ha2 (The self-directedness of adult learners significantly and positively predicts their employability attributes).

(3) To investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes. This was achieved in chapter 5 by empirically testing research hypothesis Ha3 (Gender, race and age groups differ significantly regarding their self-directedness and employability attributes).

(4) To formulate recommendations regarding organisational training and development (T&D) and ODL educator teaching and learning practices and to indicate further research that may evolve from the findings of this study. This will be achieved in this chapter.

The statistical results provided supportive evidence for the research hypotheses. The findings in terms of each of the research aims that merit discussion will be presented as conclusions in the following section.

6.1.2.1 Conclusions regarding research aim 1: to investigate the empirical relationship between the self-directedness and employability attributes of adult learners as manifested in a sample of respondents who are pursuing distance learning, further studies in the economic and management sciences field in South Africa

The findings led to the following conclusions:

- The self-directedness of adult learners relates significantly and positively to their employability attributes and, especially, to their career self-management and proactivity.
- Employability attributes were most strongly related to the participants' success orientation for open distance learning and less strongly with their engagement in academic activities.

- Generally, it may be concluded from the observed relationship between the variables that the development of the self-directedness of adult learners will help to strengthen their capacity to demonstrate the attributes they require to sustain and develop their employability.

In considering the participants' self-directedness and employability attributes profile in the light of the observed relationship between the variables, the following additional conclusions may be drawn:

- Overall, the self-directedness profile and employability attributes profile indicate that the participants possessed both an intrinsic drive and a confidence in their ability to achieve success in their academic endeavours and career growth.

- In addition, the results showed that the participants possessed a relatively strong employability attributes profile. The employability attributes that appeared to be the strongest were career self-management and self-efficacy. The results confirmed that adult learners who possess well-developed self-directedness also possess higher levels of self-efficacy. Thus, the conclusion may be drawn that adult learners in open distance, tertiary education acknowledge that they should be active agents in their own career aspirations so as to ensure success. The participants' well-developed career self-management and self-efficacy attributes led to the conclusion that they recognised the importance of autonomously managing their careers and that they were confident about their ability in this regard.

- Sociability appeared to be the weakest employability attribute of the adult learners. Sociability is positively associated with career success and may be described as a facet of the social capital of adult learners. It is recommended that ODL tertiary institutions pay attention to the aspect of sociability in terms of employability.

- The relatively lower levels of engaged academic activity may inhibit the learner's academic success and, interpreted together with the lower levels of sociability, should receive attention in open distance tertiary environments.

6.1.2 1   Conclusions regarding research aim 2: To assess whether the self-directedness of adult learners significantly and positively predicts their employability attributes

The findings led to the following conclusions:

- The self-directedness of adult learners significantly and positively predicts their employability attributes.

- Adult learners who possess a highly developed success orientation for open distance learning will possess the skills required to cultivate strong employability attributes.

- Success orientation for open distance learning is important for the understanding the self-directedness and employability attributes of adult learners and, especially, their career self-management capacities. It may be concluded that higher levels of success orientation for open distance learning will not only help to strengthen the general self-directedness of adult learners but also the attributes they need in order to develop and manage their employability and, in particular, their career self-management.

- Adult learners who possess high levels of self-directedness (actively utilise officially provided tuition resources, engage in academic activities, feel confident as regards their succeeding in an ODL environment and are academically motivated) will also definitely have developed the ability to manage their career progression and success autonomously.

- Developing the success orientation for open distance learning of adult learners will also assist in enhancing their overall self-directedness, cultural competence, self-efficacy, career resilience, sociability, entrepreneurial orientation, proactivity and emotional literacy.

- Adult learners who are confident in their ability to succeed in open distance, tertiary education and who are academically motivated to succeed in their studies are likely to feel comfortable in culturally diverse situations.

- Adult learners who possess high levels of self-directedness (actively utilise officially provided tuition resources, feel confident as regards succeeding in an ODL environment and are academically motivated) possess high levels of self-efficacy.

- Adult learners who possess high levels of confidence in their ability to achieve success in distance tertiary education, actively utilise officially provided tuition resources and are academically motivated will be more resilient in their careers.

- Adult learners who possess high levels of self-directedness (actively utilise officially provided tuition resources, feel confident in succeeding in an ODL environment and are academically motivated) may also be more socially connected and more able to utilise social connections in order to advance in their careers.

- Adult learners who are confident in their ability to be successful in their studies and who are academically motivated to succeed will be more likely to display entrepreneurial behaviour regarding their careers.

- Adult learners who are confident in their success as learners, actively utilise the officially provided resources in their studies and who are academically motivated will be proactive in their career management activities.

- Adult learners will be more emotionally literate in their career management when they are confident as regards their ability to succeed in their studies and actively utilise the officially provided resources for their studies.

6.1.2.2   Conclusions regarding research aim 3: To investigate whether gender, race and age groups differ significantly regarding their self-directedness and employability attributes

The findings led to the following conclusions:

The gender, race and age groups differed significantly regarding their self-directedness and employability attributes.

Conclusions in terms of gender
- The male adult learners felt more confident in their ability to succeed in their academic ventures than their female counterparts, while the females appeared to be better at translating their feelings of confidence and motivation into actions through their study behaviours as compared to the males.
- The male participants were more inclined to display entrepreneurial orientation and proactivity attributes than the female participants, while the female participants were more inclined to display career resilience than the males.
- The female participants appeared to deal more effectively with adverse career situations than the male participants, while the male participants were more likely to act proactively and display entrepreneurial behaviour in their career management than the females.

Conclusions in terms of race
- As compared to the other race groups the white adult learners appeared to display higher levels of self-directedness because success orientation for open distance learning is such a significant contributor to the self-directedness construct and the white participants, specifically male white participants scored significantly higher on success orientation for open distance learning.
- The Indian participants were possibly more inclined to value the efficient and effective use of the available resources and hard work as prerequisites for academic and the concomitant career success than the other race groups.
- Of all the race groups the coloured participants placed the least value on using the resources provided by the university to ensure academic success, while the African

participants appear not to recognise the value of sustained hard work during the tuition period to ensure success.

- It appeared that, for the Indian participants, both cultural competence and sociability were highly regarded as part of their overall employability attributes.

Conclusions in terms of age

- The participants older than 50 tended to be more confident about their ability to succeed in an open distance learning environment than their younger counterparts. It may, thus, be concluded that self-directedness increases with age and that older adult learners will be more self-directed than the younger learners.

- The older participants appeared to be stronger in both self-efficacy and self-directedness as compared to their younger counterparts. It may, thus, be concluded that the older workers should not be neglected in the provision of development opportunities, irrespective of whether these opportunities are provided through the medium of education, training or development as older employees will probably be more successful in their educational endeavours than younger employees.

- Of all the age groups the younger participants appeared to spend more time on sustained study while the age group of 41 to 50 spent the least time actively studying. These findings may be informed by various factors, such as career stage, previous learning experiences or a multiplicity of life roles making diverse demands on the learners' time.

6.1.3   Conclusions about the contribution made to the field of organisational training and development (T&D) and ODL educator teaching and learning practices

This research study may be regarded as unique in that it provides insight into both the self-directedness of adult learners in an open distance learning environment and also into the relationship between their self-directedness and employability attributes. Furthermore, the research makes a valuable new contribution in terms of the influence of biographical variables, such as gender, race and age, on adult learner self-directedness and employability attributes.

The results suggest that the self-directedness of adult learners who take advantage of open distance learning opportunities may be improved by a focus on cultivating and nurturing a success orientation to open distance learning, specifically in the case of female learners

while the male learners may benefit from developing more enhanced academic motivation skills.

Botha's (in Coetzee & Botha, 2013) model of self-directed learning in open distance learning settings may be of value in creating learning environments in which adult learners may cultivate and nurture their self-directedness in order to enhance their employability attributes in preparation for successful career entry and management. The model focuses on the behaviour and/or environmental as well as the affective or psychological processes involved in self-directed distance learning and, as such, may offer a guideline to academic staff and human resource development professionals who are involved in facilitating learning opportunities for adult learners.

The implications of self-directedness for adult learner guidance and support are anchored in the central assumption that self-directedness, as both an inclination or attitude and behaviour, may be acquired, particularly in view of the fact that the appropriate tuition strategy and learning environment are created and maintained by the facilitator.

6.2   LIMITATIONS

The limitations of the literature review and empirical study are discussed in this section.

6.2.1   Limitations of the literature review

The following limitations apply to the literature review:

The exploratory research on adult learner self-directedness and employability attributes was limited to the research literature on both constructs which is currently available. Although there are several resources which deal with the construct of employability, the paucity of current published research on the construct of adult learner self-directedness proved to be a limiting factor. Further limitations were also experienced with regard to the influence of biographical variables, such as gender, race and age, on both constructs.

The study focused on both the variables as defined in Botha's (2013) model of adult learner self-directedness in open distance learning settings and on the variables defined in the Employabilty Attributes Framework described by Bezuidenhout and Coetzee (2010).

6.2.2   Limitations of the empirical study

Although the findings of this study shed some light on adult learner self-directedness and employability attributes in a South African environment, it is not possible to generalise the

results to include the wider population because of the demographic confines of the study. The sample was limited to adult learners enrolled for distance tertiary education and, thus, in view of the small percentage of South African residents who embark on further education in the country, the results cannot be generalised to the general public in South Africa. The results may also not be generalisable to learners at residential tertiary institutions and fields of study other than the economic and management sciences.

The sample was limited to a group of predominantly black female adult learners in the economic and management sciences field and, thus, the findings cannot be generalised to other occupational, gender and race contexts. In addition, although standardised for the South African context, a cultural limitation may exist because the ALSDS and SEAS were standardised according to data collected in a Western society.

In view of the cross-sectional nature of the research design, the associations between the variables have been interpreted in an exploratory manner rather than their being established. In addition, the potential risk of common method bias should be considered because of the self-report methodology that was used. Nevertheless, acceptable internal consistency reliabilities were reported for the two measuring instruments.

6.3   RECOMMENDATIONS

Recommendations for both organisational training and development (T&D) and for ODL educator teaching and learning practices and further research in the field are outlined below. These recommendations are based on the research findings, conclusions and limitations of the study.

6.3.1   Recommendations regarding training and development

Based on the research findings and the relationships found, the following strategies for enhancing the self-directedness of adult learners are recommended:

(1)   It is recommended that Botha's (2013) model for adult learner self-directedness in open distance learning settings be utilised as a framework for cultivating and nurturing self-directedness in adult learners who are taking advantage of any learning opportunity. This model provides a holistic approach to creating environments in which adult learners may be successful in their learning and, thus, develop the positive, self-affirming thought processes that will nurture their capacity to become fully self-directed human beings. This model not only focuses on affective traits or abilities, but also on specific behaviours associated with

adult learner self-directedness. Consequently, the model provides a useful point of departure for the facilitator as regards guiding the development of adult learner self-directedness. The findings of the study showed that a strong sense of self-directedness significantly and positively predicts higher levels of the attributes which adult learners require in order to develop and manage their employability.

(2)   The developers of learning programmes in both tertiary institutions and private human resource development organisations or departments may apply the principles of the model in the development of learning programmes as a whole and learning materials and practice opportunities in particular. When the principles of cultivating and nurturing adult learner self-directedness are incorporated into the learning material and practice opportunities, a learning environment is created in which adult learners are able to safely acquire the necessary competencies to become fully self-directed human beings who are capable of developing and managing their employability.

(3)   Adult learner self-directedness predicts employability attributes and, therefore, the development of self-directedness in adult learners will positively influence their employability and, thus, their capacity and willingness to manage their own career progression actively.

(4)   Significant differences between the gender, race and age groups in terms of their success orientation for open distance learning and academically motivated behaviour suggest that various learner support strategies may be useful.

The male adult learners and learners in the age group 41 to 50 may benefit from interventions that enable them to set implementation objectives that will assist them in applying the necessary academically motivated and academic engagement behaviours to enhance their confidence in their ability to be successful adult learners in the ODL environment. Execution objectives pro-actively provide learners with strategies which they may to implement when problems arise. For example, a learner may be prompted to think about what he/ she would do if a postal strike prevented him or her from submitting an assignment on time (Wieber, Odenthal, & Gollwitzer, 2010). In this way adult learners may be shown that they are able to manage their own behaviour in situations that are not within their control. Research has found that execution objectives have a positive effect on learner goal achievement (Wieber et al., 2010). Wieber and others. (2010) also found that both the perceived difficulty of a task and the learners' self-efficacy beliefs significantly improved learners execution objectives where those learners possessed high self-efficacy beliefs,

while low to moderately difficult tasks did not require specific execution goals as the learners' learning goals would already have endorsed execution (Marchand & Gutierrez, 2011).

Female learners, African learners and younger learners may benefit from being exposed to increasingly difficult learning tasks that stretch them in terms of ability but also allow them to experience success. Such learning tasks will also develop the self-efficacy of female adult learners and eventually cultivate success beliefs in the ODL milieu. Phan (2011(b)) reiterated that self-efficacy positively influences academic achievement, and also that academic success positively influences self-efficacy. However, the ability of academic success to increase academic self-efficacy is mediated by time and it takes longer to improve lower academic self-efficacy through academically successful behaviours (Phan, 2011(b)). When adult learners are able to enjoy real success after successfully dealing with a specific problem a robust self-efficacy may be cultivated. Thus, the requirement is that adult learners should be confronted with actual, difficult obstacles that require sustained exertion and tenacity in they are to be solved (Van Dinther et al., 2011).

6.3.2   Recommendations regarding adult learning

(1)   It is recommended that the developers of learning programme and learning materials use Botha's (in Coetzee & Botha, 2013) model to incorporate the relevant principles of self-directedness into learning and practice opportunities. This, in turn, will cultivate and nurture in adult learners the capacity for self-directedness that will enable them to become fully self-directed human beings.

(2)   Learner support activities may benefit from the inclusion of the principles of Botha's (in Coetzee & Botha, 2013) model in order to facilitate the cultivation and nurturing of adult learner self-directedness as regards all learning opportunities.

(3)   As explained above a specific focus on execution objectives may contribute to the cultivation of more robust academic engagement in, specifically, the African male adult learners and also in the age group 41 to 50, while the female adult learners and younger adult learners may benefit from succeeding in increasingly difficult, but achievable, learning activities. Success nurtures feelings of self-efficacy while self-efficacy positively influences success orientation for open distance learning.

(4)   With regard to sociability, the white participants may benefit from participating in collaborative learning experiences that allow them to cultivate their sociability. Peer evaluation and collaborative learning tasks may be particularly helpful in this regard.

Collaborative learning in the ODL context is strongly supported by integrated communication technology such as social media, web-based learning activities and e-learning. In view of the fact that the self-directedness factors of success orientation for open distance learning, academically motivated behaviour and strategic utilisation of officially provided resources are all strongly and positively associated with the sociability factor of the employability attributes, similar learner support strategies that are recommended for cultivating both success orientation for open distance learning and academically motivated behaviour may be utilised in the cultivation of the sociability of adult learners.

(5)   The cultivation of success orientation in open distance learning, academic engagement, academically motivated behaviour and engaged academic activity may be facilitated by creating both an environment and learning experiences that actively expose adult learners to difficult, but achievable, learning activities. According to Billet (2010(a)), success in difficult, but achievable, learning activities facilitates the cultivation and nurturing of learner self-efficacy which, in its turn, informs the cultivation and nurturing of the strategic utilisation of officially provided resources, engaged academic activity and eventually academically motivated behaviour. The cultivation and nurturing of adult learner self-directedness will strongly and positively facilitate the cultivation and nurturing the attributes necessary for employability in adult learners.

In order to facilitate the essential cultivation of learner self-efficacy, the learning content and activities developed for adult learners should be firmly anchored in their own life experiences. Learners who are able to identify with the learning content and activities through their own life experiences will more readily become engaged in that content and learning. The anchoring of learning content and activities in life experiences also clearly indicates to adult learners where and how the learning may be applied in their own lives, thereby addressing one of the principles of Knowles (1984), namely, that adult learners need to know why they should learn a specific skills or knowledge component.

Once the adult learners have been exposed to the knowledge or skills content, they should be given ample opportunity to apply their new knowledge and skills in specific learning activities that have been created for the purpose of practising the new knowledge and skills. Practice opportunities should be structured in such a way that the adult learners are able to achieve success without feeling that the practice activity was too easy while these practice opportunities should also be sufficiently abundant to facilitate the assimilation of the knowledge and skills in the long-term memory scaffolds. Effective feedback is vital in this stage. The feedback should provide the adult learners with a clear indication of their

performance and what they could do to improve their performance, if necessary. In order to facilitate further the assimilation and subsequent retrieval of the new knowledge and skill from the long-term memory, the adult learners should be encouraged and guided through a reflective process during which they may reflect on what they have learnt in terms of knowledge, skills and attitudes, thus enhancing competence. The cultivation of the reflective ability is essential for the nurturing of the ability to apply new competence to unfamiliar and unrelated problems and environments. The process is illustrated in Figure 6.1.

6.3.3   Recommendations for further research

The recommendations for further research focus on human resource development professional and academics who are involved in the tuition of adult learners. Based on the conclusions and limitations discussed above, recommendations for further research in both the field of organisational training and development (T&D) and in ODL educator teaching and learning practices are outlined below.

Future research should focus on obtaining a sample from adults participating in workplace learning opportunities, as well as from learners at residential universities. In addition, a balanced spread of representation to determine any racial differences that may exist should be included in the sample for a further study. There is also a need for more research on learner self-directedness within the South African context – both in tertiary institutions and in workplace learning environments. Further research on the degree to which adult learner self-directedness predicts employability attributes should also be conducted. In view of the finding that it would appear that the success orientation for open distance learning of learners increases as age increase, a comparative study of different age groups in various learning environments may produce valuable results.

FIGURE 6.1:   CULTIVATE ADULT LEARNER SELF-EFFICACY IN ORDER TO CULTIVATE SELF-DIRECTEDNESS AND EMPLOYABILITY ATTRIBUTES
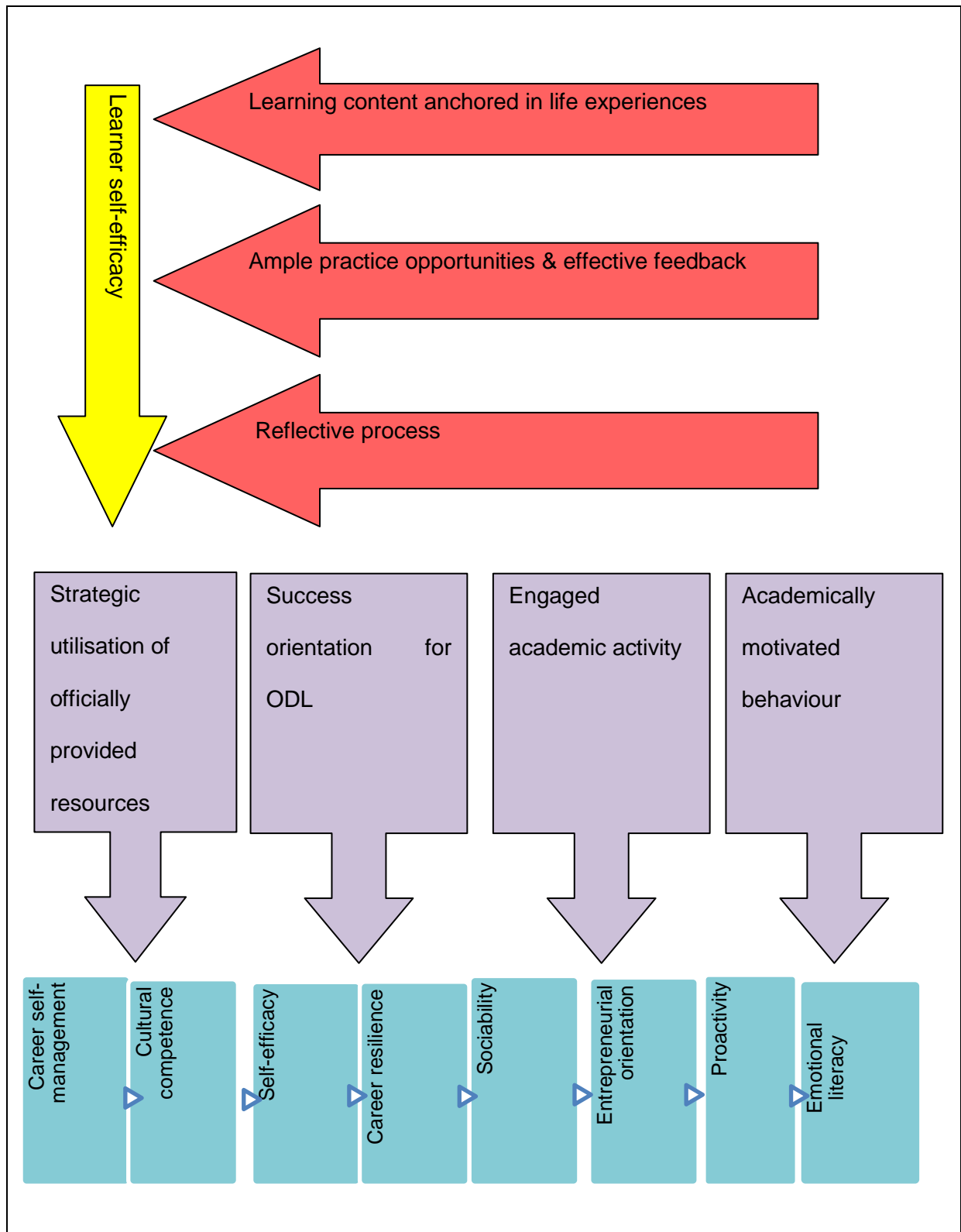
Future research and longitudinal studies should also investigate the way in which the self-directedness and employability attributes of adult learners change over time as their career self-concept and self-efficacy evolves.

6.4   INTEGRATION OF THE RESEARCH

This research study investigated the relationship between adult learner self-directedness and employability attributes. The research results established that the self-directedness of adult learner positively predicts employability attributes and also that gender, race and age may influence both constructs in varied ways. Learners from different gender, age and race groups also differed significantly regarding their self-directedness and employability attributes. It is, thus, essential that these aspects be considered in learning design.

Employers these days prefer employees who not only take responsibility for their own learning but also for ensuring their own employability (Coetzee, 2012; Potgieter & Coetzee, 2013; Sewell & Pool, 2010). Tertiary institutions are under increasing pressure to produce graduates who are not only knowledgeable in a specific field, but who are also capable of taking responsibility for their own continued development and employment (Boden & Nedeva, 2010; Coetzee, 2012; Eddy & Garza Mitchell, 2012). This, in turn, requires a high level of autonomy in learners, specifically self-efficacy, goal-directedness and resilience, as discussed in this research study (Billet, 2010(b); Karakas & Manisaligil, 2012, Taylor, 2005).

The literature review hinted at, but did not confirm, that a relationship exists between the variables of adult learner self-directedness and employability attributes. However, the empirical research of the current study proved the existence of a strong, positive relationship between adult learner' self-directedness and their employability attributes. The fast-changing world of work in the twenty-first century requires employees who are able to active agents in their own development and career progress. It is, thus, incumbent on both tertiary institutions and human resource development professionals to cultivate and nurture the capacity for autonomous learning and development in every participant in any learning opportunity (Karakas & Manisaligil, 2012). The findings of this study indicated that, when adult learners and employees have cultivated the capacity for autonomous growth and development, they will be able and willing to be active agents in their own growth and progress.

The empirical study explored the statistical relationship between adult learner self-directedness and employability attributes. The results provided evidence of a statistically

significant relationship between adult learner self-directedness and employability attributes, and also between gender, race and age groups and the two constructs.

In conclusion, the findings from this research study provided some preliminary insights into the relationship between adult learner self-directedness and employability attributes. This may prove to be useful to both human resource development practitioners and academics in tertiary institutions who are involved in the teaching of adult learners. Recommendations were made for further research. This study should be seen as a step towards making a positive contribution to the field of human resource development in the South African and the evolving e-learning context.

6.5   SUMMARY

This chapter discussed the conclusions of the research study in terms of the theoretical as well as the empirical objectives. Possible limitations of the study, in terms of both the theoretical and empirical stages of the study, were discussed. Recommendations for further research investigating the relationship between adult learner self-directedness and employability attributes, as well as the influence of gender, race and age on these constructs were suggested. Lastly, the chapter integrated the research from this study with relevant published research, emphasising the extent to which the results of the study provided support for the relationship between the constructs of adult learner self-directedness and employability attributes. With this the study is concluded.

REFERENCES

Ahmad, B. A., & Majid, F. A. 2010. 'Self-directed learning and culture: A study on Malay adult learners', *Procedia Social Behavoural Science*, *7*(C): 254–263.

Ainoda, N., Onishi, H., & Yasuda, Y. 2005. 'Definition and goals of "self-directed learning" in contemporary medical education literature', *Annals Academy of Medicine*, *34*8: 515–519.

Akerlind, G. S. 2007. 'Constraints on academics' potential for developing as a teacher', *Studies in Higher Education*, *32*(1): 21–37.

Akkermans, J., Brenninkmeijer, V., Huibers, M. & Blonk, W. B. 2013. 'Competencies for the contemporary career: Development and Preliminary Validation of the Career Competency Questionnaire', *Journal of Career Development*, 403: 245-267.

Alarcon, G. M., Edwards, J. M. & Menke, L. E. 2011. 'Student burnout and engagement: A test of the conservation resources theory', *The Journal of Psychology: Interdisciplinary and Applied*, 145(3): 211-227.

Altbeker, A. & Storme, E. 2013. *Graduate unemployment in South Africa. A much exaggerated problem*, The Centre for Development and Enterprise, Johannesburg.

Arbuckle, J. L. 1995-2009. *Amos 18 user's guide*. Crawfordville, FL: Amos Development Corporation.

Arnau-Sabates, L., Marzo, M. T., Jariot, M., & Sala-Roca, J. 2013. 'Learning basic employability competence: A challenge for the active labour insertion of adolescents in residential care in their transition to adulthood', *European Journal of Social Work*, DOI: 10.1080/13691457.2013.802227.

Assar, S., El Amrani, R., & Watson, R. T. 2010. 'ICT and education: A critical role in human and social development', *Information Technology for Development*, 163: 151–158.

Ashwin, P. & Trigwell, K. 2012. 'Evoked prior experiences in first-year university student learning', *Higher Education Research & Development*, 314: 449-463.

Andrews, J. & Higson, H.2008. 'Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study', Higher Education in Europe. 33(4): p411-422

Baeten, M., Kyndt, E., Struyven, K., & Dochy, F. 2010. 'Using student-centred learning environments to stimulate deep approaches to learning: Factors encouraging or discouraging their effectiveness', *Educational Research Review*, 5(3): 243–260.

Barker, K. L., & McInerney, D. M. 2002. 'Performance approach, performance avoidance and depth of information processing: A fresh look at relations between students' academic motivation and cognition', *Educational Psychology, 22*5: 571–598.

Baron, P. & Corbin, L. 2012. 'Student engagement: rhetoric and reality', *Higher Education Research & Development*, 31(6): 759-772.

Basar, S., Nawaz, R. A. & Adnan, A. 2013. 'Net Generation, Threats & Opportunities for Higher Education Institutes', *Life Science Journal*,10(12): 327-377.

Bashrina, O. 2009. 'Student Agency and Language-Learning Processes and Outcomes in International Online Environments', *CALICO Journal* 26(2): 390-412.

Bartholomew, K., Antonia, J.Z. & Marcia, J.E. 2000. 'Coded semi-structured interviews in psychological research', In H.T. Resi & C.M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 286-312). Cambridge, UK: Cambridge University Press

Bartlett, M.S. 1954. 'A note on the multiplying factors for various chi square approximations', *Journal of the Royal Statistical Society*, 16 (Series B): 296 – 298.

Bayeth-Marom, R., Chajut, E., Roccas, S., & Sagiv, L. 2003. 'Internet-assisted versus traditional learning environments: Factors affecting students' preferences',. *Computers & Education, 41:* 65–76.

Beldarrin, Y. 2006. 'Distance education trends: Integrating new technologies to foster student interaction and collaboration', *Distance Education*, 27(2): 139–153.

Bergamin, P., Werlen, E., & Siegenthaler, E. 2012. 'The relationship between flexible and self-regulated learning in open and distance universities', *The International Review of Research in Open and Distance Learning*, 132: 101–123.

Berntson, E., Näswall, K. & Sverke. M. 2008. 'Investigating the relationship between employability and self-efficacy: A cross-lagged analysis', *European Journal of Work and Organisational Psychology*, 174: 413-425.

Beukes, C. J. 2010. *Employability and emotional intelligence of the individual within the school to-work transition phase,* Unpublished master's dissertation, University of South Africa, Pretoria.

Bezuidenhout, M. 2011. *The development and evaluation of a measure of graduate employability in the context of the new world of work,* unpublished master's dissertation. University of Pretoria, Pretoria.

Billet, S. 2010a. The relational interdependence between personal and social agency in learning and for working life. In M. van Woerkom & R. Poell (Eds), *Workplace learning: Concepts, measurements and application* (pp. 11–25). New York, NY: Routledge.

Billet, S. 2010b. 'Lifelong learning and self: Work, subjectivity and learning', *Studies in Continuing Education,* 32(1): 1–16.

Billett, S., Dymock, D., Johnson, G., & Martin, G. 2011. 'Overcoming the paradox of employers' views about older workers', *The International Journal of Human Resource Management*, 22*:* 1248–1261.

Bimrose, J. & Hearne, L. 2012 'Resilience and career adaptability: Qualitative studies of adult career counselling', *Journal of Vocational Behaviour*, 81: 338-344.

Black, A. E., & Deci, E. L. 2000. 'The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: a self-determination theory perspective', *Science Education*. 84(6): 740 - 757.

Blackburn, J. 2000. 'Understanding Paulo Freire: Reflections on the origins, concepts and possible pitfalls of his educational approach', *Community Development Journal*, 35(1): 3–15.

Blickle, G., Wendel, S. & Ferris, G. R. 2010. 'Political skills as moderator of personality – job performance relationships in socioanalytic theory: Test of the getting ahead motive in automobile sales', *Journal of Vocational Behaviour*, 76: 326-335.

Boden, R & Nedeva, M. 2010. 'Employing discourse: universities and graduate 'employability'', *Journal of Education Policy*, 251: 37-45.

Boeren, E. 2011. 'Profiles and motives of adults in Flemish continuing education', *European Journal of Higher Education*, 1(2-3): 179-191.

Botha, J. 2012. Graduateness, self-directedness and employability. In M. Coetzee, J. Botha, N. Eccles, N. Hotzhausen, & H. Nienaber (Eds), *Developing student graduateness &*

employability: Issues, provocations, theory and practical guidelines. Randburg: Knowledge Resources.

Brewster, C., Carey, L., Grobler, P., Holland, P., & Warnich, S. 2008. *Contemporary issues in human resource management: Gaining a competitive advantage,* 3rd ed, Cape Town: Oxford University Press.

Bridgstock, R. 2009. 'The graduate attributes we've overlooked: Enhancing graduate employability through career management skills', *Higher Education Research & Development,* 28(1):31–44.

Bridgstock, R. 2010. 'Skills for creative industries graduate success', *Education + Training*, 53(1): 9-26.

Brink, H. 2006. *Fundamentals of research methodology for health care professionals*, Kenwyn, Juta.

Brookfield, S. 1985. 'Self-directed learning: A critical review of research', *New Directions for Continuing Education*, 25*:* 5–16.

Brown, P., Hesketh, A., & Williams, S. 2003. 'Employability in a knowledge-driven economy', *Journal of Education and Work,* 6(2): 107–126.

Burger, R., & Woolard, I. 2005. *The state of the labour market in South Africa after the first decade of democracy.* Unpublished manuscript, Centre for Social Science Research, University of Cape Town.

Burton, K., Lloyd, M. G. & Griffiths, C. 2011. 'Barriers to learning for mature students studying HE in a FE college', *Journal of Further and Higher Education*, 35(1): 25-36.

Caffarella, R. S. 1993. 'Self-directed learning', *New Directions for Adult and Continuing Education*, (57): 25-35.

Callan, R. J., & Perry, L. S. 2002. 'Empowered learners: The new paradigm for 2000 and beyond', *International Journal of Value-based Management*, 15(1): 51–59.

Calvert, J. 2005. 'Distance education at the crossroads', *Distance Education*, 26(2): 227–238.

Cameron, R. & Harrison, J. L. 2012. 'The interrelatedness of formal, non-formal and informal learning: Evidence from labour market programme participants', *Australian Journal of Adult Learning*, 52(2): 277-309.

Candy, P.C. 1990. 'Dealing with diversity: Challenges confronting tertiary teachers', *Research and Development in Higher Education,* Vol 13. Sydney: HERDS

Candy, P. C. 1995. 'Developing lifelong learners through undergraduate education', in Summers, L (ed.), *A Focus on Learning*, p ii-viii. Proceedings of the 4th Annual Teaching Learning Forum, Edith Cowan University, February, 1995.

Candy, P. C. 1996. 'Promoting lifeling learning: academic developers and the university as a learning organisation', *International Journal for Academic Development*, 1(1): 7-18.

Candy, P. C. 2000. 'Reaffirming a proud tradition: Universities and lifelong learning', *The Institute for Learning and Teaching in Higher Education and SAGE Publications*, 1(2): 101-125.

Carr, D. 2000. 'Emotional Intelligence, PSE and Self Esteem: A Cautionary Note', *Pastoral Care in Education: AnInternational Journal of Personal, Social and Emotional Development*, 18(3): 27-33.

Caasey, C. 2009. 'Organisations, workers and learning: new prospects for citizenship at work?", *Citizenship Studies*, 13(2): 171-185.

Cassidy, S. 2006. 'Developing employability skills: Peer assessment in higher education', *Education & Training,* 48(7): 508–517.

Castles, J. 2004. 'Persistence and the adult learner: Factors affecting persistence in Open University students', *Active Learning in Higher Education*, 5(2): 166–179.

Catell, R.B. 1966. 'The scree test for number of factors', *Multivariate Behavioral Research*, 1: 245 – 276.

Chartier, I. S., Gaudreau, P. & Fecteau, M-C. 2011. 'From dispositional affect to academic goal attainment: the mediating role of coping', *Anxiety, Stress & Coping: An International Journal*, 24(1): 43-58.

Chan, C-S., Liu, E. Z-F., Sung, H-Y., Lin, C-H., Chen, N-S. & Cheng, S-S. 2013. 'Effects of online college students' self-efficacy on learning motivation and performance', *Innovations in Education and Teaching International*, DOI: 10.1080/147039297.2013.771429, retrieved on 4 June 2013.

Child, D. 1990. *The essentials of factor analysis* (2nd edition). London: Cassell Educational.

Choi, N. 2005. 'Self-efficacy and self-concept as predictors of college students' academic performance', *Psychology in the School*, 422:197-205.

Choi, B. Y., Park, H., Yang, E., Lee, S. K., Lee, Y. & Lee, S. M. 2011. 'Understanding career decision self-efficacy: A meta-analytic approach', *Journal of Career Development*, 39(5): 443-460.

Christ, T. J. & Boyce, C. 2009. 'Rating scale items: a brief review of nomenclature, components and formatting to inform the development of direct behaviour rating (DBR)', *Assessment for Effective Intervention*, 2(4): 242-250.

Christensen, W. 2004. 'Self-directedness, integration and higher cognition', *Language sciences*, 26: 661–692.

Chuprina, L., & Durr, R. 2006. 'Self-directed learning readiness and cultural adaptability in expatriate managers', *International Journal of Self-Directed Learning*, 3(1): 13–23.

Clarke, M. 2009. 'Plodders, pragmatists, visionaries and opportunists: career patterns and employability', Career Development International, 14(1): 8-28.

Clark, M., & Zukas, M. 2013. 'A Bourdieusian approach to understanding employability: Becoming a 'fish in water'', *Journal of Vocational Education & Training*, *65*2: 208–219.

Coetzee, M. 2009. *The degree is not enough: Does ODL address the challenge of graduate employability in a skills development era?* Inaugural lecture, University of South Africa, unpublished manuscript.

Coetzee, M. 2012 'Exploring distance students' graduateness in relation to their employability', unpublished research report, Pretoria: UNISA.

Coetzee, M. & Botha, J. 2013. 'Undergraduate students' self-directedness in relation to their examination preparation styles in Open Distance Learning', *Progressio*, in press.

Coetzee, M., Botha, J., Kiley, J., Truman, K., & Tshilongamulenzhe, M. C. 2013. *Practising education, training and development in South African Organisations,* Cape Town: Juta and Co.

Coetzee, M., & Esterhuizen, K. 2010. 'Psychological career resources and coping resources of the young unemployed African graduate: An exploratory study;, *SA Journal of Industrial Psychology*, *36*(1): 1–9.

Coetzee, M. & Harry, N. 2013. ‚Emotional intelligence as predictor of employees' career adaptability', *Journal of Vocational Behaviour*, in press, http://dx.doi.org/10.1016/j.jvb/2013.09.001.

Coetzee, M., & Schreuder, D. (Eds). 2010. *Personnel Psychology: An applied perspective.* Cape Town: Oxford University Press.

Coetzee, M. & Schreuder, D. 2011. 'The relation between career anchors, emotional intelligence and employability satisfaction among workers in the service industry', *Southern African Business Review*, 15(3): 76-96.

Cohen, J. 1992. 'Quantitative methods in psychology: a power primer', *Psychological Bulletin*, 112 (1): 153-159.

Converse, P. D., Pathak, J., DePaul-Haddock, A. M., Gotlib, T. & Merbedone, M. 2012. 'Controlling your environment and yourself: Implications for career success', *Journal of Vocational Behaviour*, 80: 148-159.

Cranmer, S. 2006. 'Enhancing graduate employability: best intentions and mixed outcomes', Studies in Higher Education, 312: 169-184.Christ, J., & Boyce, C. 2009. 'A brief review of nomenclature, components and formatting to informthe development of direct behaviour rating'. Assessment for Effective Intervention, 34: 242–250.

Cretchley, G & Castle, J. 2001. 'OBE, RPL and adult education: Good bedfellows in higher education in South Africa?', *International Journal of Lifelong Education*, 20 (6): 487-501.

Dabic, S. 2008. 'The alchemy of learning and work : negotiating learner knowledge in a global society', *International Journal of Lifelong Education*, 27(6) : 613-624.

Davis, D. 2006. 'Continuing education, guideline implementation and the emerging transdicsiplinary field of knowledge translation', *The Journal of Coontinuing Education in the Health Professions*, 26: 5-12.

De Bruin, K. 2007. 'The relationship between personality traits and self-directed learning readiness in higher education students;, *South African Journal of Higher Education,* 21: 228-240.

De Bruin, K., & De Bruin, G. P. 2011. 'Development of the Learner Self-Directedness in the Workplace Scale', *SA Journal of Industrial Psychology*, 37(1): 926–936.

De Grip, A., Van Loo, J. & Sanders, J. 2004. 'The industry employment index: taking account of supply and demand characteristics', *International Labour Review*, 1433: 211-233.

DeSimone, R. L., Werner, J. M. 2012**.** *Human Resource Development*, 6th eEdition, South-Western, Cengage Learning.

Deggs, D. 2011. 'Contextualising the perceived barriers of adult learners in an accelerated undergraduate degree programme', *The Qualitative Report*, 16(6):1540–1553.

Dekker, S. & Fischer, R. 2008. 'Cultural differences in academic motivation goals: A meta-analysis across 13 societies', *The Journal of Educational Research*, 102(2): 99-110.

Derrick, M. G., Ponton, M. K., & Carr, P. B. 2005. 'A preliminary analysis of learner autonomy in online and face-to-face settings', *International Journal of Self-Directed Learning*, *2*(1): 62–70.

De Ture, M. 2004. 'Cognitive style and self-efficacy: Predicting student success in online distance education', *The American Journal of Distance Education,* 18(1), 21–38.

De Vos, A., De Hauw, S. & Van Der Heijden, B., I. J. M. 2011. 'Competency development and career success: The mediating role of employability', *Journal of Vocational Behaviour*, 79: 438-447.

Dias de Oliveira, E., & De Castro Guimaraes, I. 2010. 'Employability through curriculum innovation and skills development: A Portuguese case study', *Higher Education Management and Policy,* 22(2), 83–101.

Donald, J. 2002. *Learning to think*. San Francisco, CA: Jossey-Bass.

Donaldson, J. F., & Townsend, B. K. 2007. 'Higher education journals' discourse about adult undergraduate students', *The Journal of Higher Education*, 78(1), 27–50.

Dupin-Bryant, P. A. 2004. 'Pre-entry variables related to retention in online distance education', *American Journal of Distance Education*, 18(4), 199–206.

Du Toit, G. S., Erasmus, B. J., Strydom, J. W. (eds). 2010. *Introduction to Business Management,* eighth edition, Cape Town: Oxford University Press.

Du Plessis, A., Prinsloo, P., & Muller, H. 2005. 'Determining the profile of the successful first-year accounting student', *South African Journal of Higher Education,* 19(4), 684–698.

Dymock, D., Billett, S., Klieve, H., Johnson, G. C. & Martin, G. 2012. 'Mature age 'white collar' workers' training and employability', *International Journal of Lifelong Education*, 31(2): 171-186.

Dynan, L., Cate, T., & Rhee, K. 2008. 'The impact of learning structure on students' readiness for self-directed learning', *Journal of Education for Business*, 84(2): 96–100.

Dzakira, H., & Idrus, R. M. 2003. 'Teacher-learner interactions in distance education: A case of two Malaysian Universities', *Turkish Online Journal of Distance Education,* 4(3). Retrieved 1 October 2010 from http://scholar.google.co.za/scholar?q=Turkish+online+journal+of+distance+education

Eby, L. T., Butts, M., & Lockwood, A. 2003. 'Predictors of success in the era of the boundaryless career', *Journal of Organizational Behavior*, 24(6), 689–708.

Eddy, P. L. & Garza-Mitchell, R. L. 2012. 'Faculty as Learners: Developing Thinking Communities', *Innovative Higher Education*, 37(24): 83–296.

Ehlers, U-D. & Schneckenberg, D. 2010. Introduction: Changing cultures in higher education. In Ehlers, U.D. & Schneckenberg, D. (Eds.). *Changing cultures in higher education* (pp. 1-14).Berlin: Springer.

Ehiyazaryan, E. & Barraclouch, N. 2009. 'Enhancing employability: integrating real world experience in the curriculum', *Education & Training*, 51(4): 292-308.

Ellinger, A. D. 2004. 'The concept of self-directed learning and its implications for human resource development', *Advances in Developing Human Resources*, 6(2), 158–177.

Elliott, A. C., & Woodward, W. A. 2007. *Statistical analysis quick reference guidebook: With SPSS examples.* California: Sage.

Enache, M., Sallan, J. M., Simo, P. & Feernadez, V. 2011. 'Career attitudes and subjective career success: Tackling gender differences', *Gender in Management: An International Journal*, 36(3): 234-250.

Engstrom, Y. & Kerosuo, H. 2007. 'From workplace learning to inter-organisational learning and back: the contribution of activity theory', *Journal of Workplace Learning*, 196: 336-342.

Erasmus, B. J., Loedolf, P. V. Z., Mda, T., & Nel, P. S. 2013. *Managing training and development in South Africa* (6th ed.), Cape Town: Oxford University Press.

Ferreira, N. & Coetzee, M. 2010. 'Psychological career resources and organisational commitment: Exploring sociodemographic differences', *South African Journal of Labour Relations*, 34(2): 25-35.

Field, A. 2009. *Discovering statistics using SPSS*. (3rd edition), Thousand Oaks: Sage.

Finch, D. J., Hamilton, L. K., Baldwin, R. & Zehner, M. 2013. 'An exploratory study of

factors affecting undergraduate employability', in print, Emerald Group Publishing Limited.

Fowler, Z. 2008. 'Negotiating the textuality of further education: Issues of agency and participation', *Oxford Review of Education,* 34(4): 425–441.

Fox, C., & Jones, J. 1998. 'Uses of the Rasch modeling in counseling psychology research',*Journal of Counseling Psychology*, 45(1), 30-45.

Fugate, M. 2006. Employability. In J. Greenhaus & G. Callanan (Eds.), *Encyclopedia of career development, v*ol. 1, pp. 267–271. Thousand Oaks, CA: Sage.

Fugate, M., Kinicki, A. J. & Ashforth, B. E. 2004. 'Employability: a psycho-social construct, its dimension and applications', *Journal of Vocational Behaviour*, 65(3): 14-38.

Fugate, M., & Kinicki, A. J. 2008. 'A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organisational change', *Journal of Occupational and Organisational Psychology,* 813: 503–527.

Fuller, A., Unwin, L., Felstead, A., Jewson, N., & Kakavelakis, K. 2007. 'Creating and using knowledge: An analysis of the differentiated nature of workplace learning environments', *British Educational Research Journal*, 335: 743–759.

Furnham, A. 2000.'Parents' estimates of their own and their childrens' lintelligences', *British Journal of Developmental Psychology*, 18 : 583–594.

Gagnon, J. L., Packard, B. W-L. 2012. 'An overwhelming climb: The complexities of combining college, full-time work and company tuition assistance', *Journal of Career Development*, 39(6): 479-499.

Garrison, D. R. 1992. 'Critical thinking and self-directed learning in adult education: An analysis of responsibility and control issues', *Adult Education Quarterly*, 42: 136–148.

Garrison, D. R. 1997. 'Self-directed learning: Toward a comprehensive model', *Adult Education Quarterly*, 48(1): 18–33.

Garrison, R., Anderson, T. & Archer, W. 2001. 'Critical thinking, cognitive presence and computer conferencing in distance education', *American Journal of Distance Education*, 151: 7-23.

Garson, G. D. 2008. *Structural equation modeling: Statnotes,* PA75, retrieved January 12, 2009, from http://faculty.chass.ncsu.edu/garson/PA765/structur.html

Gibson, L. 2011. 'Student-directed learning: An exercise in student engagement', *College Teaching*, 59(3): 95-101.

Glover, D., Law, S., & Youngman, A. 2002. 'Graduateness and employability: Student perceptions of the personal outcomes of university education', *Research in Post-Compulsory Education,* 7(3): 293–306.

Gonzáles, M. L. G. 2013.'Learning goals and strategies in the self-regulation of learning', *US-China Education Review*, 3(1): 46-50.

Gore, J. S. & Rogers, M. J. 2010. 'Why do I study? The moderating effect of attachment style on academic motivation', *The Journal of Social Psychology*, 150(5): 560-578.

Granott, N. 1998. *We learn, therefore we develop:* Learning versus development – or developing learning? In M. C. Smith, & Pourchot, T. (Eds), *Adult learning and development: Perspectives from educational psychology.* New Jersey: Lawrence Erlbaum Associates.

Greenbank, P. 2011.' 'I'd rather talk to someone I know than to somebody who knows': The role of networks in undergraduate career decision-making', *Research in Post-Compulsory Education*, 16(1): 31–45.

Greenbank, P. 2012. 'Career decision-making by business school students: A British case study', *International Journal of Management*, 29(4): 543–553.

Greenberg, G. 1998. 'Distance learning and geography's soul', *AAG Newsletter, 33*5: 1–2.

Grier-Reed, T. & Ganuza, Z. 2012. ' Using constructivist career development to improve career decision self-efficacy in TRiO students', *Journal of College Student Development*, 53(2),: 464-471.

Griesel, H. & Parker, B. 2007. *Graduate attributes*, Pretoria: Higher Education South Africa.

Guan, Y., Deng, H., Sun, J., Wang, Y., Cai, Y., Ye, L., Fu, R., Wang, Y. , Zhang, S. & Li, Y. 2013. 'Career adaptability, job search self-efficacy and outcomes: A three-wave investigation among Chinese university graduates', *Journal of Vocational Behaviour*, 83: 561-570.

Guglielmino, L. M. 2008. 'Why self-directed learning?', *International Journal of Self-Directed Learning*, 5(1): 1–14.

Guglielmino, P. J., & Guglielmino, L. M. 2011. 'An exploration of cultural dimensions and economic indicators as predictors of self-directed learning readiness',. *International Journal of Self-Directed Learning*, 8(1), 29–45.

Hadsell, L. 2010. 'Achievement goals, locus of control and academic success in Economics, *American Economics Review*, Papers and Proceedings, 272-276.

Hair, J., Black, W., Babin, B., & Anderson, R. 2010. *Multivariate data analysis.* Pearson, NJ: Pearson Education.

Hammond, M., & Collins, R. 1991. *Self-directed learning: Critical practice.* London: Kogan Page.

Hampden-Thompson, G. & Bennett, J. 2013. 'Science teaching and learning activities and students' engagement in science', *International Journal of Science Education*, 35:8, 1325-1343.

Hartley, J., & Betts, L. R. 2010. 'Four lay-outs and a finding: The effects of changes in the order of verbal labels and numerical values on Likert-type scales', *International Journal of Social Research Methodology*, 13(1): 17–27.

Hayes, E. 1990.' Adult education: 'Context and challenge for distance educators', *American Journal of Distance Education*, *4*(1): 25–38

Henderson-King, D., & Smith, M. 2006. 'Meanings of education for university students: Academic motivation and personal values as predictors', *Social Psychology of Education,* 9: 195–221.

Hensley, G. H., & Kinser, K. 2001. 'Rethinking adult learner persistence: Implications for counsellors', *Adultspan Journal, 3*(2), 88–100.

Heydenrych, J. F., & Prinsloo, P. 2010. 'Revisiting the five generations of distance education: Quo Vadis?', *Progressio,* 31(10): 5–26.

Hiemstra, R. 2011. 'Self-directed learning: individualising instruction – most still do it wrong!', *International Journal of Self-Directed Learning*, 8(1): 46-59.

Hinchliffe, G. W., & Jolly, A. 2011. 'Graduate identity and employability', *British Educational Research Journal*, 37(4), 563–584.

Hirschi, A., Lee, B., Porfeli, E. J. & Vondracek, F., W. 2013. 'Proactive motivation and engagement in career behaviours: Investigating direct, mediated and moderated effects', *Journal of Vocational Behaviour*, 83: 31-40.

Ho, L. 2008. 'What affects organisational performance?', *Industrial Management & Data Systems,* 108(9): 1234–1254*.*

Holton, E. F. III., Swanson, R. A., & Naquin, S. S. 2001. 'Andragogy in practice: Clarifying the andragogical model of adult learning', *Performance Improvement Quarterly*, 14(1): 118–143.

Horwath, I., Peck, D., & Verlinden, J. 2009. 'Demarcating advanced learning approaches from methodological and technological perspectives', *European Journal of Engineering Education*, 346: 465–485.

Howard, C. & Davies, P. 2012.' Attracting mature students into higher education: The impact of approaches to learning and social identity', *Journal of Further and Higher Education*, DOI: 10.1080/0309877X.2012.684038, retrieved on 24 June 2013.

Howell, D. C. 2004. *Fundamental Statistics for the Behavioral Sciences* (5th ed), Belmont, CA: Thomson Wadsworth.

Howell, S. L., Williams, P. B. & Lindsay, M. S. 2003. 'Thirty-two trends affecting distance education: an informed foundation for strategic planning', *Online Journal of Distance Learning Administration*, VI (III): 18 pages.

Huang, C. 2013. 'Gender differences in academic self-efficacy: a meta-analysis', *European Journal of Psychology Education*, 28: 1-35.

Hui, E. K. P., Sun, R. C. F., Chow, S. S-Y. & Chu, M., H-T. 2011.' Explaining Chinese students' academic motivation: Filial piety and self-determination', *An International Journal of Experimental Educational Psychology*, 31(3): 377-392.

Howell, S. L., Williams, P. B., & Lindsay, M. S. 2003. 'Thirty-two trends affecting distance education: An informed foundation for strategic planning', *Online Journal of Distance Learning Administration*, VI(III): 18 pages.

Hoyle, R. H. 1995. *Structural equation modelling,* Thousand Oaks, CA: Sage.

Ihejirika, J. C. 2013. 'Teaching strategies for adult learners: Implications of learning characteristics for effective teaching-learning transaction', *Academic Research International*, 4(2): 6 pages.

Ineson, E. M., Rhoden, S., Nita, V., & Alexieva, I. 2011. 'Seeking excellent recruits for hotel management training: An intercultural comparative study', *Journal of Hospitality & Tourism Education*, 23(2): 5–13.

Inda, M., Rodriguez, C. & Peňa, J. V. 2013. 'Gender differences in applying social cognitive career theory in engineering students', *Journal of Vocational Behaviour*, 83: 346-355.

Jackson, D. 2012. 'Testing a model of undergraduate competence in employability skills and its implications for stakeholders'. *Journal of Education and Work*, DOI: 10.1080/13639080.2012.718750.

Jackson, D. 2013. 'Self-assessment of employability skill outcomes among undergraduates and alignment with academic ratings'. *Assessment & Evaluation in Higher Education..*

Jackson, D. 2013. 'Student perceptions of the importance of employability skill provision in Business undergraduate programmes', *Journal of Education for Business*, 88(5): 271-279.

Jafari, M., Bourouni, A., & Amirir, R. H. 2009. 'A new framework for selection of the best performance appraisal method', *European Journal of Social Sciences*, *7*(3): 92–100.

Jeffrey, L. M. 2009. 'Learning orientations: Diversity in higher education', *Learning and Individual Differences*, 19(2): 195-208.

Jha, S. 2011. 'Influence of psychological empowerment on affective, normative and continuance commitment. A study in the Indian IT industry', *Journal of Indian Business Research*, 4(4): 263-282.

Jones, A. 2010. 'Generic attributes in accounting: the significance of the disciplinary context', *Accounting Education: An International Journal*, 19(1-2): 5-21.

Jones, C. & Healing, G. 2010. 'Net Generation Students: agency and choice and the new technologies', *Journal of Computer Assisted Learning*, 26: 244-356.

Jones, E. 2013. 'Internationalisation and employability: The role of intercultural experiences in the development of transferable skills', *Public Money & Management*, 33(2): 95-104.

Joy-Matthews, J., Meggison, D., & Surtees, M. 2004. *Human resource development* 3rd ed, London: Kogan Page.

Jung, J. H., & Choi, K-S. 2009. 'Technological change and returns to education: The implication for the S&E labour market', *Global Economic Review: Perspectives on East Asian Economies and Industries*, 38(2): 161–184

Jungert, T. & Rosander, M. 2010. 'Self-efficacy and strategies to influence the study environment', *Teaching in Higher Education*, 15(6): 647-699.

Karakas, F., & Manisaligil, A. 2012.' Reorienting self-directed learning for the creative digital era', *European Journal of Training and Development*, *36*(7): 712–731.

Kasworm, C. E. 2008. 'Emotional challenges of adult learners in higher education', *New Directions for Adult and Continuing Education*, 120(Winter): 27–34.

Kasworm, C. 2011. 'New perspectives on post-formal cognitive development and self-directed learning', *International Journal of Self-Directed Learning*, 8(1): 18–28.

Keegan, D. 1990. *Foundations of distance education* 2_{nd} ed, London: Routledge.

Keirns, J. L. 1999. *Designs for self-instruction: Principles, processes, and issues in developing self-directed learning,* Massachusetts: Allyn & Bacon.

Kerlinger, F. N., & Lee H. B. 2000. *Foundations of behavioural research* 4_{th} ed, New York: Harcourt.

Kim, S. 2003. 'Research paradigms in organizational learning and performance'. *Information Technology, Learning and Performance Journal*, 21(1): 9–18.

Klein-Collins, R. 2011. 'Strategies for becoming adult-learning-focused institutions', *AAC&U* (Winter): 4–7.

Knight, P. T. & Yorke, M. 2003. 'Employability and good learning in higher education', *Teaching in Higher Education*, 81: 3-16.

Knowles, M. S. and associates. 1984. *Andragogy in action.* San Francisco, CA: Jossey-Bass.

Koen, J., Klehe, U-C., Van Vianen, A. E. M., Zikic, J. & Nauta, A. 2010. 'Job-seracj strategies and employment equity. The impact of career adaptability', *Journal of Vocational Behaviour*, 77: 126-139.

Koivistu, P., Vinokur, A. D. & Vuori, J. 2011. 'Effects of career choice intervention on components of career preparation', *The Career Development Quarterly*, 594: 345-366.

Kraak, A. 2005. 'Human resource development and the skills crisis in South Africa: The need for a multi-pronged strategy', *Journal of Education and Work*, 18(1): 57-83.

Krauss, S. E. 2005.' Research paradigms and meaning making: A primer', *The Qualitative Report*, 10(4): 758–770.

Kreber, C. 1998. 'The relationship between self-directed learning, critical thinking and psychological type, and some implications for teaching in higher education', *Studies in Higher Education*, 23(1): 71–86.

Lai, H. J. 2011. 'The influence of adult learners' self-directed learning readiness and network literacy on online learning effectiveness: A study of civil servants in Taiwan', *Educational Technology & Society*, 14(2): 98–106.

Larson, L. M., Wu, T. F., Bailey, D. C., Gasser, C. E., Bonitz, V. S. & Borgen, F. H. 2010. 'The role of personality in the selection of a major: With and without vocational self-efficacy and interests', *Journal of Vocational Behaviour*, 76: 211-222.

Leedy. P. D., & Ormrod, J. E. 2005. *Practical research: Planning and design,* New Jersey: Pearson Education.

Lefkowitz, J. 2008.' To prosper, organizational psychology should expand the values of organizational psychology to match the quality of its ethics', *Journal of Organizational Behavior,* 29: 439–453.

Lent, R. W. 2013. 'Career-life preparedness: Revisiting career planning and adjustments in the new workplace', *The Career Development Quarterly*, 611: 2-14.

Liao, L-F. 2006. 'A flow theory perspective on learner motivation and behaviour in distance education'. *Distance Education*, *27*(1): 45–62.

Li, N., Lee, K., & Kember, D. 2000. 'Towards self-direction in study methods: The ways in which new students learn to study part-time', *Distance Education*, 21(1): 6–28.

Liddell, T. N. 2008. 'Executive women's self-directed learning and leading in charitable foundations', *International Journal of Self-directed Learning*, 5(1): 15–29.

Linnenbrink, E. A., & Pintrich, P. R. 2003. 'The role of self-efficacy beliefs in student engagement and learning in the classroom; *Reading & Writing Quarterly*, 19: 119–137.

Lloyd, S. & Härtel, C. 2010.' Intercultural competencies for culturally diverse work teams', *Journal of Management Psychology*, 25(8): 845-875.

Lombardi, A., Seburn, M. & Conley, D. 2011. 'Development and initial validation of a measure of academic behaviours associated with college and career readiness', *Journal of Career Assessment*, 19(4): 375-391.

Long, H. B. & Agyekum, S. B. 1983. ' Guglielmino's self-directed learning readiness scale: a validation study', *Higher Education*, 12: 77-87.

Long, B., & Associates. 1989. *Self-directed learning: Emerging theory and practice*. Oklahoma Research Center for Continuing Professional and Higher Education, University of Oklahoma.

Long, B., & Associates. 1990. *Advances in research and practice in self-directed learning*. Oklahoma Research Center for Continuing Professional and Higher Education, University of Oklahoma.

Long, H. B. 2007. 'Themes and theses in self-directed learning literature', *International Journal of Self-Directed Learning*, 4(2): 1–18.

Luckett, K., & Luckett, T. 2009. 'The development of agency in first generation learners in higher education: A social realist analysis', *Teaching in Higher Education,* 14(5): 469–481.

Lundvall, B-A. & Nielsen, P. 2007. 'Knowledge management and innovation performance', *International Journal of Manpower*, 28(3): 207-223.

Mackay, J. & Parkinson**, J.** 2008**. '**Gender, self-efficacy and achievement among South African Technology teacher trainees**',** *Gender and Education* 22(1): 87-103.

Mackenzie, N., & Knipe, S. 2006. 'Research dilemmas: Paradigms, methods and methodology', *Issues in Educational Research*, 16: 1 page.

Magagula, C. M., & Ngwenya, A. P. 2004. 'A comparative analysis of the academic performance of distance and online campus learners', *Turkish Online Journal of Distance Education,* *5*(4). Retrieved 1 October 2010 from http://scholar.google.co.za/scholar?q=Turkish+online+journal+of+distance+education

Mancuso, S. 2001. 'Adult-centered practices: Benchmarking study in higher education', *Innovative Higher Education*, 25(3): 165–181.

Marambe, K. N., Vermunt, J. D. & Boshuizen, H. P. 2012. 'A cross-cultural comparison of student learning patterns in higher education', *Higher Education*, 64: 299-316.

Marchand, G. C. & Gutierrez, A. P. 2011. 'The role of emotion in the learning process: Comparisons between online and face-to-face settings', *Internet and Higher Education*, doi: 10.1016/j.iheduc.2011.10.001, downloaded on 24 January 2013.

Markes, I. 2006. 'A review of literature on employability skills needs in engineering', *European Journal of Engineering Education*, 31(6): 637–650.

Mason, G., Williams, G., & Cranmer, S. 2009. 'Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes?', *Education Economics,* 12(1): 1–30.

Maurer, T., J. & Chapman, E., F. 2013. 'Ten years of career success in relation to individual and situational variables from the employee development literature', *Journal of Vocational Behaviou*r, 83: 450-465.

McIlveen, P., Beccaria, G., Du Preez, J., & Patton, W. 2010. 'Autoenthnography in vocational psychology: Wearing your class on your sleeve', *Journal of Career Development*, *37*3: 295-311.

McMahon, M., Watson, M. & Bimrose, J. 2012. 'Career adaptability: a qualitative understanding from the stories of older women', *Journal of Vocational Behaviour*, 80: 762-768.

Merriam, S. B. 1993. 'An update on adult learning theory', *New Directions for Adult and Continuing Education*, 57: 25–35.

Merriam, S. B. 2001. 'Andragogy and self-directed learning: Pillars of adult learning theory', *New Directions for Adult and Continuing Education*, 89: 3–13.

Merriam, S. B. 2004. 'The role of cognitive development in Mezirow's Transformational Learning Theory', *Adult Education Quarterly*, 55(60): 60–68.

Merrill, B. 2010. 'Learning and teaching in universities: Perspectives from adult learners and lecturers', *Teaching in Higher Education*, 6(1): 5–17.

Messum, D., Wilkes, L., & Jackson, D. 2011. 'Employability skills: Essential requirements in health manager vacancy advertisements', *Asia Pacific Journal of Health Management*, 6(2): 22–28.

Mezirow, J. 1985. A critical theory of self-directed learning. In S. Brookfield Ed., *Self-directed learning: From theory to practice. New directions for continuing education*. San Francisco, CA: Jossey-Bass.

Mezirow, J. 2000. Learning to think like an adult: Core concepts of transformation theory. In J Mezirow and Associates, *Learning as transformation: Critical perspectives on a theory in progress.* San Francisco, CA: Jossey-Bass.

Mezirow, J. 1981. 'A critical theory of adult learning and education', *Adult Education Quarterly,* 32(3): 3-24.

Mishra, P., Fahnoe, C., Hendriksen, D., & The Deep-Play Research Group. 2013. 'Creativity, self-directed learning and the architecture of technology rich environments;, *Tech Trends*, 57(1): 10–13.

Mlatsheni, C., & Rosbabe, S. 2002. *Why is youth unemployment so high and unequally spread in South Africa?* Working paper 02/65, Development Policy Research Unit University of Cape Town, unpublished manuscript.

Moneta, G. B., Spada, M. M. & Rost, F. M. 2007. 'Approaches to studying when preparing for a final exams as a function of coping strategies', *Personality and Individual Differences* 43: 191-202.

Moreau, M-P., & Leathwood, C. 2006. 'Graduates' employment and the discourse of employability: A critical analysis', *Journal of Education and Work*, 19(4): 305–324*.

Morrison, A. R. 2012. 'You have to be well spoken: Students' views on employability within the graduate labour market', *Journal of Education and Work*, DOI: 10.1080/13639080.2012.742178

Morrison, A. 2013. 'A class act? Lecturers' views on undergraduates' employability', *British Journal of Sociology of Education*. DOI: 10.1080/01425692.2013.802420.

Mouton, J., & Marais, H. C. 1994. *Basic concepts in the methodology of the social sciences,* Pretoria: HSRC.

Munro, Lyle. 2011. 'Go boldly, dream large: The challenge confronting non-traditional students at university', *Australian Journal of Education*, 55(2): 115-131.

McQuaid. R. W. & Lindsay, C. 2002. 'The employability gap: Long-term unemployment and barriers to work in buoyant labour markets', Environment and Planning, 20(4): 613-628.

Newby, M. 2005. 'A curriculum for 2010', *Journal of Education for Teaching: International Research and Pedagogy*, 31(4): 297-300.

Nielsen, J. (1993), *Usability engineering*. London: Academic Press.

Niemieck, C. P., Lynch, M. F., Vansteenkiste, M., Bernstein, J., Deci, E. L., & Ryan, R. M. 2005. 'The antecedents and consequences of autonomous self-regulation for college: A self-determination theory perspective on socialisation', *Journal of Adolescence*, 29: 761–775.

Nikolova, I., Van Ruysseveldt, J., De Witte, H. & Syriot, J. 2014. 'Work-based learning: Development and validation of a scale measuring learning potential of the workplace', *Journal of Vocational Behaviour*, 84: 1-10.

Ning, H. K., & Downing, K. 2010. 'The reciprocal relationship between motivation and self-regulation: A longitudinal study on academic performance', *Learning and Individual Differences*, 20: 682–686.

Nikolova, I., Van Ruysseveldt, J., De Witte, H. & Syroit, J. 2014. 'Work-based learning: Development and validation of a scale measuring the learning potential of the workplace (LPW)', *Journal of Vocational Behaviour*, 84(1): 1-10.

Nisber, R., Elder, J., & Miner, G. 2009. *Handbook of statistical analysis and data mining applications,* Massachusetts: Elsevier.

Noe, R. A. 2013. *Employee training and development,* New York: McGraw-Hill.

Noe, R. A., Tews, M. J. & Marand, A. D. 2012. 'Individual differences and informal learning in the workplace', *Journal of Vocational Behaviour*, 83: 327-335.

Nunnaly, J.C. & Bernstein, I.H. 1994. *Psychometric theory.* New York: McGraw-Hill.

Obschonka, M., Silberstein, R. K., Scmidd-Rodermund, E. & Steutzer, M. 2011. 'Nascent entrepreneurship and the developing individual: Early entrepreneurial competence in adolescence and venture creation success during the career', 79: 121-133.

Ohland, M. W., Loughry, M. L., Carter, R. L., Bullard, L. G., Felder, R. M., Finelli, C. J., Schmucker, D. G. 2005. Developing a peer evaluation instrument that is simple, reliable and valid. *Proceedings of the 2005 American Society for Engineering Education Annual Conference & Exposition*, American Society for Engineering Education.

Oliviera, A. L., & Simões, A. 2006. 'Impact of socio-demographic and psychological variables on the self-directedness of higher education students', *International Journal of Self-Directed Learning*, 3(1): 1–12.

Oprichard, E. 2013. 'Sampling: Bridging probability and non-probability designs', *International Journal of Social Research Methodology*, 16(1): 1–11.

Owen, K. 1995. Test bias and test fairness. In K. Owen & J.J. Taljaard Eds., *Handbook for the use of psychological and scholastic tests of the HSRC.* Pretoria: Human Sciences Research Council.

Patric, L., Care, E. & Ainly, M. 2011. 'The relationship between vocational interests, self-efficacy and achievement in the prediction of educational pathways', *Journal of Career Assessment*, 19(1): 61-74.

Pauw, K., Oosthuizen, M., & Van der Westhuizen, C. 2008. 'Graduate unemployment in the face of skills shortages: A labour market paradox', *South African Journal of Exonomics*, 76(1): 45–57.

Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. 2002. 'Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research', *Educational Psychologist*, 37(2): 91–105.

Phan, H. P. 2011. 'Interrelations between self-efficacy and learning approaches: a developmental approach', *Educational Psychology: An International Journal of Experimental Educational Psychology*, 31(2): 225-246.

Phan, H. P. 2012a. 'Relations between informational sources, self-efficacy and academic achievement: A developmental approach', *Educational Psychology: An International Journal of Experimental Educational Psychology,* 32(1): 81-105.

Phan, H. P. 2012b. 'Information sources, self-efficacy and achievement: A temporally displaced approach', *Educational Psychology: An International Journal of Experiential Education Psychology*, 32(6): 699-726.

Pietrykowski, B. 1996. 'Knowledge and power in adult education: Beyond Freire and Habermas', *Adult Education Quarterly*, 46(2): 82–97.

Pina, A. A. 2008. 'Factors influencing the institutionalisation of distance education in higher education', *The Quarterly Review of Distance Education*, 9(4): 427–438.

Pintrich, P. R. 2004. 'A conceptual framework for assessing motivation and self-regulated learning in college students', *Educational Psychology Review*, 16(4): 385–407.

Pollard, H., Blevins, R. & Connor, M. 2013. 'An examination of the relationship between teaching presence, social presence, learner motivation and self-reported learning among online MBA students', *The Journal of the American Academy of Business*, 18(2): 23-30.

Ponton, M. K., & Carr, P. B. 2000. 'Understanding and promoting autonomy in self-directed learning', *Current Research in Social Psychology*, 5(19): 271–284.

Ponton, M., Carr, P., & Derrick, G. 2004. 'A path analysis of the conative factors associated with autonomous learning', *International Journal of Self-directed Learning*, 1(1): 59–69.

Ponton, M. K., Derrick, M. G., Hall, J. M., Rhea, N., & Carr, P. 2005. 'The relationship between self-efficacy and autonomous learning: The development of new instrumentation', *International Journal of Self-Directed Learning*, 2(1): 50–61.

Ponton, M., & Schuette, C. 2008. 'The learner autonomous profile: A discussion of scale combination to measure autonomous learning', *International Journal of Self-directed Learning*, 5(1): 55–60.

Pool, L. D. & Sewell, P. 2007. 'The key to employability: developing a practical model of graduate employability', *Education + Training*, 49(4): 277-289.

Poropat, A. E. 2011. 'The role of citizenship performance in academic achievement and graduate employability', *Education + Training*, 53(6): 499-514.

Potgieter, I. & Coetzee, M. 2013. 'Employability attributes and personality preferences of postgraduate business management students', *SA Journal of Industrial Psychology*, 39(1): 10 pages.

Potgieter, I., Coetzee, M. & Masenge, A. 2012. 'Exploring employees' personality attributes in relation to their employability attributes in the Business Management field', *Journal of Psychology in Africa*, 22(4): 589-597.

Pratt, D. D. 1993. 'Andragogy after twenty-five years', *New Directions for Adult and Continuing Education*, 57: 15–23.

Prinsloo, P. 2009. *Modelling throughput at Unisa: The key to the successful implementation of ODL.* Discussion document, Unisa: Directorate for Curriculum and Learning Development, unpublished manuscript.

Raabe, B., Frese, M. & Heehr, T. A. 2007. 'Action regulation theory and career self-management', *Journal of Vocational Behaviour*, 70: 297-311.

Ramnarain, U. & Molefe, P. 2012. 'The readiness of high school students to pursue first year physics', *Africa Education Review*, 9(1): 142-158.

Rainsbury, E., Hodges, D., Burchell, N. & Lay, M. C. 2002. 'Ranking workplace competencies: Student and graduate perceptions', Asia-Pacific Journal of Cooperative Education, 3(2): 8-18.

Rehg, M. T. & Gundlach, M. J. 2012. 'Examining the influence of cross-cultural training on cultural intelligence and specific self-efficacy', *Cross Cultural Management*, 19(2): 215-232.

Reio, T. G., & Davis, W. 2005. 'Age and gender differences in self-directed learning readiness: A developmental perspective', *International Journal of Self-Directed Learning*, 2(1): 40–49.

Reio T. G. & Wiswell, R. 2000. 'Field investigation of the relationship among adult curiosity, workplace learning and job performance', *Human Resource Development Quarterly*, 11(1): 5-30.

Restubog, S. L. D., Florentino, A. R. & Garcia, P. R. J. M. 2010. 'The mediating roles of career self-efficacy and career directedness in the relationship between contextual support and persistence', *Journal of Vocational Behaviour*, 77(2): 186-195.

Richardson, G. E. 2002. 'The metatheory of resilience and resiliency', *Journal of Clinical Psychology,* 58(3): 307–321.

Richardson, T. E. 2011. 'The academic engagement of White and ethnic minority students in distance education', *Educational Psychology: An International Journal of Experimental Educational Psychology*, 31(2): 123-139.

Richardson, T. E., Long, G. L. & Woodley, A. 2003. 'Academic engagement and perceptions of quality in distance education', *Open Learning*, 183: 223-244.

Ross-Gordon, J. M. 2011. 'Research into adult learners: Supporting the needs of a student population that is no longer non-traditional', *Association of American Colleges & Universities*, 13(1): 26–29.

Roper, L. & Pettit, J. 'Development and the learning organisation: an introduction', *Development in Practice*, 12(3-4): 258-271.

Rothwell, A., Jewell, S. & Hardie, M. 2009. 'Self-preceived employability: Investigating the responses of post-graduate students', *Journal of Vocational Behaviour*, 75: 152-161.

Rovai, A. P. 2002. 'In search of higher persistence rates in distance education online programs', *The Internet and Higher Education*, 6: 1–16.

Rumble, G. 2000. 'Student support in distance education in the 21st century: Learning from service management', *Distance Education*, 21(2): 216–235.

Rushmer, R. K., Kelly, D., Lough, M., Wilkinson, J. E., Greig, G. J., & Davies, H. T. O. 2007. 'The learning practice inventory: Diagnosing and developing learning practice in the UK', *Journal of Evaluation in Child Practice*, 13: 206–211.

Ryan, R. M. & Deci, E. L. 2006. 'Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination and will?', *Journal of Personality*, 74(6): 1557-1587.

Saba, F. 2005. 'Critical issues in distance education: A report from the United States', *Distance Education*, 26(2): 255–272.

Sadler-Smith, E. & Smith, P. J. 2004. 'Strategies for accommodating individuals' styles and preferences in flexible learning programmes', *British Journal of Educational Technology*, 354: 395-412.

Sachs, J. 2001. 'A path model for adult learner feedback', *Educational Psychology*, 21(3): 267–275.

Salkind, N. J. 2012. *Exploring research* 8th ed, Upper Saddle River, NJ: Pearson Education.

Salemla-Aro, K. & Nurmi, J-E. 2007. 'Self-esteem during university studies predicts career characteristics 10 years later', *Journal of Vocational Behaviour*, 70: 463-477.

Salmela-Aro, K., Tolvanen, A. & Nurmi, J-E. 2011. 'Social strategies during university studies predict early career work burnout and engagement: 18 year longitudinal study', *Journal of Vocational Behaviour*, 79: 145-157.

Scarbrough, H. 2001. 'Knowledge a la mode: The rise of knowledge management and its implications for views of knowledge production', *Social Epistemology*, 15(3): 201–213.

Schreuder, D., & Coetzee, M. 2011. 'The relation between career anchors, emotional intelligence and employability satisfaction among workers in the service industry', *Southern African Business Review*, 15(3): 76–97.

Sewell, P. & Pool, L. D. 2010. 'Moving from conceptual ambiguity to operational clarity. Employability, enterprise and entrepreneurship in higher education', *Education + Training*, 52(1): 89-94.

Shapiro, M. J., Gardner, R., Godwin, S. A., Jay, G. D., Lindquist, D. G., Salisbury, M. L. & Salas, E. 2008. 'Defining team performance for simulation-based training: Methodology, metrics and opportunities for emergency medicine', *Academic Emergency Medicine*, 15(11): 1088–1097.

Silen, C., & Uhlin, L. 2008. 'Self-directed learning: 'A learning issue for students and faculty!',*Teaching in Higher Education*, 13(4): 461–475.

Simonson, M., Schlosser, C., & Hanson, D. 1999. 'Theory and distance education: A new discussion', *American Journal of Distance Education*, 13(1): 60–75.

Slev,A. M. & Pop, A. 2012. 'A model for developing adult learner effectiveness in new roles and environments', *Procedia – Social and Behavioural Sciences*, 46: 2015-2055.

Smith, M. E., Zsidisin, G. A., & Adams, L. L. 2005. 'An agency theory perspective on student performance evaluation', *Decision Sciences Journal of Innovative Education*, 3(1): 29–46.

Song, X. 2013. 'The effects of technological change on schooling and training human capital', *Economics of Innovation and New Technology*, 22(1): 23–45.

Soria, K. M. & Stebleton, M. J. 2012. 'First-generation students' academic engagement and retention', *Teaching in Higher Education*, 17(6): 673-685.

Soucy Chartier, I. Gaudreau, P. & Fecteau. M-C. 2011. 'From dispositional affect to academic goal attainment: the mediating role of coping', *Anxiety, Stress & Coping: An International Journal,* 241: 43-58.

Stafford, S. P. 2001. 'Epistemology for sale', *Social Epistemology,* 15(3): 215–230.

Stein, D., & Glazer, H. 2003. 'Mentoring the adult learner in academic midlife at a distance education university', *American Journal of Distance Education*, 17(1): 7–23.

Stevens, T., & Switzer, C. 2006. 'Running ahead: Online and traditional student differences', *Turkish Online Journal of Distance Education,* 7(2). Retrieved 1 October 2010 from http://scholar.google.co.za/scholar?q=Turkish+online+journal+of+distance+education.

Støren, L. A., & Aamodt, P. O. 2010. 'The quality of higher education and employability of graduates', *Quality in Higher Education*, 16(3): 297–313.

Straka, G. A. Ed.. 1997. *European views of self-directed learning: Historical, conceptual, empirical, practical, vocational.* Munster: Waxman Verlag GmbH.

Stumpf, S. A., Tymon, W., G., Jr. 2012. 'The effects of objective career success on subsequent subjective career success', *Journal of Vocational Behaviour*, 81(3): 345-353.

Subotzky, G. & Prinsloo, P. 2011. 'Turning the tide: a socio-critical model and framework for improving student success in open distance learning at the University of South Africa', *Distance Education*, 32(2): 177-193.

Sung, Y., Turner, S. L. & Kaewchinda, M. 2013. 'Career development skills, outcomes and hope among college students', *Journal of Career Development*, 40(2): 127-145.

Suphi, N. & Yaratan, H. 2012. 'Effects of learning approaches, locus of control, socio-economic status and self-efficacy on academic achievement: A Turkish perspective', *Educational Studies*, 38(4): 419-431.

Swanson, R. A., & Holton. E. F. 2008. *Foundations of human resource development.* California: Berett-Koehler.

Taipjutorus, W., Hansem, S., & Brown, M. 2012. 'Investigating the relationship between learner control and self-efficacy in an online learning environment', *Journal of Open, Flexible and Distance Learning*, 16(1): 56–69.

Tam, M. 2000. 'Constructivism, design and technology: Implications for transforming distance learning', *Educational Technology & Society*, 3(2): 1–17.

Taylor, A. 2005. 'What employers look for: The skills debate and the fit with youth perceptions', *Journal of Education and Work*, 182: 201-218.

Teaster, P., & Blieszner, R. 1999. 'Promises and pitfalls of the interactive television approach to teaching adult development and aging', *Educational Gerontology*, 25(8): 741–754*.*

Terre Blanche, M., Durrheim, K. & Painter, D. 2006. *Research in practice: Applied methods for the social sciences* 2nd ed. Cape Town: UCT Press.

Tews, M., J., Michel, J. W. & Noe, R., A. 2011. 'Beyond objectivity: The performance impact of the perceived ability to learn and solve problems', *Journal of Vocational Behaviour*, 79: 485-495.

Thurstone, L. L. (1947). *Multiple Factor Analysis,* Chicago, IL: University of Chicago Press

Tison, E. B., Bateman, T. Steven, T. & Culver, M. 2011. 'Examination of the gender-student engagement relationship at one university', *Assessment & Evaluation in Higher Education*, 36(1): 27-49.

Tomlinson, M. 2007. 'Graduate employability and student attitudes and orientations to the labour market', Journal of Education and Work, 204: 285-304.

Tones, M., Pillay, H. & Kelly, K. 2011. 'The link between age, career goals and adaptive development for work-related learning among local government employees', *Journal of Career Assessment*, 19(1): 92-110.

Troskie-De Bruin, C., & Otto, D. 2004. 'The influence of assessment practices on students' learning approach', *South African Journal of Higher Education*, 18(2): 322–335.

Tucker, S. 2002. 'Distance education: Better, worse or as good as traditional education? ', Retrieved 1 October 2010 from http://www.westga.edu/distance/ojdla/winter44/tucker44.html.

Tucker, S. T. 2003. 'A portrait of distance learners in higher education', *Turkish Online Journal of Distance Education,* 4(3), retrieved 1 October 2010 from http://scholar.google.co.za/scholar?q=Turkish+online+journal+of+distance+education.

Tymon , A. 2011. 'The student perspective on employability', *Studies in Higher Education*, DOI: 10.1080/03075079.2011.604408.

Uprichard, E. 2013. 'Sampling: bridging probability and non-probability designs', *International Journal of Social Research Methodology*, 16(1): 1-11.

Unisa Policy on Research Ethics. 2007. Retrieved 19 September 2011 from www.unisa.ac.za/policies/research/.

Unisa student profile 2010. Retrieved 20 February 2011 from www.unisa.ac.za/heda.unisa.ac.za/indicatordashboard/

Valentine, D. 'Distance learning: promises, problems and possibilities', Retrieved 27 February 2012 from http://distance/westga.edu/~distance/ojdla/fall53/valentine53.html.

Van Dam, K. 2004.'Antecedents and consequences of employability orientation', *European Journal of work and Organisational Psychology*, 131: 29-51.

Van den Bogaard, M. 2012. 'Explaining student success in engineering education at Delft University of Technology: a literature synthesis', *European Journal of Engineering Education*, 371: 59-82.

Van den Brink, M., & Fruytier, B. 2012. 'Talent management in academia: Performance systems and HRM policies', *Human Resource Management Journal*, doi: 10.1111/j.1748-8583.2012.00196.x

Van Der Heijde, C. M. & Van Der Heijden, J. M. 2006. 'A competence-based and multidimensional operationalization and measurement of employability', *Human Resource Management*, 453(3): 449-476.

Van Der Heijden, B. 2002. 'Prerequisites to guarantee lifelong employability', *Personnel Review*, 311: 44-61.

Van Der Heijden, B. I. J. M., de Lange, A., Demerouti, E. & Van Der Heijde, C. 2009. 'Age effects on employability-career success relationships', *Journal of Vocational Behaviour*, 74: 156-164.

Van Dinther, M., Dochy, F., & Segers, M. 2011. 'Factors affecting students' self-efficacy in higher education', *Educational Research Review*, 6(2): 95–108.

Van Emmerik, I. J., Schreurs, B., De Cuyper, N., Jawahar, I. M. & Peeters, M. C. W. 2012. 'The route to employability: Examining resources and the mediating role of motivation', *Career Development International*, 17(2): 104-119.

Vansteenkiste, M., Lens, W., & Deci, E. L. 2006. 'Intrinsic versus extrinsic goal contents in Self-Determination Theory: Another look at the quality of academic motivation', *Educational Psychologist,* 41(1): 19–31.

Veira, E. T. & Grantham, S. 2011. 'University students setting goals in the context of autonomy, self-efficacy and important goal-directed task engagement', *Educational Psychology: An International Journal of Experimental Educational Psychology*, 31(2): 141-156.

Vella, J. 2000. 'A spirited Epistemology: Honouring the adult learner as subject', *New Directions for Adult and Continuing Education*, 85: 7-16.

Verbruggen, M. & Sels, L. 2008. 'Can career self-directedness be improved through counselling?', *Journal of Vocational Behaviour*, 73: 318-327.

Wan, Z., Compeau, D. & Haggerty, N. 2012. 'The effects of self-regulated learning processes on e-learning outcomes in organisational settings', *Journal of Management Information Systems*, 29(1): 307-339.

Wales, W. J., Parida, V. & Patel, P. C. 2013. 'Too much of a good thing? Absorptive capacity, firm performance and the moderating role of entrepreneurial orientation', *Strategic Management Journal*, 34: 622-633.

Walker. L., Matthew, B.& Black, F. 2004. 'Widening access and student non-completion: an inevitable link? Evaluating the effects of the Top-Up Programme on student completion', *International Journal of Lifelong Education,* 23(1): 43-39*.*

Warhurst, C.2008. 'The knowledge economy, skills and government labour market intervention', *Policy Studies,* 9(1):71-86.

Waugh, R. F. 2002. 'Creating a scale to measure motivation to achieve academically: Linking attitudes and behaviours using Rash measurement', *British Journal of Educational Psychology*, 72: 65-86.

Welman, J. C.& Kruger, S. J. 2001. *Research Methodology,* 2nd edition, Cape Town, Oxford Unversity Press.

Weng, L-J. 2004. 'Impact of the number of response categories and anchor labels on coefficient Alpha and test-retest reliability', *Educational and Psychological Measurement*, 64: 956-972.

Werner, J. M.& De Simone, R. L. 2009. *Human Resource Development,* Ohio USA: South-Western Cengage Learning.

Wieber, F., Odenthal, G. & Gollwitzer, P. 2010. 'Self-efficacy feelings moderate implementation intention effects', *Self and Identity*, 9(2): 177-194.

Wille, B., De Fruyt, F. & Feys, M. 2010. 'Vocational Interests and Big Five traits as predictors of job instability', *Journal of Vocational Behaviour*, 76: 547-558.

Wilton, N. 2008. 'Business graduates and management jobs: an employability match made in heaven?', *Journal of Education and Work*, 21(2): 143-158.

Wittekind, A., Raeder, S. & Grote, G. 2010. 'A longitudinal study of determinants of perceived employability', *Journal of Organisational Behaviour*, 31(4): 566-586.

William, J. W., Parida, V. & Patel, P. C. 2013. 'Too much of a good thing? Absorptive capacity, firm preformance and the moderating role of entrepreneurial orientation', Strategic Management Journal, 34(5): 622-633.

World competitiveness online, retrieved 2 February 2011 from https://www.worldcompetitiveness.com/OnLine/App/Index.htm.

Ya-Hui, S. 2009. 'Idea creation: The need to develop creativity in lifelong learning practices', *International Journal of Lifelong Education*, 28(6): 705–717.

Yawson, R. M. 2010. 'Skills needs and human resources development in the emerging field of nanotechnology', *Journal of Vocational Education and Training*, 62(3): 285–296.

Youssef, C. M. & Luthans, F. 2007. 'Positive organisational behaviour in the workplace, the impact of hope, optimism and resilience', *Journal of Management*, 33(5): 774-800.

Zacher, H., Heusner, S., Schmitz, M. & Zwieranska, M. M. 2010. 'Focus on opportunities as a mediator of the relationships between age, job complexity and work performance', *Journal of Vocational Behaviour*, 76: 374-386.

Zepke, N., Leach, L. & Butler, P. 2010. 'Engagement in post-compulsory education: students' motivation and action', *Research in Post-Compulsory Education*, 15(1): 1-17.

Zgheib, P. W. & Kowatly, A. K. 2011. 'Autonomy, locus of control and entrepreneurial orientation of Lebnanese expatriates worldwide', *Journal of Small Business and Entrepreneurship*, 24(3): 345-360.

Zimmerman, B. J. 2000. 'Self-Efficacy: an Essential Motive to Learn', *Contemporary Educational Psychology*, 25: 82-91.

Zimmerman, B., J. 2002. 'Becoming a self-regulated learning: an overview', *Theory Into Practice*, 41 (2): 64-70.