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CHAPTER 1: SCIENTIFIC OVERVIEW OF THE RESEARCH

This chapter outlines the scientific background to the research. The manifestation of resistance to change (RTC) (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), work engagement (WE) (represented by vigour, dedication and absorption) and positive psychological capital (PsyCap) (represented by hope, efficacy, resilience and optimism) of open distance learning (ODL) academics in a changing world of work is explored and the rationale for the need for the research outlined. A problem statement is formulated and the research questions recorded. The aims of the research are explained as well as the paradigm perspective. Finally the research design and methodology to be followed in the empirical study is explicated and the chapter outline clarified.

1.1 BACKGROUND TO AND RATIONALE FOR THE RESEARCH

In the present knowledge economy, the external environment is rapidly evolving and South African as well as international organisations increasingly function in a highly competitive, complex and unpredictable environment (Koyunco, Burke, & Ficksenbaum, 2006). This environment is characterised by unstabilty and continuous change and renewal (Sellgren, Ekvall & Tomson, 2007) and according to Burnes (2004b), organisational change is one of the most complex issues facing organisations.

This changing business environment currently demands much more from employees than during any previous time in history (Burke & Cooper, 2009; Rothmann, 2003). Furthermore, employee's RTC is recognised as one of the biggest obstacles and threats to organisations attempting to change or to keep up or ahead of the evolving internal and external environment. Similarly, Prochaska, Prochaska and Levesque (2001) report research results from 400 organisations that point to RTC as the main reason for the failure of organisational change initiatives. The most valuable asset of any organisation is its human capital

(Schultz & Straus, 2008) and organisations therefore require employees with emergent behaviours and personal resources to ensure successful change.

Already in 1987, research indicated that organisations needed to change every four or five years to stay competitive, but change is in the current world of work, constantly part of the organisation (Hacker & Washington, 2004). In resistance, people try to pertain a sense of identity and meaning, by clinging to familiar ways of doing things (Burnes & James, 1994) and therefore the capacity of employees to accommodate change in the organisation, may significantly constrain transformation (Karp, 2004). Almost 20 years ago Strebel (1996) emphasised the fact that vision and leadership drive successful organisational change but only a few leaders recognise the importance of employees' commitment to changing their behaviour.

Moreover, as the labour market is characterised by flexibility, rapid innovations and changes, it is forcing organisations to look for specific competencies and behaviours in employees that can adapt to these challenges (Salanova & Schaufeli, 2008). Avey, Reichard, Luthans and Mhatre (2011) are of the opinion that the changing environment in which organisations function requires flexibility and innovation in the development of employees' knowledge, skills and expertise. Furthermore, Bakker and Schaufeli, (2008) stressed the fact that organisations need proactive employees who are committed to high quality performance, show initiative and regard their own professional development as a high priority. Organisations demand employees who can generate high levels of energy, who are engaged with their work and who can contribute to the organisation's competitive advantage (Bakker, Schaufeli, Leiter & Taris, 2008) however, Deal, Peterson and Gailor-Loflin (2001) are concerned that people have become cynical and pessimistic, whilst the world of work is forcing people to be flexible to changing environments.

The rapid rate of change in organisations is also reflected in the higher education (HE) environment. Higher Education Institutions (HEIs), globally as well as in South Africa, are undergoing constant transformation, in learning itself, and wider

access to and development in communication and information technology resulting in an increase in e-learning (Conceição, 2006), as well as changes in competencies and capacities required from academics (Jamlan, 2004). It is expected of academics to redefine their roles proactively, through well-being and WE and taking initiative (Crant, 2000). They need to overcome several barriers and have to adapt to a new world of adult education as well as take responsibility for their own career development (Jamlan, 2004).

Luthans (2002a) elaborates on the theory that positive psychology, or the application of measurable positive human resource strengths and psychological capacities that can be developed and effectively managed for enhanced performance in the workplace, is an effective modern approach, even in the presence of change. According to Cascio (2001), positive work and organisational psychology is concerned with human behaviour related to work, the organisation and productivity. Schultz and Schultz (2014) emphasise that work and organisational psychological principles help to optimise the success of organisations. Seligman (2002) is of the opinion that positive work and organisational psychology, or the study of optimal human functioning, focuses on two psychological goals namely, to help ordinary people live a more productive and meaningful life, despite a changing, unpredictable world and secondly to focus on a full realisation of the potential present in human beings.

Positive organisations, characterised by flourishing employees and the study of positive organisational psychology, enables institutions and individual employees to flourish through positive well-being, despite change (Seligman & Csikszentmihalyi, 2000). Flourishing employees demonstrate positive feelings and positive functioning (Keyes, 2007) as well as hope, efficacy, resilience and optimism, what has been termed positive psychological capital (PsyCap). It is suggested that these personal resources facilitate WE (Bakker & Demerouti, 2008).

Employees' psychological resources or resource capacities (Luthans & Youssef, 2004; Luthans, Luthans & Luthans, 2004), such as hope, efficacy, resilience and

optimism (PsyCap) are examples of positive individual-level factors that may facilitate change (Luthans, Avolio, Avey & Norman, 2007). It is, according to Luthans, Youssef & Avolio (2007), a construct that enables positive work-related outcomes and positive organisational change that is beneficial to the organisation. In the demanding world of work, organisations need employees who can identify and nurture their own strongest qualities, who can find niche areas in which they can live out these strengths (Seligman & Csikszentmihalyi, 2000).

One of psychology's first laws is that people are different, behave different (Cascio, 1998) and therefore, according to Smith (2005) some people working in an established and settled organisation, will tend to resist change, however for some people change and transformation are exciting and stimulating. Biswass–Diener (2011) is of the opinion that the heart of change is the human capacity to notice a discrepancy between how things are and how they might be. Avey, Wernsing and Luthans (2008), found that employees' PyCap may be important in countering potential dysfunctional behaviour relevant to organisational change.

The changing environment of the ODL academic, requires change resilience, or as reflected by Luthar and Cicchetti (2000), the dynamic interaction between the individual employee and the cultural environment as well as positive outcomes despite significant threats to well-being (Luthar & Zelazo, 2003). Wissing et al., (2014) presents resilience not only as an individual construct, but also as a social construct which implies that resilience is more likely to occur when the organisation provides an environment which enhances well-being of the employee. Rutter (1990) and Grotberg (2003) had seen the phenomenon as maintaining or regaining mental well-being, positive outcomes after a negative event and the capacity for successful adaptation.

In this transformed world of work of academics, new terminology became part of the everyday language such as "open education", "distance learning", "virtual learning", "remote learning", "online learning" and "e-learning" and as digital education has no boundaries, does not distinguish between cultures and stimulate new ways of reasoning, according to Jamlan (2004), a supportive technological

infrastructure as well as the necessary human expertise, are essential for any e-learning system. According to Panda and Mishra (2007), e-learning also requires different pedagogical methods and proactive actions from academics for example comprehensive programmes of continuing professional development and Figure 1.1 provides an overview of the context of the HEI under investigation, based on the macro-, meso- and micro-levels.

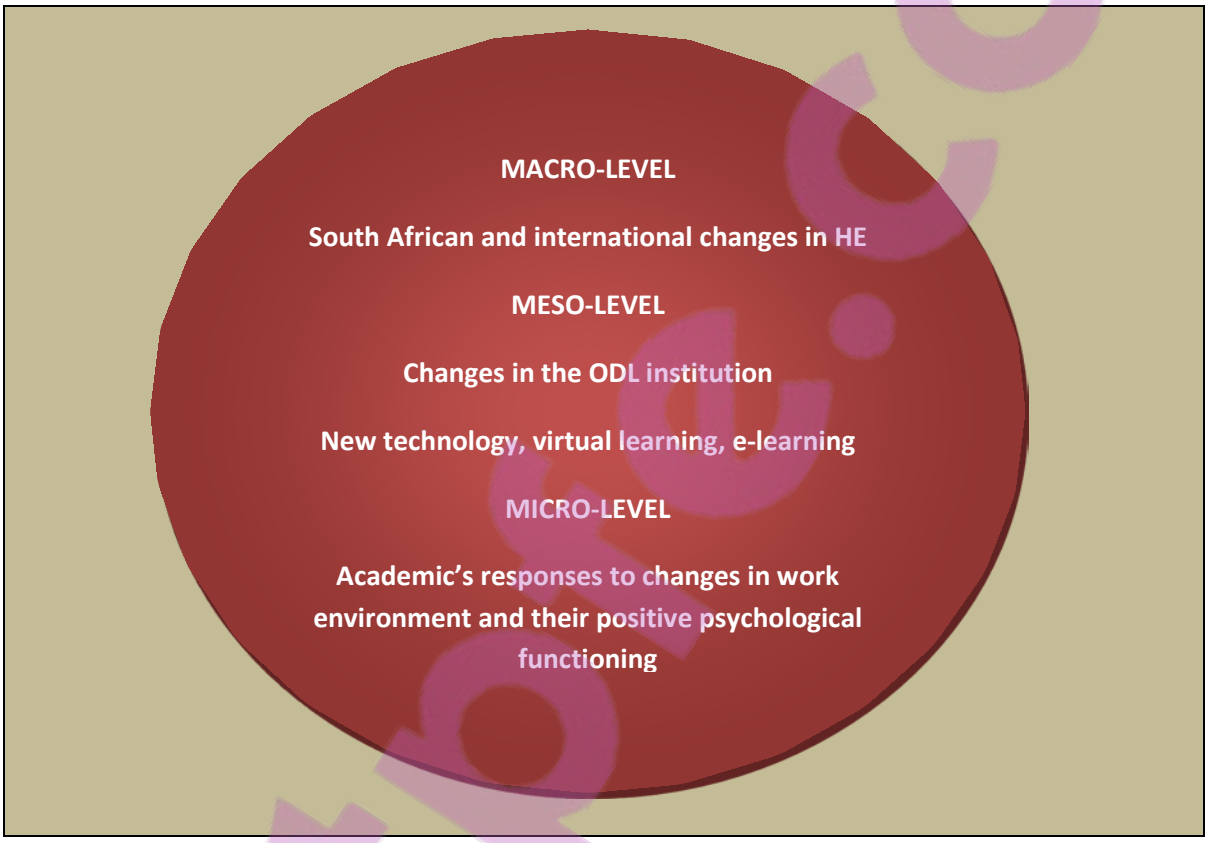

Figure 1.1 Context of the changing work environment of the ODL academic

Firstly, at macro-level, this organisation, being an ODL institution, is functioning and competing in the global HE environment with students from all over the globe.

Secondly, at meso-level, several change interventions were implemented, for example technological as well as pedagogical changes, affecting students and academics, demanding new skills and competencies.

Thirdly, at micro-level, the individual academic as an employee in this ODL institution, is directly affected by these organisational changes and is also expected to adapt to it and embrace the transformation process.

Open Distance Learning (ODL) is a unique form of e-learning, which demands access and availability but also increasingly demand more competencies from academics (Heydenrych & Prinsloo, 2010). This was supported by Paloff and Prat, (2011) as they stated that there is no doubt that on-line teaching demand ample high level skills from the academic and indicated that skill full facilitation requires high level interaction between students and academics. Attitudinal and behavioural barriers were found to play a crucial role in making an effective shift from traditional distance education delivery to web-enabled education (Panda & Mishra, 2007).

As organisational changes are also motivated by gaps between the organisation's goals and current results (Avey et al., 2008), employees often react negatively towards the change process and this affects the well-being of employees and consequently that of the organisation. ODL is a multi-faceted phenomenon that requires academics to bridge the gap between explicit job requirements and the changing work environment (Bates, 2014). It is accompanied by various challenges, such as rapidly changing technologies and pressure to productively employ technology and incorporate appropriate teaching methods into an increasingly diverse HE environment. The result is often occupational stress (Bates, 2014).

The rapid growth of and focus on the field of positive work and organisational psychology has also flourished in HE (Parks, 2011). Positive work and organisational psychology has been taught and applied in HE for almost as long as it has existed as a field but there are nevertheless many potential applications of positive work and organisational psychology in HE that have not yet been developed. Panda and Mishra (2007) state that no research has been done on the psychological perspectives of academics' resistance to e-learning, although the well-being of academics is central to the optimal functioning of any academic

institution. Similarly Beaudion (2009) emphasises that there is a lack of research on ODL academics.

As the meta-theoretical assumptions in the world of work are increasingly being explored in the literature on positive psychology (Christopher & Hickinbottom, 2008; Fowers, 2012; Waterman, 2013) and positive work and organisational psychology is engaged in exploring the optimal expression of potential through the well-being of individuals and positive institutions (Seligman & Csikszentmihalyi, 2000), positive work and organisational psychology is seen as an important means of equiping academics in the HEI with positive organisational behaviour (POB) (Luthans, 2002a), which is characterised by flourishing employees. Furthermore, for academics to flourish, it is necessary for them to engage fully in their work (May, Gilson, & Harter, 2004).

Rothmann and Cooper (2015) recently distinguished between two broad approaches to well-being namely, the disease model and the positive psychology model. The disease model falls beyond the scope of this study but the positive psychology model is seen as relevant to this study. The well-being constructs are illustrated in Figure 1.2.

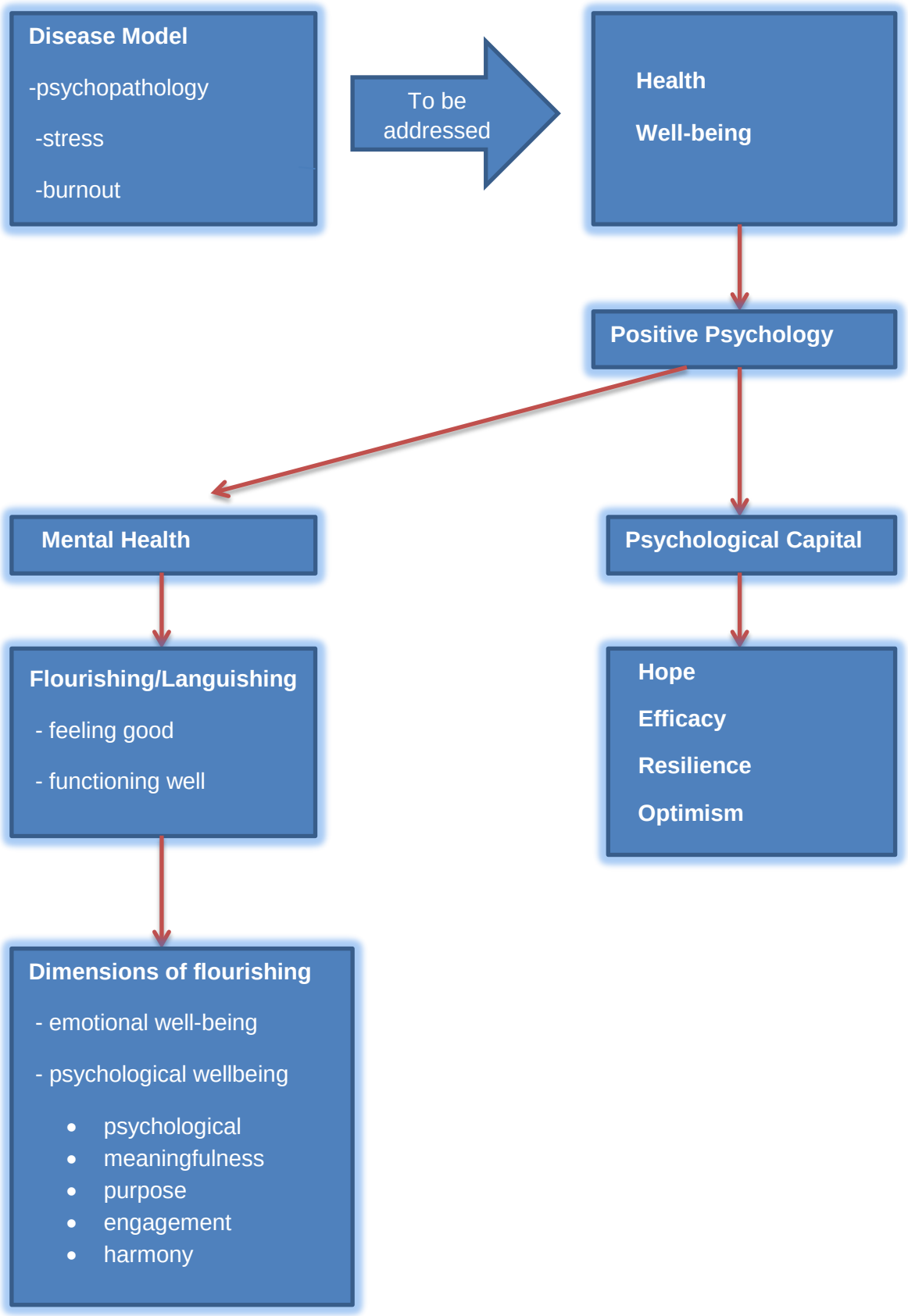

Figure 1.2 Work-related well-being (Adapted from positive psychology model, Rothmann & Cooper, 2015)

For the purposes of this study, this multidimensional model of well-being was adopted and two conceptualisations from positive psychological functioning were singled out namely, the mental health continuum and psychological capital. The mental health continuum consists of complete and incomplete mental health and individuals with complete mental health are flourishing in life with high levels of psychological well-being (Keyes, 2002). Psychological capital is characterised by hope, efficacy, resilience and optimism (Luthans et al., 2007).

Keyes (2005) proposes psychological well-being as a dimension of human functioning and suggests a model of positive mental health. Keyes (2007) operationalises flourishing as a pattern of positive feelings and positive functioning and flourishing was therefore included in this study of positive psychological functioning of ODL academics. The focus will be on the positive behaviour of ODL academics in a changing work environment. The relationship between flourishing and positive work outcomes is under-researched (Bakker & Schaufeli, 2008) and it is stated that flourishing will stimulate contextual performance and engagement at work. As flourishing represents the top end of the well-being spectrum, people are believed to experience high positive affect when they flourish (Bakker & Oerlemans, 2011).

As Rothmann's (2013) multidimensional model includes emotional-, psychological-, and social dimensions of well-being, it could not be addressed in totality in this study. Relevant prior research indicates a wide scope of benefits of high levels of WE for the individual as well as the organisation, especially within the ODL work environment and therefore the focus was on WE as a dimension of flourishing. Without engaged academic staff, no academic institution can really ensure sustainability and quality over the long haul (Altbach, 1991; Pienaar, 2005).

Furthermore, WE is associated with positive work outcomes as it improves the health, well-being and flourishing of employees (Bakker, Demerouti & Schaufeli 2003; Schaufeli & Bakker 2004). It is therefore important to note that increased levels of WE are extremely beneficial for an HEI (Gullup, Inc, 2013). Barkhuizen, Rothmann and Van de Vijver (2014) argue that in the energy-driven environment

of the academic, job demands can increase health problems. However, interventions aimed at increasing job resources contribute to WE which increases well-being. It is suggested that engaged and flourishing academics have abundant resources which they are willing and able to invest in their work so that they can go the extra mile (Demerouti, Bakker & Gevers, 2015).

PsyCap is characterised by hope, efficacy, resilience and optimism and will be discussed comprehensively in section 4.4.2. Empirical studies on PsyCap have shown that it facilitates positive organisational change (Avey et al., 2008) and it was therefore decided that these positive psychological constructs are of relevance to this study of ODL academics in a rapidly changing work environment.

1.2 PROBLEM STATEMENT

The traditional role of the academic used to be one of a "subject specialist" and dispenser of knowledge (Conceição-Runlee & Reilly, 1999) but from the above discussion, it became evident that the role expectations of academics in an ODL environment, have changed significantly and presents a multitude of challenges to the individual academic as well as to the HEI.

The ODL University where this study was conducted, has indicated in a Skills Audit Report that academics, apart from their teaching role, need to be able to participate in effective management of change, be able to demonstrate work resilience (Unisa Skills Audit Report, 2010) to be able to adapt to transformation in the world of work. The ODL student environment in South Africa, consisting of younger, unemployed students, often inadequately prepared for HE (Scott, Yeld & Hendry, 2007) has added another layer of complexity to the world of work of the academic. The potential for heavier and more complex workloads for ODL academics is highlighted in the literature (Kearsley, 2000; Weller, 2002). RTC among academics is seen as an immense obstacle or threat to HEI's attempting to transform in order to adapt to the rapidly changing internal as well as external environment. Limited research has been conducted from a positive psychological

paradigm and PsyCap, which is important in countering potential dysfunctional behaviour associated with change as in the flourishing of academics, which they require to engage fully in work, has not received the necessary attention in academic research (Rothmann, 2002). Furthermore, positive work and organisational psychological functioning, directed at the behaviour of the individual ODL academic as well as the HEI, needs to be researched.

This research project was conceptualised as a result of the increasing emphasis on the changing world of work of academics and the need to adapt to the staffing crises in South African universities because of the increasing demand for skills and training as outlined in the Green Paper on Post-School Education and Training (2012). These challenges and changes often result in RTC (Antonacopoulou & Gabriel, 2001; Frances, 1995) and as employees are the organisational resources most difficult to control (Perez & De Pablos, 2003), Gardner (2004) emphasises that RTC may hamper change efforts. Positive work and organisational psychology, specifying the application of psychological principles such as WE and PsyCap to the work environment to help optimise success despite the changing environment (Schultz & Schultz, 2014), may indicate positive organisational outcomes. Zwetsloot and Pot (2004) argue that employee health and well-being is becoming a business value of strategic importance in the work environment and therefore also for the ODL academic.

Although a lot of research has been done on the role and importance of academics, this group has been largely neglected in terms of psychological behavioural research (Beaudion, 1990; Panda & Misha, 2007)) and the researcher could not find any research on the role of PsyCap in promoting flourishing or WE in ODL academics or how positive psychological resources can contribute to the ability of academics to adapt to change. Ng (2006) as well as Jahanzeb (2010) wrote that hardly any research exist that deals with the work experience or the world of work of the ODL academic.

A review of the current literature on RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), flourishing as indicated

by WE (represented by vigour, dedication and absorption) and positive psychological functioning (PsyCap - represented by hope, efficacy, resilience and optimism), indicated the following research problems:

- Theoretical models do not clarify the relationship between RTC, WE and PsyCap in a single study.
- Industrial and organisational psychologists lack knowledge of the theoretical and empirical relationship between RTC, WE and PsyCap particularly in the South African HE context.
- The specific nature of the relationship between RTC, WE and PsyCap in the changing world of work of academics at an ODL HEI in South Africa is not known — hence the need for investigation.

As all organisations, globally as well as in South Africa, are being affected by multiple changes (Burke, 2008), academics' attitudes towards change in the work environment are often regarded as synonymous with RTC. This study will focus on academics' experience of the changes (RTC) in their work environment (the ODL university) in order to investigate behaviour, perspectives and attitudes. The focus will also be on the positive psychological resources, namely WE and PsyCap, that may facilitate change and enable positive work-related outcomes. In this regard, the research is original and novel in its approach and the contribution it makes to positive psychology literature.

The problem statement, namely the changing world of the ODL academic and the need to adapt to this changing work environment gave rise to the following general research question, from which the specific research questions outlined below were derived:

> What are the interrrelationship dynamics between the psychological constructs of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism), as experienced by academics in the changing environment in an ODL HEI in South Africa?

The following specific research questions emerge from the abovementioned problem statement:

1.2.1 Research questions with regards to the literature review

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

Research question 1: How does the literature conceptualise the context of the work environment of the ODL academic in the 21st century?

Research question 2: How is the psychological behavioural construct of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) as experienced by ODL academics conceptualised and explained by theoretical models in the literature?

Research question 3: How are the positive psychological constructs of WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as experienced by ODL academics conceptualised and explained by theoretical models in the literature?

Research question 4: What is the theoretical interrelationship between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as experienced by ODL academics in a changing world of work?

1.2.2 Research questions with regards to the empirical study

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

Research question 1: What is the nature of the statistical interrelationships of the psychological constructs of RTC (represented by routine seeking, emotional

reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa?

Research question 2: Do statistical significant differences exist between groups of academics as defined by biographical variables (age, gender, marital status, educational level, job level and years of service) between the psychological construct variable RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) and the positive psychological construct variables WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism)?

Research question 3: What recommendations can be formulated for ODL academics, the ODL University, the practice of Industrial and Organisational Psychology as well as for further research based on the findings of this research project?

1.3 AIMS OF THE RESEARCH

From the above research questions, the following aims were formulated:

1.3.1 General aim of the study

The general aim of this study is to investigate the interrelationship dynamics of the psychological constructs of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism), as experienced by academics in the changing environment in an ODL University in South Africa.

1.3.2 Specific aims of the study

The following specific aims were formulated for the literature review and for the empirical study:

1.3.2.1 Literature review

In terms of the literature review, the specific aims were as follows:

Research aim 1: To conceptualise the context of the work environment of the ODL academic in the 21st century.

Research aim 2: To conceptualise the psychological behavioural construct of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) as experienced by ODL academics.

Research aim 3: To conceptualise positive work and organisational psychology as explained by two theoretical models namely flourishing as defined by WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as experienced by ODL academics.

Research aim 4: To conceptualise the theoretical interrelationship between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as experienced by ODL academics in a changing world of work.

1.3.2.2 Empirical study

In terms of the empirical study, the specific aims were as follows:

Research aim 1: To empirically investigate the nature of the statistical interrelationships of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) WE (represented by vigour, dedication and

absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa.

Research aim 2: To empirically investigate whether significant differences exist between groups of academics as defined by biographical variables (age, gender, marital status, educational level, job level and years of service) between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism).

Research aim 3: To formulate recommendations for ODL academics, the ODL HEI, Industrial and Organisational Psychology as well as for future research based on the findings of this research project.

1.4 STATEMENT OF SIGNIFICANCE

The positive psychological constructs of WE (represented by vigour, dedication and absorption) in this study and PsyCap (represented by hope, efficacy, resilience and optimism) appear to have an influence on an individuals' RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity). In-depth studies have been conducted on RTC, WE and PsyCap, however, no integrated theoretical research exists, explaining the relationship dynamics between these psychological constructs in an ODL University. This research is a starting point in studying the relationship between these constructs in the South African academic context. This research may prove useful on a theoretical, empirical and practical level.

1.4.1 Contribution on a theoretical level

On a theoretical level, this research may develop a better understanding of the positive psychological constructs of WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism)

and the influence thereof on an individual's RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity). If significant relationships are found, it could raise awareness of the fact that individual academics posess different levels of RTC, as well as different levels of positive psychological functioning, influencing their adaptation to the changes in the world of work.

Where relationships are found between the variables, the findings may prove useful to future researchers in exploring possible interventions to enhance positive psychological functioning by reducing resistance of ODL academics. Furthermore, the research results could contribute to the body of knowledge concerned with positive psychological factors that may possibly increase an individual's positive psychological functioning and well-being in a changing work environment.

1.4.2 Contribution on an empirical level

On an empirical or methodological level, the research may provide useful insight into firstly, the empirical interrelationships found between the psychological construct RTC, and the positive psychological constructs of WE and PsyCap, secondly into the relationships found between RTC and WE and RTC and PsyCap as well as the relationship between WE and PsyCap and thirdly that there are significant differences between groups of academics as defined by biographical variables namely age, gender, marital status, job level, educational level and years of employment. If significant relationships are found, then the findings will be useful in informing Industrial and Organisational Psychology, the HEI and ODL academics of how positive psychological constructs and biographical variables play a role in the psychological functioning and well-being of the academic.

1.4.3 Contribution on a practical level

On a practical level, the study could establish whether ODL academics from different groups of age, gender, marital status, job level, educational level and years of employment differ in terms of their RTC and levels of positive

psychological functioning defined by WE and PsyCap. Industrial and Organisational Psychology and the HEI will be able to develop interventions to enhance the positive psychological functioning as well as skills and behaviour of ODL academics which will enable them to adapt to and willingly take part in changes in the dynamic, changing work environment.

In summary, Industrial and Organisational Psychology and the HEI could be made more aware of the reducing of RTC in academics as well as their positive psychological functioning that influence their optimal positive work and organisational psychological functioning and well-being. This research is breaking new ground as there is no existing study on the interrelationship between the behavioural constructs of RTC, WE and PsyCap of ODL academics in the South African context.

1.5 PARADIGM PERSPECTIVES OF THE RESEARCH

A paradigm in the social sciences includes the accepted theories, models, body of research and the methodologies of a specific perspective (Mouton, 2001). Their origin is mainly philosophical and is neither testable nor meant to be tested. This study is related to the fields of psychology and industrial and organisational psychology, as well as the sub-discipline of positive work and organisational psychology.

1.5.1 The intellectual climate

The literature review will be presented from the perspectives of the humanistic paradigm and the positive psychology paradigm which developed as a specialised field within the humanistic paradigm. The empirical study will be presented from the perspective of the positivist research paradigm.

1.5.1.1 Literature review

The literature review will be presented from the following paradigmatic perspectives:

(a) The humanistc paradigm

The basic assumptions of the humanistic paradigm according to Meyer, Moore and Viljoen (1997) are the following:

The individual is an integrated whole - this study focuses on perspectives of individuals in an organisation as collective. It goes beyond exploring the views of individuals of that unit, and considers the impact of the collective on the individual.

The individual is a dignified human being - the person is a dignified being and is only a person when seen in a human context. This implies that the interpersonal experiences of the person cannot be ignored and the current study is interested in the population sample's opinions and perceptions.

Human nature is positive - people are basically good, and their destructive behaviour is caused by environmental or organisational influences such as change in the work environment, work overload, insecurity, unemployment and discrimination.

The individual has conscious processes - the person is a conscious being with self-awareness. This is of vital importance to the humanistic theorists.

The individual is an active being - the person is a unique and intentional being who is actively involved in attaching meaning to work and environment and setting goals despite challenges.

Thematically, the humanistic paradigm relates to the constructs of RTC, WE and PsyCap.

(b) The positive psychology paradigm

The positive psychology paradigm, which has its roots in humanistic psychology (Resnick, Warmoth & Serlin, 2001), studies the entire functioning person and self-actualisation (Rogers, 1961) and expresses a vision of optimal living by sharing those actions which lead to the development of positive and healthy individuals (Maslow, 1968; Spencer & Rathus, 2005).

The basic assumptions of the positive psychology paradigm according to Snyder and Lopez (2002) are aimed at identifying and concentrating on strengthening behaviour; the individual is seen as not being a passive vessel but as an active decision maker; are aimed at enhancing optimism that enable individuals to become skilled disputers; it focuses on overall well-being of the individual as well as on constructive cognitions about the future namely optimism, faith and hope.

Thematically this paradigmatic perspective relates to the constructs of WE and PsyCap.

(c) Positivist paradigm

The empirical findings of this study will be presented from the positivist paradigm, which is defined by Burrell and Morgan (1979) as an epistemology which seeks to explain and predict what will happen in the social world by searching for regularities and causal relationships between its constituent elements.

Positivism can be viewed as the existence of a direct relationship between the world (objects, events and phenomena) and our perception and understanding of it. Hammersley (2012) is of the opinion that the positivist research paradigm seeks to explain, clarify and predict what happens in the social world by searching for regularities and causal relationships between its basic parts. Krauss (2005) states that the objective of the study is independent of researchers, and knowledge is discovered and verified through direct observations or measurements of phenomena. The phenomenon is analysed by taking it apart to examine the components of the parts, in order to establish the facts. Epistemologically,

positivists perceive science as a way in which to discover the truth, so that it can be understood well enough to be predicted and controlled (Bryman, 2012).

This paradigm is important to this study because it attempts to draw objective conclusions by minimising errors through statistical data analysis. The empirical study in this research is in the form of a quantitative study (Bryman, 2012).

Thematically, the empirical study will deal with psychological behaviour broken down into small facets, which can be measured directly through various techniques (Angen, 2000).

1.5.2 Market of intellectual resources

The market of intellectual resources refers to the collection of beliefs that have a direct bearing on the epistemic states of scientific statements (Mouton & Marais, 1996). For the purpose of this study, the theoretical models, metatheoretical statements and conceptual descriptions relating to psychological constructs of RTC as well as positive psychological constructs of WE and PsyCap are presented.

1.5.2.1 Meta-theoretical statements

The meta-theoretical statements represent an important category of assumptions underlying the theories, models and paradigms of this research. Meta-theoretical values and beliefs have become part of the intellectual climate of each particular discipline in the social sciences (Mouton & Marais, 1996). Meta-theoretical statements are presented on the following disciplines:

(a) Industrial and Organisational Psychology

This study is undertaken in the context of Industrial and Organisational psychology, which is conceptually defined as the scientific study of human behaviour in the workplace, or the application of psychological facts, principals,

theory and research to the work setting (Cilliers,1991; Landy & Conte, 2004). It will include a study of the factors that influence work behaviour, such as technology, organisation change and effectiveness (Landy & Conte, 2004). The study will examine the relationship between RTC, WE and PsyCap of ODL academics.

The relevant subfields of Industrial and Organisational Psychology included in this research will be positive organisational psychology, personnel psychology and psychometrics.

(b) Positive work and organisational psychology

Within the field of Industrial and Organisational psychology, the study of positive work and organisational psychology is concerned with an awareness of the flourishing, happiness and well-being of people in the work and organisational context (Gable & Haidt, 2005; Linley et al., 2011; Rothmann, 2013; Swart & Rothmann, 2012). Work and organisational psychology comprises work psychology or how people should be managed strategically towards well-being (Armstrong & Taylor, 2014) and organisational psychology or the behaviour of people and how it affects the functioning and performance of the organisation (Robbins & Judge, 2013). Positive work and organisational psychology is the scientific study of what enables individuals as well as organisations to flourish by focusing on reaching optimal potential through positive well-being, positive traits and positive institutions (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000).

In this study, the two models of positive psychological functioning that are reconnoitred are firstly flourishing, as defined by WE and secondly, PsyCap.

(c) Personnel Psychology

Within the field of Industrial and Organisational Psychology, the study of Personnel Psychology is concerned with the measurement of the personality characteristics of individuals. Personnel Psychology focuses on the psychological elements of the employee (Coetzee & Schreuder, 2010). The study of personality focuses on the

characteristics of individuals and the similarities and differences between people (John & Gross, 2004). It also deals with the evaluation of employees.

In this study, levels of the subscales of RTC - routine seeking, emotional reaction, short term focus, cognitive rigidity as well as the dimensions of WE – vigour, dedication and absorbtion of ODL academics were investigated. It also included the subconstructs of PsyCap - hope, efficacy, resilience and optimism.

(d) Psychometrics

This relates to the principles and practices of psychological measurement, such as the development and standardisation of psychological tests and related statistical procedures (Coetzee & Schreuder, 2010). Psychometrics enables researchers to measure behaviour in various forms, providing different explanations for inter- and intrapersonal functioning.

In this study, questionnaires were used to measure individuals' level of RTC, WE and PsyCap.

1.5.2.2 Theoretical models

The theoretical beliefs described here are testable statements about the what (prescriptive) and why (interpretive) of human behaviour and social phenomena. These include all statements which form part of hypotheses, typologies, models, theories and conceptual descriptions (Mouton & Marais, 1996).

In this research the theoretical models will be based on the following:

In terms of the literature review on RTC, the specific theories that will be reviewed are Harper's (1993), Lewin's (1945), Kotter's 1995), Swidler's (1986) and Woodman's (1989).

The specific theories that will be reviewed in terms of the literature review on flourishing are Keyes's (2007) and Seligman's (2011). The literature review on WE

is presented from the perspective of Maslach and Leiter (1997) who described WE as characterised by energy, involvement and efficacy. The perspective of Schaufeli (2004) was also considered.

The literature review on PsyCap is presented from the perspective of Luthans et al., (2007) as well as Seligman and Csikszentmihalyi (2000).

1.5.2.3 Conceptual descriptions

Constructs of psychological behaviour of academics in a changing ODL work environment were evaluated in this research. The following is a description of the constructs of this study:

- RTC originated in psycho-analysis but Del Val and Fuentes (2003) stated that organisations, evaluating RTC, may provide an important point of reference to improve the understanding of the variables that support organisational change through positive organisational behaviour.
- Kahn (1990) conceptualised engagement as when employees connect themselves to their work roles, people employ and express themselves physically, cognitively, emotionally and mentally during role performances.
- Flourishing incorporates two dimensions namely feeling good and functioning well according to Keyes and Annas (2009). Functioning well integrates engagement, hope, efficacy, resilience and optimism.
- WE is defined by Schaufeli and Bakker (2004) as a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption.
- Vigour is characterised by, despite difficulties that the employee will continue to work and put in a lot of effort in work related tasks. Dedication means to be enthusiastically and with pride, involved in your work. Absorption indicates a strong desire to devote your time and undivided concentration to your work.
- Psychological capital is the positive and developmental state of an individual characterised by high levels of hope, efficacy, resiliency and optimism (Luthans, Youssef et al., 2007).

- Efficacy to succeed at challenging tasks, optimism to succeed now and in the future, hope that goals will succeed and sustained resilience to succeed in the face of adversity, characterise PsyCap (Luthans, Youssef et. al., 2007).

1.5.2.4 Central hypothesis

The central hypothesis of the research can be formulated as follows:

The interrelationships between the academic's RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) constitutes individuals with different levels of psychological behaviour that informs optimal positive work and organisational psychological functioning in a changing work environment. This hypothesis further assumes that academics with a particular level of positive psychological behaviour, will be able to adapt to changes and be more engaged, hopeful, efficacious, resilient and optimistic, which in turn will influence their work performance in a changing ODL work environment. Furthermore, significant differences exist between groups of academics as defined by age, gender, marital status, educational level, job level and years of service with regards to RTC, WE and PsyCap.

1.5.2.5 Theoretical assumptions

Based on the literature review, the following theoretical assumptions are addressed in this research:

- There is a need for basic research on RTC as it is a multifaceted construct, originating as a psychodynamic construct and seen as a defense mechanism. Social scientists attached a negative connotation to resistance and being multidimensional, it can be influenced by positive organisational psychology.

- Flourishing and well-being are important criteria for WE, hope, efficacy, resilience and optimism (PsyCap) and can contribute to the optimal functioning of ODL academics.
- High levels of PsyCap contribute to employee well-being and increased WE.
- Knowing an individual's levels of WE and PsyCap will increase understanding of how academics will be able to cope with the changing environment that they are functioning in.
- Biographical and psychological factors such as age, gender, marital status, educational background and well-being will influence an individual's positive psychological functioning.

1.5.2.6 Methodological assumptions

Methodological assumptions are beliefs about the nature of social science and scientific research with the inclusion of methodological models such as quantitative and qualitative models (Mouton & Marais, 1996). Methodological assumptions in the social sciences are related to research which may be regarded as objective by virtue of its being critical, balanced, unbiased, systematic and controllable (Mouton & Marais, 1996). They continue to state that there is a direct link between methodological beliefs and the epistemic status of research findings. The following main epistemological assumptions are the methodological assumptions that affect the nature and structure of the research domain and these relate to methodological choices, assumptions and suppositions that make for sound research.

(a) Sociological dimension

The sociological dimension conforms to the requirements of the sociological research ethic, which draws on the research community for sources of theory development. Within the bounds of the sociological dimension research is experimental or non-experimental, analytical and exact, since the issues that are being studied are subject to quantitative research and analysis (Mouton & Marais, 1996). This research will be descriptive in nature and will include the quantitative

analysis of variables and concepts that will be described in Chapter 5 (the empirical research) and Chapter 6 (the research results) in this study.

(b) Ontological dimension

The ontological dimension of research encompasses that which is investigated in reality. It relates to the study of human activities and institutions whose behaviour can be measured. This research will measure the constructs of RTC, WE and PsyCap.

(c) The teleological dimension

This dimension suggests that research should be systematic in nature and goal-directed. It is important, therefore, to state the problem being investigated and relate it to the research goals. The research goals are explicit in this research, namely to invesigate the effect of RTC, WE and PsyCap on academics in an ODL environment. Furthermore, in practical terms the teleological dimension of this research project aims to further the field of Industrial and Organisational Psychology by contributing knowledge that can enable an individual academic to become more engaged in a changing work environment.

(d) The epistemological dimension

According to Mouton and Marais (1996), this dimension relates to the quest for truth. A primary aim of research in the social sciences is to generate valid findings that approximate reality as closely as possible. This research attempts to achieve this truth through a good research design and the achievement of reliable and valid results.

(e) The methodological dimension

Methodological assumptions are beliefs concerning the nature of social science and scientific research. Methodological beliefs are more than the methodological

preferences, assumptions and presuppositions about what ought to constitute sound research (Mouton & Marais, 1996). An optimal research design incorporating relevant methods will be used to test the theoretical hypothesis.

In this research, exploratory and descriptive research will be presented in the form of a literature review on ODL, RTC and positive psychological functioning. Quantitative (descriptive and explanatory) research will be presented in the empirical study (Terre Blanche et al., 2006).

1.6 RESEARCH DESIGN

According to Terre Blanche and Durrheim (2002), research design is a strategic framework which serves as a bridge between research questions and the execution of the research. The research design of this study is discussed with reference to the types and sequence of research activities that will be conducted.

1.6.1 Exploratory research

According to Mouton and Marais (1996), the object of exploratory research is to gather information from a relatively unknown field. The key issues are to gain new insights, establish central concepts and constructs, and then establish priorities. This research is exploratory because it will compare various theoretical perspectives on RTC, WE and PsyCap.

1.6.2 Descriptive research

Descriptive research comprises the in-depth description of the individual, situation, group, organisation, culture, subculture, interactions or social objects (Mouton & Marais. 1996). Its purpose is to systematically classify the relationships between variables in the research domain. The aim is to describe issues as accurately as possible.

In the literature review, descriptive research is applicable with reference to the conceptualisation of the constructs of RTC, WE and PsyCap.

In the empirical study, descriptive research is applicable with reference to means, standard deviations and correlations, in terms of the constructs of RTC, WE and PsyCap.

1.6.3 Explanatory research

Explanatory research goes further than merely indicating the relationship that exists between the variables (Mouton & Marais, 1996). The researcher seeks to explain the direction of the relationship and in this study, this form of research is applicable in the empirical study of the relationship between RTC subscale scores, dimensions of WE and the subconstructs scores of PsyCap of a group of subjects. The end goal of the research is to draw conclusions about the relationship between the constructs of the psychological construct of RTC and the positive psychological constructs of WE and PsyCap.

This research thus fulfils the requirements of the type of research as outlined above.

1.6.4 The variables

This research attempted to measure the interrelationship between a psychological construct (RTC) as the independent variable and a composite set of positive psychological constructs (WE, PsyCap) as the dependant variables.

The research also attempted to assess whether age, gender, marital status, job level, educational level and years of employment act as moderating variables of the relationship between RTC, WE and PsyCap. According to Kerlinger and Lee (1999) an independent variable is the presumed cause of the dependent variable – the presumed effect. Similarly, Terre Blanche and Durrheim (2002), view an independent variable as the element considered, manipulated or chosen by the

researcher to establish its relationship with a practical phenomenon, the dependent variable.

In this study, in order to measure the relationship between the dependent and independent variables, criterion data on independent and dependent variables were collected by means of the criteria forms (the measuring instruments) selected for the purpose of this research. The research variables and their relationships are indicated in Figure 1.3.

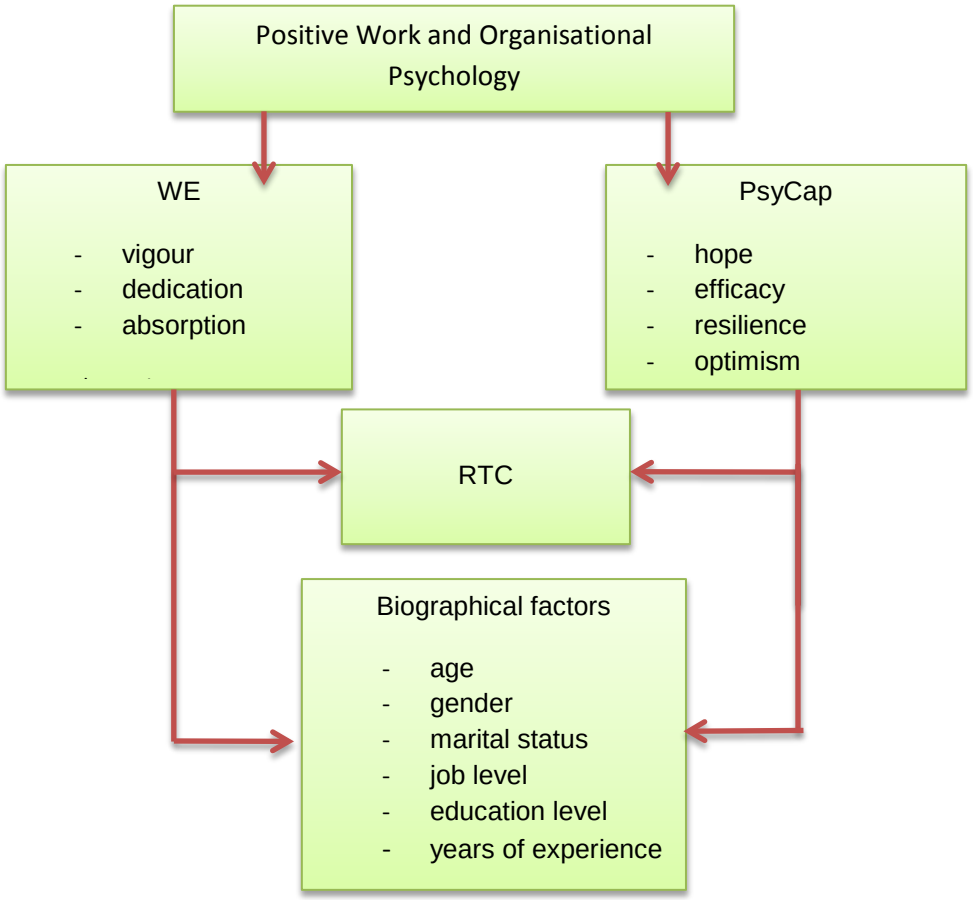

Figure 1.3 An overview of the core research variables and the relationships investigated

1.6.5 Ethical considerations

Following De Vos, Delport, Fouche and Strydom (2011), who defined ethics as a set of moral principles which refer to the quality of research procedures with

regard to adherence to professional, legal and social obligations to the research participants, the following ethical principles were adhered to (De Vos et al., 2011):

- Research was conducted within recognised parameters.
- Approval was obtained from the HEI (refer to Appendix B).
- Permission was obtained from the research ethics committee of the particular organisation.
- A lime survey was distributed via e-mail and confidentiality was assured.
- Both classical and recent resources were used to analyse and describe the concepts.
- Experts in the field of research were consulted to ensure a scientific research process.
- All sources were cited.
- An informed agreement was entered into with the participants.
- Participants were informed about the results of the research.
- Access to appropriate information on the research was provided by reporting the research process and findings in the form of a thesis.

1.7 RESEARCH METHODOLOGY

This research is conducted within a South African ODL university, being one of the mega-universities in the world, the largest in Africa, with approximately 350 000 students and approximately 1660 permanent academics in service. This institution could not escape the developments and changes in the HE system in South Africa, such as massification, low pass rates from students and tremendous pressure on academics for increased research outputs. The additional pressure on academics to prepare these students for the challenges of the 21st century, many of them underprepared and under-resourced, must not be underestimated (Heydenrych & Prinsloo, 2010).

The research is conducted in two phases, which will be discussed in the section below.

PHASE 1: LITERATURE REVIEW

Step 1: The ODL context in the 21st century

The changing role of the academic was highlighted as were the ways in which RTC can influence the role of the ODL academic. An evaluation of the HE sector was made to determine the transformation and changing work environment of the ODL academic. Emphasis was placed on fierce competition amongst institutions, global mobility, the increased importance and use of digital technology and a shift towards learner-centred and industry based education, resulting in the changing roles of academics. Competencies required of ODL academics were also discussed. The background for the importance of positive work and organizational psychological functioning in this changing environment was provided.

Step 2: Resistance to Change

Research on the reaction to change as a response to a stimulus within the context of the organisation, often seen as RTC, and related theoretical models are critically evaluated. Finally, the positive effects of change as well as interventions to promote change are presented.

Step 3: Positive Work and Organisational Psychology

A critical evaluation was made of positive work and organisational psychology which according to Seligman (2002) could prevent the onset of psychopathology. It also emphasises that individuals have strengths and potential despite a challenging environment, that can be expressed in well-being. Flourishing and functioning well in the work environment result in WE, hope or goal directedness, efficacy or cognitive resources, resilience or positive change and optimism or a positive expectancy of work and life. Two models of positive psychological functioning namely flourishing as defined by WE, and PsyCap and how this can assist in coping with RTC were discussed. Finally the positive effects of positive

work and organizational psychology for Industrial and Organisational Psychology practices as well as individuals were discussed.

PHASE 2: THE EMPIRICAL STUDY

The research took the form of a quantitative survey design comprising the eight steps outlined below. Some of the advantages of a survey design are that it is cost-effective and a large number of respondents can be surveyed.

Step 1: Determination and description of the population and sample

The determination and description of the population and sample is discussed in Chapter 5 in detail.

Step 2: Choosing and motivating the measuring instruments

The following measuring instruments were used in this study:

- A biographical questionnaire to obtain the personal information needed for the statistical analysis of the data – age, gender, marital status, educational level, job level and years of service as an ODL academic

Three quantitative instruments were chosen for this study namely:

- The resistance to change scale (RTC) (Oreg, 2006)
- The Utrecht work engagement scale (UWES) (Schaufeli, 2002)
- The psychological capital questionnaire (PCQ-24) (Luthans et al., 2007)

The measuring instruments are discussed in Chapter 5 in detail.

Step 3: Data collection procedure and administration of the measuring instruments.

The responses of subjects to each of the items in the three questionnaires were captured in an electronic spreadsheet format. All data were analysed by means of

the The Statistical Package for Social Sciences 22.0 (SPSS, 2003) programme and AMOS Version 19 (Arbuckle 2006).

Step 4: Reporting on data analysis

The statistical procedure relevant to this research includes descriptive statistical analysis (means, standard deviations, kurtosis and skewness); validity and reliability (Cronbach's Alpha coefficients), correlational analysis (Pearson product-moment correlation coefficients); exploratory and confirmatory factor analysis, structural equation modelling, and test for significant mean differences.

The statistical processing of the data will be discussed in Chapter 5 in detail.

Step 5: Formulation of the research hypotheses

The research hypotheses are formulated from the central hypothesis to be empirically tested.

Step 6: Reporting on and interpretation of the results

Results are presented in tables, diagrams and/or graphs and the discussion of the findings are presented. The results are reported in Chapter 6.

Step 7: Integration of the research results

The findings relating to the literature review and the findings from the empirical research have been integrated to create overall findings.

Step 8: Formulation of research conclusions, limitations, and recommendations

The final step, Chapter 7, relates to conclusions based on the results and the integration thereof with theory. The limitations of the research are discussed, and recommendations are made in terms of RTC and positive psychological functioning (WE and PsyCap) of academics in an ODL work environment.

1.8 CHAPTER DIVISION

The chapters are presented in the following manner:

Chapter 1: Scientific overview of the research
Chapter 2: Meta theoretical framework: The ODL context in the 21st Century
Chapter 3: Resistance to change
Chapter 4: Positive Work and Organisational Psychology
The integration of the literature on the research constructs resistance to change, work engagement and psychological capital.
Chapter 5: Research design and methodology
Chapter 6: Research results
Chapter 7: Conclusions, limitations and recommendations

1.9 CHAPTER SUMMARY

The background to and motivation for the research, the problem statement, the objectives of the study, paradigm perspective, the theoretical research and its design and methodology, the central hypothesis and the research method were all discussed in this chapter. The rationale for the study is that no known research has been conducted on the interrelationship dynamics between the psychological constructs of RTC, WE and PsyCap of academics in an ODL work environment. The research will therefore critically investigate, on the basis of sound research methodology, the interrelationship dynamics of these psychological constructs.

Chapter 2 addresses research aim 1 and conceptualised the context of the work environment of the ODL academic in the 21st century from a meta-theoretical perspective.

CHAPTER 2: META THEORETICAL FRAMEWORK: THE OPEN DISTANCE LEARNING ENVIRONMENT IN THE 21 ST CENTURY

This chapter focuses on the ODL work environment of academics as the context of the present study which forms the boundaries of the research. Academics at ODL universities experience a number of challenges, such as rapidly changing digital technologies, an interactive online teaching environment and fast-growing demands from industry. Global changes impacting the ODL university, require the redefinition of roles and competencies expected from academics and the barriers encountered by academics are also outlined. These trends require an understanding of the work environment in the 21st century in contrast to the traditional role of the academic.

2.1 THE OPEN DISTANCE LEARNING WORK ENVIRONMENT

Higher education (HE) is a very complex, dynamic industry which had enrolled approximately 19 million students by 2010 and employed 3.4 million people worldwide (Weisbrod, Ballou & Asch, 2010). More recently, the HE sector has been transformed and has seen several changes in government funding, fierce competition among institutions, global mobility, the increased importance and use of digital technology and a shift towards learner-centred and industry-based education, resulting in rapidly changing roles of academics (Bokor, 2012; Briggs, 2005).

In this section, the evolution of the concept of ODL is discussed, ODL is defined as a phenomenon and a theoretical framework of ODL is outlined.

2.1.1 Evolution of the concept of Open Distance Learning

Distance education has a long history going back around 180 years (Schlosser & Simonson, 2009), when the opportunity to study “Composition through the medium of the Post” was advertised in 1833 in Sweden. Schlosser and Simonson (2009) provide a detailed history of the rapid development of distance learning in Europe and the United States. Distance education using correspondence models began in

Australia early in the twentieth century to address the needs of rural families but did not reach significant proportions at tertiary level until much later in the century (Erdos, 1986). Although distance education at universities is generally perceived as a recent phenomenon, it was already being offered in 1911 by the University of Queensland in Australia and correspondence education through the University of South Africa (Unisa), was launced in 1946 (Roberts, 2000).

ODL is a concept that combines the methodology of distance education with the concepts of open and flexible learning (Belawati & Baggaley, 2009) and refers to more than merely the geographical distance between the university and the students. Heydenrych and Prinsloo (2010), state that it also includes time, economic, social, educational, epistemological and communication distances. The ODL environment is therefore multidimensional, as illustrated in Figure 2.1.

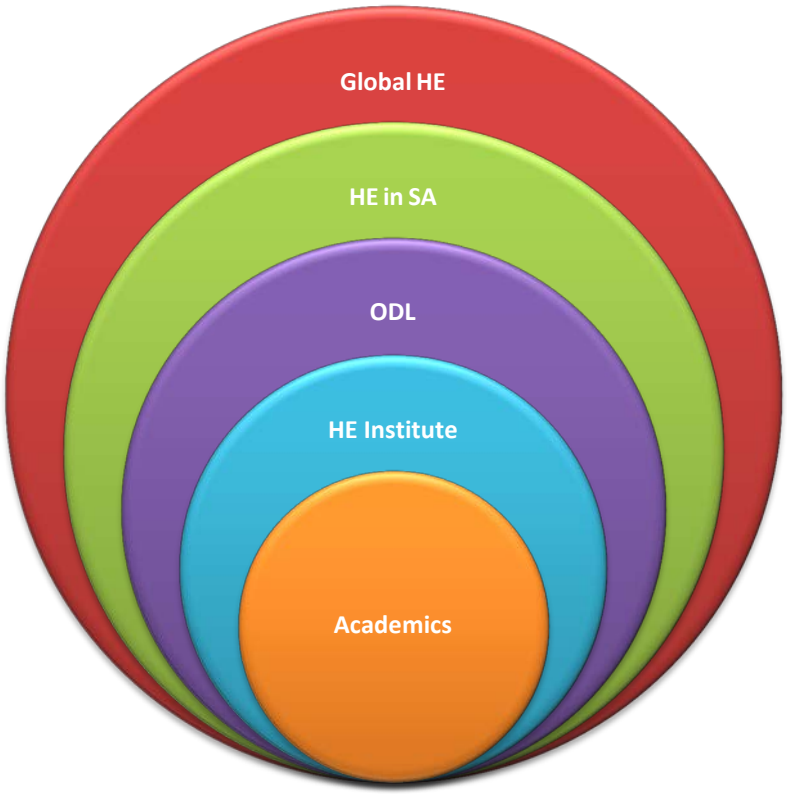

Figure 2.1 The multidimensional ODL environment (own compilation)

Although correspondence programmes have served higher education students for over a hundred years (Shifter, 2000), the phenomenon of e-learning is relatively new (Panda & Mishra, 2007). Etymologically e-learning has caught the imagination

of academics, with the emergence of the World Wide Web in 1991. Despite the many advantages of e-learning, with a strong emphasis on flexibility and learner centredness, openness in terms of access, delivery and interpretation, Rossen and Hartley (2001) and Rowntree (1992) have reported skcepticism on the part of academics and resistance towards adapting to web-based technology.

From another perspective, the metaphor of generations is often used to describe the evolution of distance education and the development of the different phases or the paradigm shift in distance education that has occurred (Bates, 2014; Belawati & Baggaley; Moore, 1997). These models, presented by a number of authors, focus mainly on the impact of technology on distance education and do not integrate its multidimensionality. Furthermore, they have not considered the disparities within the student audience in matters such as preparedness for higher education or the role of the ODL academic. However, according to Heydenrych and Prinsloo (2010), it was only in generation 5 that curriculum development and pedagogical practices became drivers of new approaches in teaching and learning and have therefore forced academics into change. The characteristics of the development of ODL in the different generations, as described by various authors, are as follows:

Generation 1

Period 1451–1916 (Guglielmo,1998)

The benefits of the invention of the printing press, the further development of printing and correspondence as modes of communication, and the mail system as a delivery option, were enhanced through new media and technologies. The pedadogy that was followed in generation 1 was behaviourism, characterised largely by the transmission of information. Knowledge was formulated and sanctioned by the powerful elite and embedded in gender, class, caste, and race/tribal assumptions and relations (Guglielmo, 1998). Correspondence distance education began in Europe and this period saw the rise of the modern university, with the development of different disciplines. The interaction between students and educators was content-based and dominated by the limitations of print technology.

Content was stored in books, letters, text and images, the latter part of this period saw the advent of film (Guglielmo,1998).

Generation 2

Period 1918–1955 (Purdy, 1980)

The second generation emphasises the technological developments reflected in media recording, film, animation, radio and television, as well as mass media. New media technologies that enabled content to be delivered to students anywhere, while requiring minimal equipment in the form of radio and later, television were introduced. However, this generation did not see any major changes in curriculum development, content ownership or pedagogies. Behaviourism and cognitivism were still dominated by the transmission of information (Purdy, 1980).

These generations relied mostly on correspondence and the use of media, and focused largely on the production of the curriculum, as embodied in the content of learning materials, and its transmission and delivery to students (Garrison, 2000; Peters, 1998). The responsibility of the institution was to develop the content and ensure its delivery to students with little, if any, interaction between students and the delivering institution. The responsibility of the student was independent study methods such as self-directed learning, also with very little interaction between the student and the academic. Generations 1 and 2 had a profound influence on the evolution of mega-universities such as the University of South Africa (Unisa) and the Open University of the United Kingdom (OUUK) in terms of production systems and organisational planning (Heydenrych & Prinsloo, 2010).

Generation 3

Period 1956–1968 (Horton, 2000)

This generation was characterised by the development of computer systems. The first real breakthrough occurred in the 1960s when computer technology was first acknowledged as a means of transmitting knowledge, by the University of Illinois which incorporated sophisticated branching necessary for teaching complex subjects (Horton, 2000). The curriculum was still determined by the university/lecturer and the pedagogical approach did not change from that of

previous generations, namely the dominant approach was still the transmission of content with behaviourist learning objectives in mind.

Students were able to access the material in their own time and at their own pace, gaining the required knowledge, but although this was a form of interactive human-computer learning, it did not represent efficient two-way communication over a distance. Learning was not seen as a social process in which priority is given to teacher-student interaction and the use of technology did not impact on the nature of the knowledge produced and transmitted (Horton, 2000).

Generation 4

Period 1969-2005 (Taylor, 1995)

Taylor (1995) and Lauzon and Moore (1989) are of the opinion that the emergence of online group communication and the sharing of resources can be classified as a fourth generation of distance education. Two-way communication technologies allow direct interaction between the teacher, who is the originator of the instruction, and the remote student as well as among remote students themselves. Consequently, relationships are formed in order to foster collective development in this online learning community.

Holmberg (1977), another fourth-generation distance learning theorist, also arrived at the conclusion that although substantial conversation can be incorporated into pre-produced courses, continued communication between student and lecturer is important. Although there may be a need for independence among distance students, with sufficient communication and support, students should be able to construct knowledge together with facilitators and fellow students. Knowledge construction, based on the pedagogy of behaviourism/constructivism and social constructivism learning philosophies, emerged as institutions experimented with collaborative learning and the online learning community. Barnett (2004) reported an increase in problem based knowledge production in the fourth generation.

Generation 5

Present day (Taylor, 2001)

Taylor (2001) introduced his fifth generation of distance learning, which he called the intelligent flexible learning model, noting that it is based on intelligent technologies that are able to record conversations and then allow for reusability through automated response systems. This generation of distance education presented the first generation in which curriculum development and pedagogical practices became drivers of new approaches to teaching and learning. Naidu (2014) is of the opinion that the internet and the Web are responsible for the exponential growth of online education.

The fifth generation is characterised by behaviourism, cognitivism, constructivism and social constructivism (Taylor, 2001). Given the rapid global technological advances and the great complexities academics face, it has become necessary to produce knowledge in which "knowing the world is a matter of producing epistemological gaps and accepting that knowing produces further uncertainty" (Barnett, 2004, p. 251). This could imply that creating knowledge, is never ending. New trends in international HE, are also influencing the South African scene. Terminology like Open Educational Resources (OERs) - freely accessible documents and media for teaching, learning, education, assessment and research purposes - and Massive Open Online Courses (MOOCs), a term proposed in 2008 by George Siemens and Stephen Downes (Rodriguez, 2013), have become part of everyday educational language. Flexibility and adaptability of design distinguish 21st century ODL from older forms of ODL (Garrison, 2000; Haughey, 2010; Tait, 2010). This has signalled a new era in HE and also redefined the experience and challenges of academics in the HE environment and universities, as well as the competencies required of them. This has changed the world of work of the academic and although, according to Baruch (2004), change has always been present, the pace of change has seen rapid increases.

2.1.2 Defining Open Distance Learning

ODL highlights the convergence of the philosophy of open learning espoused by open universities and the distance education and e-learning pedagogies and technologies adopted by these institutions to enable flexible learning, independent learning, and the building of learning communities (Arinto, 2013). Caruth and Caruth (2013) define ODL as instruction in which students are separated from instructors during the entire course of study. Recently, Simonson, Smaldino, Albright, and Zvacek (2012) have expressed the opinion that ODL is institution-based, formal education where the learning group is separated from the academic and where interactive telecommunications systems are used to connect learners, resources and instructors.

Over 30 years ago, Holmberg (1982) noted that ODL includes all the various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises but which, nevertheless, benefit from the planning, guidance, and teaching of a supporting organisation.

It is also over 30 years ago that Keegan (1980) stated comprehensively that ODL refers to:

- the separation of academic and student;
- the influence of an educational organisation in the planning, development and distribution of learning materials and student support services;
- the use of technical media to unite academics and students and carry the educational content;
- the provision of two-way communication to allow students to participate in and initiate dialogue;
- the possibility of occasional meetings for both didactic and socialisation purposes and lastly, participation in an industrialised form of education.

With reference to the abovementioned definition of ODL by Keegan (1980), it is important to explain its relevance for this study.

Separation of academic and student

ODL was born out of the need to serve a socioeconomic and political agenda towards improving the quality of life of the less privileged members of society (Wedemeyer, 1981) and it embraced the notions of openness (Lewis, 1986; Rowntree, 1992).

Today, the value of ODL is that education is a basic need that should be accessible to all and, as Sen (1999) indicated, it is the path to real freedom, because it is education which opens doors to meaningful choices that are essential for social and economic development.

Influence of an educational organisation

In the early 1980s, various terms emerged for various forms of learning and teaching that are equivalent to ODL, namely open learning, flexible learning, blended learning, distributed learning, online learning and e-learning. The one common trait was organised educational delivery that did not require the students and academics to be in the same place at the same time (Paine, 1989).

Today, there is a wide range of dedicated ODL universities and programs (Gallagher & Garrett, 2013). Furthermore, the nature of universities is undergoing intense change and the educational organisation or university of the future might be an entity like the Open Education Resources university which merely facilitates the Internet and the Web to bring together students and academics to make education available to anyone, anywhere, at any time (Naidu, 2014).

Use of technical media to unite academic and student

In the early days, the role of printed study materials was to bridge the physical separation of the distance student from the academic and the university where they never came together physically. This ensured a great deal of flexibility and

independence for the ODL student, did not exclude anyone and served as a medium for carrying the educational content (Keegan, 1980; 1993).

Today, the use of online learning tools, connecting the academic and the student and carrying the educational content, has made the ODL experience a lot more effective, efficient, and engaging (Naidu, 2014). However, despite the excitement of embracing the Internet and the Web to bridge the distance between the student, the academic and the university, it is arguable that ODL has in fact further alienated individuals who should be empowered, especially those in developing contexts who do not have access to reliable and affordable Internet service (Baggaley, 2008).

Provision of two-way communication

The earliest form of correspondence education and communication between ODL students and academics was correspondence by letter. Today, various contemporary technologies, ranging from audio and video conferencing, online messaging, and e-mail to social media tools, are available to support two-way and multiple-way communication between students, academics and the university - both synchronously and asynchronously (Naidu, 2014).

These technologies, especially the Internet and the Web, are responsible for the exponential growth of online education, according to Naidu (2014). Furthermore, they are also responsible for promoting the view that knowledge and understanding are the result of communication, discussion and debate, epitomised by the concept of connectivism and the notion of massive, open, online courses (Downes, 2012; Milheim, 2013; Naidu, 2013; Siemens & Downes, 2011).

The possibility of occasional meetings

ODL implied that students and academics did not meet regularly. However, in the case of print-based distance education, occasional optional face-to-face meetings would be organised (Naidu, 2014). Today, with the availability of advanced communications technologies such as audio and video conferencing, and social media tools, opportunities for distance learners to meet virtually for socialisation

and to debate educational content has improved significantly. Naidu (2014) draws attention to the fact that occasional face-to-face meetings in an ODL context are not an anathema, but a necessary component when they are appropriately integrated by the academic.

Participation in an industrialised form of education

Naidu (2014) is of the opinion that in comparison with conventional educational practices, which were characterised by classroom lectures and tutorial work, ODL resembled an industrialised form of educational practice. This was the result of its progressive thinking in its use of technology for learning and teaching and the fact that it offered a choice to those who could not afford campus-based education, as well as the result of its logistics, which were characterised by task specialisation and the division of labour, as was the case in the industrialisation of our economy during the eighteenth century (Peters, 1983). In conventional educational practice, academics are responsible for designing the course, teaching it, assessing student work, and providing students with feedback, as well as engaging in research and scholarship in their field. In ODL, however, these functions are disaggregated and carried out by specialists in specific areas of course design and development, distribution, support and evaluation (Naidu, 2014).

Today, in an increasingly competitive contemporary HE environment, proliferation of information and communications technology requires a variety of additional skills and competencies from academics, over and above subject matter knowledge, in order to be effective and efficient. The diverse nature of the student profile contributes to the complexity and as a result, the aggregation of the various functions of teaching, research and professional engagement in academe in an ODL environment is undergoing rapid change (Rosenbloom, 2011).

While Keegan's (1980) six defining characteristics of ODL still explain the phenomenon today, clearly the ODL field has undergone a great deal of change, and is very likely to continue to change as the HE technologies and their environments continue to change.

2.1.3 The changing environment in Open Distance Learning

According to Picciano (2006), there is no clear single pedagogy of ODL, although the rapid pace of social and economic change, increasing globalisation, advances in technology and information, and significant demographic shifts have contributed to the creation of a changing environment for the ODL academic within which to function. A major challenge for academics in ODL in the 21st century is to change conventional teaching methods to adjust to the latest communication and technological developments, and to gain the necessary skills to teach effectively in an online environment. ODL is a unique form of distance education and the openness presents an ideological position that affects the access to and availability of knowledge (Heydenrych & Prinsloo, 2010). As a result, ODL universities utilise technology to bridge the geographical distance but it is often ignored that distance education is a multi-dimensional construct and the academic, as one of the most important resources of the HEI, plays a vital role in this multi-dimensional construct.

Much of the literature in ODL discusses the importance of academics, but according to Beaudion (2009), they have been largely neglected by the research. As far back as 24 years ago, Baldwin (1990) stated that academics experience a multitude of challenges at every stage of their professional lives. These include a lack of collegiality, poor student performance, increased requirements to undertake scholarly activity such as research and community engagement (Boice & Turner, 1990) but limited research has been done on this matter. Similarly, Conceição (2006) reported that on the experiences, attitudes and behaviour of academics in an ODL environment, is limited and consequently identifies a gap.

In the teaching world of the ODL academic, the online approach, when compared to traditional methods, demands a multidimensional, intensive effort and much more time from academics to develop, design and administer their work. DiBiase (2000) reported 16 years ago that the efficiency of an online course is directly related to the amount and quality of the instructional design and the development effort that produced it. Visser (2000) similarly stated that delivery, quality and effort

may also depend on the level of institutional support and training. There is no doubt that on-line teaching demands high-level skills from academics. Over 10 years later, Paloff and Pratt, (2011) stated that successful facilitation of knowledge requires high-level interaction between students and academics but academics are often unprepared for the demands of their job (Jahanzeb, 2010; Ng, 2006).

The complex and changing character of the ODL academics' environment, roles and tasks requires them to learn their professional practice comprehensively. They should be able to evaluate their own practice and to identify what they need to improve (Guasch, Alvarez & Espasa, 2010). Furthermore, they should be able to guide and promote their own professional development in a variety of learning situations, be able to develop professional knowledge, based on teaching from their practice and, if possible, also based on research (Guasch, et al., 2010). Bates (2014), arrived at a similar conclusion, noting that academics often receive limited training in online teaching, pedagogy and educational research. It is important to note that Chimbo and Tekere (2014) found that 62% of academics at an ODL university indicated that they were willing to migrate to ODL teaching completely but also indicated that they needed further training on these new online technologies as well as the development of skills for the digital age (Bates, 2014).

2.2 GLOBAL TRENDS IN OPEN DISTANCE LEARNING

Coch and French (1948) state that frequent changes in the work environment are necessary to keep up with competitive conditions and technological development. Veldsman (2002) contends that technological innovation often makes the difference between life and death in an organisation. Within the current competitive, global business environment, information and communication technology has become the key to a competitive advantage as well as possibly the most enabling resource in enhancing organisational performance and enabling people to choose and actualise a different future (Harris, Stanz, Zaaiman & Groenewald, 2004). All organisations need to position themselves in the changing world economy and this applies to institutions of learning as well (Baijnath, 2012).

In this section the focus is on ODL in First World countries, ODL in developing countries and also specifically ODL in Africa.

2.2.1 Open Distance Learning in First World countries

According to Olcott (2009), nearly every one of the 4130 colleges and universities in the US as well as most higher education institutions in the UK offer some form of distance education to students. Allen and Seaman (2008) report that enrolments in higher education distance learning online courses outpaced overall HE enrolments in the US.

Research in Australia indicates a fundamental transformation of the higher education scenario and Bokor (2012) identifies five major forces impacting on trends in international universities. This has a severe impact on the functioning of academics as well as on the skills required by academics to adjust to these trends in the work environment. Figure 2.2 illustrates the drivers of change that impact on trends transforming international higher education (Bokor, 2012).

Figure 2.2 Drivers of change impacting on trends

The trends as postulated by Bokor (2012) include the premises that the *democratisation of knowledge and access*, due to the massive increase in the availability of online knowledge and the mass expansion of access to university education, will lead to a fundamental change in the role of the academic. Fiercely competitive international student markets and funding issues will challenge the *contestability of markets and funding*. Furthermore, *digital technologies* changed the world of work of universities and academics, lead to the rise of online learning as well as blended learning. According to Bokor (2012), emerging markets have become global-scale competitors in the international student market and *global mobility* will increase for students as well as academics. Lastly, HEI and academics need to *collaborate intensively with industry* in the decade ahead to reinforce the role of drivers of innovation and growth.

Organisations world wide need to find ways to cope with an aging population and an increasingly aging workforce (Feyrer, 2007; Peeters & Van Emmerik, 2009). Furthermore, in the USA, by the end of 2017, the number of workers who are 55-64 years old is expected to rise by 36.5 percent. This will possibly also impact on the aging of academics in HEIs world wide.

Lockwood (2013) is of the opinion that universities have entered a phase of change and are experiencing trends that manifest in the progressive expansion and application of ODL methodology. This change is a social imperative and First World countries are showing that they are prepared to meet the demands.

2.2.2 Open Distance Learning in developing countries

Asia currently has the largest number of adult online and distance learners in the world, with 70 ODL universities (Latchem & Jung, 2010). In China, more than 10 percent of university students are engaged in online learning, and in India, 20 percent of all tertiary students are enrolled at the Indira Gandhi Open University (Latchem & Jung, 2010; Kang & Song 2007). Student access to technology and the challenges of the 21st century are expected to increase the demand for HE, and especially ODL, as it is more affordable and accessible.

2.2.3 Open Distance Learning in Africa

Many African countries are faced with a massive increase in the demand for HE and only 6 percent of Africans participate in HE compared to a world average of 25.5 percent (Kokutsi, 2011). It is clear that for the foreseeable future HEIs on the African continent can not address this high demand. Furthermore, the demand is not only for increased access, but also for successful increased access. Studies have consistently identified the shortage of computers and lack of Internet access and low Internet bandwidth as the main contextual barriers to the use of ODL in Africa (Hatakka, 2009; Hodgkinson- Hoosen, 2012; Williams, 2003; Wilson-Strydom, 2009).

Skills shortages in Africa are a reality and are also experienced in HE and at universities. Academic knowledge, experience and skills are not always passed on from senior to junior academics and Boice (1993) indicates that academics often experience mid-life burnout or disillusionment, leading to low morale. In view of the projection made by Crawley (1990) as far back as 26 years ago that at least half of the full-time academics will be 55 years of age or older by the turn of the century, it is necessary to enhance the development of academics from entry level in order to integrate personal, professional and organisational aspects. In South Africa, in 2012 the average age of academics was 59 years (HESA, 2012). Theron, Barkhuizen and Du Plessis (2013) report that 34% of academics consider resigning from their institution mainly because of change in the environment and extensive workloads. HEIs therefore need pro-active strategies to retain skills and knowledge of academics for longer.

2.3 TRANSFORMATION OF THE ACADEMIC IN OPEN DISTANCE LEARNING

In this section, the focus will be on the academics' changing role and competencies in an ODL environment and the barriers experienced in the work environment.

2.3.1 The changing role of the ODL academic

Technology and the shift from a predominantly print-based teaching mode to an online mode characterised by the use of virtual learning environments and web technologies have changed academic's perspectives and roles.

2.3.1.1 Defining the role of the ODL academic

McLagan (1989) defines a role as a major area of functioning, encompassing a number of competencies. Therefore, the role of the academic can be described as a set of expectations defining the appropriate behaviours and expectations of the incumbent of one position in relation to academics in other positions (Johnson & Johnson, 1994).

In the ODL context, Conceição-Runlee and Reilly (1999) define the role of the academic as that of a facilitator who moves from the centre of instruction to the sideline as virtual, online conversations become more learner-centred. Proactive behaviour in the sense of using initiative to create new circumstances, or to improve current circumstances, can become part of one's role behaviour. Proactive redefining of one's role in an organisation can lead to fulfilment of job requirements (Crant, 2000).

2.3.1.2 Differentiation of the roles of the ODL academic

With rapidly changing technology, academics are constantly challenged to design assignments, projects, and assessments that teach and assess students' critical thinking skills and performance. Distance education theorists such as Moore (1973), Wedemeyer (1981), Holmberg (1982) and Peters (1983) have realised for some time that ODL has become a complex, sophisticated set of phenomena which have drastically changed the role of the academic. Over the years, the numerous roles of online academics have been mentioned in the literature using different terms and descriptions (Anderson, Rourke, Garrison & Archer, 2001; Berge & Collins, 2000; Coppola, Hiltz & Rotter, 2002; Goodyear, Salmon, Spector, Steeples & Tickner, 2001; Graham, Cagiltay, Lim, Craner & Duffy, 2001; Guasch

et al., 2010; Salmon, 2004). Similarly, various researchers over the past years have analysed the changing role of the academic in a virtual learning environment (Coppola et al., 2002; Egan & Akdere, 2005; Goodyear et al., 2001; Williams, 2003).

As argued in the literature (Surikova & Baranova, 2009), in ODL the most important and accessible learning resource for the student is the academic. However, the role of the academic has moved away from that of a direct instructor with subject-matter expertise who starts with the development phase of a course and continues until the course has been replaced or is no longer relevant (Anderson et al., 2001). In ODL, the boundaries between the development and the delivery of learning material have become increasingly blurred, and traditional development roles are being deconstructed and reinvented as the role of academics in the design of pedagogically effective learning environments receives renewed emphasis (Anderson, 2008; Bennett, Agostinho, Lockyer & Harper, 2009).

Berge (1995) referred to one of the early models describing the academic's role in a virtual environment as the instructor's roles model, which identified the academic's functions under four different categories namely, a pedagogical role, a social role, a managerial role and a technical role as illustrated in Figure 2.3.

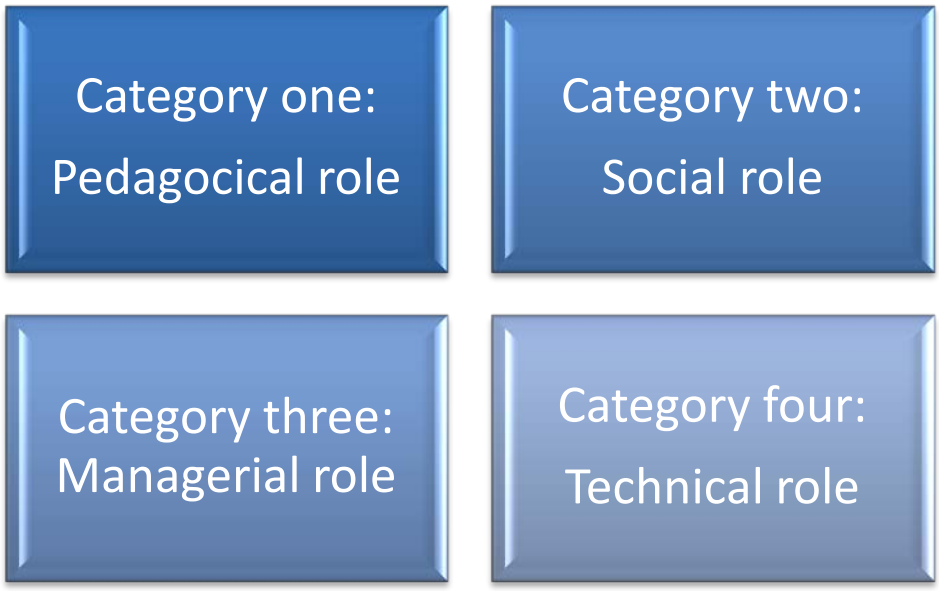

Figure 2.3 The instructor's roles model (Berge, 1995)

The pedagogical role refers to facilitating learning via ODL discussions; the social role refers to encouraging, promoting and improving student-academic relationships, through humour and energy as well as establishing a connection; the managerial role refers to planning, organising, leading and designing the logistics of the discussions; and the technical role refers to providing a transparent technology environment to the learners (Berge, 2009; Berge & Collins, 2000).

These roles were suggested at a time when academics were moving to online environments, where the main activities were designed around online discussions. However, owing to the explosion of virtual worlds and other ODL environments, Berge (2009) suggests a change in the roles of academics that would focus more on collaborative and reflective learning, with user-generated content as seen today in MOOCs and OERs.

Anderson et al. (2001) suggest three categories of academics' online roles to ensure an academic presence, namely instructional design and organisation, facilitating discourse and direct instruction, as indicated in Figure 2.4:

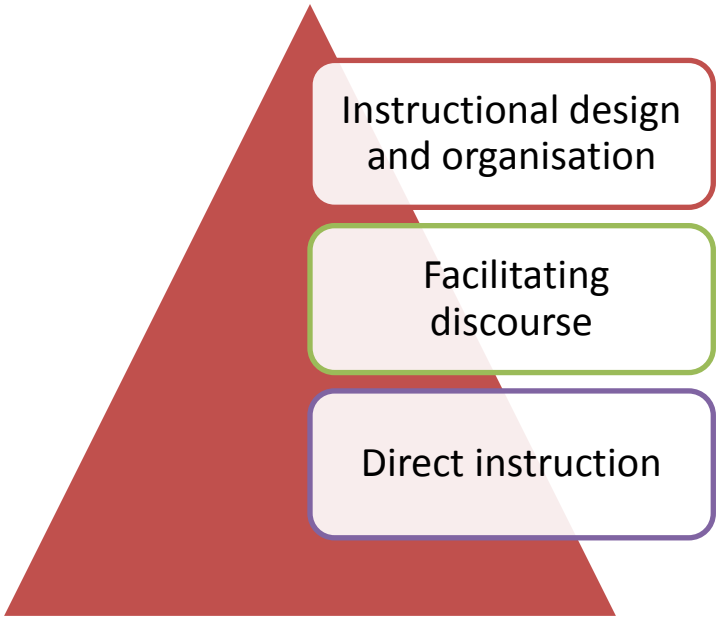

Figure 2.4 Academics' online roles (Anderson et al., 2001)

An academic presence is defined as the design, facilitation, and direct instruction of cognitive and social processes for the purpose of achieving meaningful and

educationally worthwhile learning outcomes (Anderson et al., 2001). Furthermore, an academic presence is considered to be what the academic does to create a community of inquiry with social and cognitive presence, although all participants within the ODL environment can also contribute to the academic presence by sharing the facilitation responsibilities (Baran, Correia & Thompson 2011).

Similarly, Coppola et al. (2002) focus on the changing pedagogical roles of virtual professors in asynchronous learning environments and identify three roles of ODL academics when they become “virtual professors” (p. 9), namely a cognitive role, secondly an affective role and thirdly a managerial role. Figure 2.5 illustrates the interrelationship of the roles of the ODL academic.

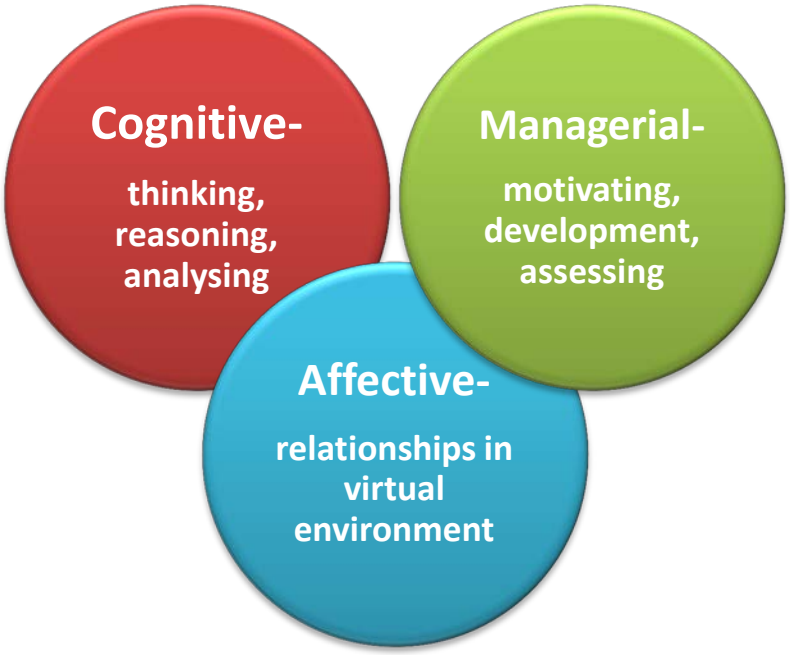

Figure 2.5 Interrelationship of the roles of the ODL academic (Coppola et al., 2002)

The cognitive role is connected to the deeper-level mental processes of learning, information storage and thinking, the affective role is influenced by the relationships between students and academics and a managerial role relates to the management and monitoring of students, as well as the technological development of the course or learning material. These roles add another dimension to the role of the academic as they imply another dimension of interaction.

Goodyear et al. (2001) differentiate between the roles of an ODL academic as a process facilitator, adviser/counsellor, assessor, researcher, content facilitator, technologist, designer and manager/administrator. Moreover, Aydin (2005) identifies additional roles, such as content expert, instructional designer and materials producer and Bawane and Spector (2009) similarly mention the following roles which emerge from the literature: professional, pedagogical, evaluator, administrator, technologist, adviser/counsellor and researcher. Bitzer (2008) argues that the work of the academic has become more emotionally demanding and very fragmented.

Beaudion (2009) argues that academics need to understand how they can adapt to their new roles and to change, as the majority of academics remain resistant to, or ignorant of, technology as an instructional tool. Technology has increasingly turned the academic into an intermediary between the student and available resources, according to Beaudion (2009) and although the teaching role is not becoming obsolete, it is being transformed dramatically. According to Egan and Akdere (2005), given the complex interaction described, roles and competencies are interrelated.

2.3.2 Competencies of academics

ODL is a learning system that combines open learning characteristics and skills with distance delivery or online learning methodologies. This learning system requires specific competencies from academics.

2.3.2.1 Defining competencies required of the ODL academic

Spencer and Spencer (1993) define competencies as instigators or predictors of behaviours and performance. Competencies could be regarded as a personal skill or ability, linked to behaviour efficiency (McLellan, 1996; Spencer & Spencer, 1993). Furthermore, competencies could be motives, traits, self-concepts, attitudes or values, content knowledge, or cognitive or behavioural skills - any individual characteristic of an ODL academic that can be measured or counted reliably (Spencer & Spencer, 1993).

A competency could also be defined as strategic behaviour, linked to the possibility of adjusting performance to the demands of the professional context. For the purposes of this study, competencies are seen as necessary to ODL academics to enable them to adapt to the demands of a changing higher education work environment (Gonczi, Hager & Athanasou, 1993). Furthermore, it could be a descriptive tool that identifies skills, knowledge, personal characteristics, and behaviour needed to effectively perform a role in the university, contributing to meeting its strategic objectives (Lucia & Lepsinger, 1999).

More recently, Surikova and Baranova (2009) define competence as the capacity to perform the key occupational tasks that characterise a profession. Specifically, in terms of ODL success, Bigatel, Ragan, Kennan, May and Redmond (2012) define a competency as the knowledge, skill, attitude or ability that enables the academic to effectively perform required functions to some standard of success, especially within the changing environment.

2.3.2.2 Differentiation of competencies of the ODL academic

An effective ODL environment relies on the behaviour, attitudes and competencies of those who are in charge of the environment, with the competencies of academics being regarded as the centre of all interactions. Relevant research indicated technology-related competencies (Egan & Akdere, 2005), communication competencies (Williams, 2003) and assessment-related competencies (Aydin, 2005) as outstanding for an ODL academic's success.

Various researchers have drawn attention to specific competencies required of an ODL academic. A review of some competencies appears in Table 2.4.

Table 2.1

Competencies of ODL academics

Knowledge experts; Listeners and communicators; Coaches; Facilitators; Mentors; Problem solvers; Designers; Supporters; Resource co-ordinators.	(Lentell, 2003)
Competency in terms of technology, communication, time, online education and content.	(Aydin, 2005)
Design instructional strategies; Develop appropriate learning resources; Implement instructional strategies; Facilitate participation among students; Sustain students' motivation.	(Bawane & Spector, 2009)
Acquisition of professional identity; Choice and organisation of scientific content; Language competence; Tutorial competence; Development of methodological strategies; Design and implementation of didactic materials; Evaluation of teaching-learning processes; Application of principles oriented to the model of didactic innovations; Construction of approaches to educational research; The challenges of information and knowledge.	(Surikova & Baranova, 2009)
Content development; Design of learning activities; Teaching strategies; Assessment.	(Arinto, 2013)

For this study, it is important to note that all the abovementioned competencies are of importance for academics in this complex HEI work environment. The dynamic global changes and diverse student profile indicate that appropriate learning and development programmes underpinned by the development of relevant competencies are necessary to equip ODL academics with the required skills, knowledge, behaviour and attitudes. Similarly, a study by Egan and Akdere (2006) has confirmed the emergence of key competencies for ODL academics as well as the need for additional understanding associated with roles, behaviour and related changing job requirements in the world of work. Arinto (2013) and Varvel (2007) are of the opinion that professional development of academics in ODL is a

complex process that requires continuous engagement in advanced roles and competencies.

2.3.3 Barriers experienced by academics in Open Distance Learning

ODL academics constantly encounter barriers in their work environment which can be experienced as prohibitive.

2.3.3.1 Defining barriers

A barrier is defined as any condition that makes it difficult to make progress or to achieve an objective (WordNet, 1997). In the world of work of the ODL academic, barriers can be defined as the aggregate effect of institutionally embedded disincentives which deter the optimal participation of academics in teaching activities (Olcott & Wright, 1995).

2.3.3.2 Differentiation of barriers experienced by ODL academics

Major investments in the latest technology and online teaching will be meaningless if academics are overwhelmed and hindered by barriers and they receive no support from the institution to remove or address these barriers or support to adapt to a rapidly changing work environment (Salanova & Schaufeli, 2008). Davis, Bagozzi and Warshaw (1989) predicted 25 years ago that academics need to engage in new behaviour and that the universities need to eliminate negative attitudes and beliefs about these new innovations, which are seen as barriers, before academics will adopt innovations.

Berge (1998) and Berge and Mrozowski (1999) identify *cultural and technical* barriers as predominant in the ODL environment. Cultural barriers include academics' resistance to innovation and change as well as negative attitudes towards technology. The technical barriers address issues such as the reliability of technology, adequate infrastructure, connectivity and technical support.

Pajo and Wallace (2001) came to the conclusion that barriers fall into three groups namely *personal barriers, attitudinal barriers and organisational barriers*. Personal barriers include lack of knowledge, lack of skills, inadequate training, inadequate role models, time required to learn new technology, time required to develop and implement online courses and the ongoing monitoring of courses. Attitudinal barriers include lack of faith in technology, unwillingness to work with technology and concerns about student access. Among many organisational barriers, the following are seen important for the ODL academic: inadequate technical support, hardware and software support, workload of academics, instructional design and insufficient resources.

Pajo and Wallace, (2001) also state that the most prohibitive barriers experienced by academics, are the extensive time required to learn the new technology and to develop and implement online courses and then monitor such courses. Pajo and Wallace (2001) also confirmed that some of the main barriers to the effective use of technology include academic's attitudes and RTC, lack of technical support from the organisation, insufficient resources and inadequate training.

The extensive workload of academics was found to be one of the principal barriers to optimal functioning (Panda & Mishra, 2007; Schifter, 2000), a finding reiterated by Naidu (2014), who also reported a lack of time to develop ODL material.

More recently, Bates (2014) argued that academics face an increasingly diverse work environment and experience a lack of training in pedagogy as well as ODL training material development. Furthermore, Bates (2014) is of the opinion that academics are not developing adequate skills for the digital age.

From the literature, it is evident that ODL academics have been found to experience numerous barriers. However, Barkhuizen, Rothmann and Van de Vijver (2014) have found that the decrease in the work overload of academics, identified as the top barrier, should enhance the physical and psychological well-being of academics.

2.4 CHANGES IN THE OPEN DISTANCE LEARNING CONTEXT

In this section, the focus will be on global changes in the ODL context as well as on changes in the South African ODL context.

2.4.1 Global changes

Research indicated that the global world of work has become unstable and is characterised by continuous change and renewal (Malone, 2004; Sellgren, Ekvall & Tomson, 2007). The most effective way in which to address the forces impacting on all organisations, is to continuously adapt to change (Wilson, DeJoy, Vandenberg, Richardson & McGrath, 2004).

Global changes have also impacted higher education institutions (HEI) and more specifically Open Distance Learning (ODL) universities (Bates, 2014; Briggs, 2005; Naidu, 2014; Welch, 2014). Global change necessitates agreement on defining the functions of academics in virtual environments and their corresponding competencies, attitudes and behaviour (Guasch et al., 2010). Armenakis and Bedeian (1999) argue that because of constant changes, universities need to motivate employees to change their behaviour in new and unique ways. Similarly, Eby, Butts and Lockwood (2003) note that academics require competencies which refer to the capacity to adjust to constantly changing situations, and adapt their behaviour accordingly.

However, employee resistance to change (RTC) is a significant obstacle in effective organisational change and resistance manifested through employee dysfunctional attitudes (for example disengagement), and negative behaviours (for example deviance). The abovementioned trends therefore, have created a need for the understanding of the changing world of work of the ODL academic, being the most important resource of the HEI (Olcott, 2008: Olcott & Wright, 1995).

The changing ODL environment, is characterised by a transactional distance (Moore, 2007), where learner and academic are separated physically, and this can result in uncertainties and even in a psychological distance. Furthermore, this can

create a psychological as well as a communication gap, potential misunderstanding between the learner and the academic and according to Moore (1997), this disconnectedness may impact on performance, motivation and engagement of both the learner and the academic.

2.4.2 The South African context

The South African HE sector has changed dramatically and the average annual increase in student enrolments for the period 2000 to 2007 has been 4.8% (Higher Education of South Africa, 2010). South Africa has 23 public universities which employ 41 383 academics (Council on Higher Education, 2009).

The South African ODL university where this research was conducted, which is one of the mega-universities of the world, has not been able to escape the developments and changes in the HE system, such as massification, low pass rates and tremendous pressure for increased research outputs (Scott et al., 2007). Distance education or teaching and facilitation with time or locality differences and distance education delivery systems may take forms that vary from broadcasts, podcasts, videoconferencing, correspondence, computers, digital technologies to the Internet (Conceição, 2006) and the result has been a redefinition of the technological and communication skills expected of academics.

In South Africa, the challenges in ODL are becoming more complex because many students who are entering this domain are younger, unemployed, looking for more affordable educational options and are often underprepared by the school system. They do not find it easy to adapt to HE (Scott, et al., 2007). Pienaar (2009) states that these students have unique needs, values, attitudes and skils, which require substantial attention from academics. The ODL academic often encounters two categories of learners simultaneously – the underprepared school leaver on the one hand and the more mature, sometimes employed, adult learner. They have different competencies and expectations, which complicates the process of knowledge facilitation (Heydenrych & Prinsloo, 2010). This also emphasises and may explain the complexity of the role of academics in the

broader context of communication and technological developments in learning theory, curriculum and innovative student support, in an uncertain and extremely complex South African environment (Barnett, 2000).

Student access to affordable technology will continue to impact on HE and even more on ODL. The support challenge will increase at the ODL institution where the research was conducted, since it has approximately 350 000 students. The task of academics preparing these students, many of whom are underprepared and underresourced, for the challenges of the 21st century, should not be underestimated (Heydenrych & Prinsloo, 2010). Universities are focusing on adapting to the challenges and the academics are a crucial resource in this drive. There is a need for research on the realities of the ODL organisation.

Academics in an ODL environment do alter their roles and have to respond to the needs of the students they teach and the HE environment. Furthermore, as the needs of the students and the environment change, so do the attitudes and behaviour of the academics (Dillon & Walsh, 1992). Similarly, evidence has been found that academics need to rethink their academic role in the virtual environment (Coppola et al., 2002; Egan & Akdere, 2005; Pienaar & Bester, 2008; Williams, 2003).

Given the above and as noted earlier, a gap in relevant research has been identified, in particular research on how resistance manifests through employee dysfunctional attitudes (such as disengagement) and negative behaviour, both of which can be devastating to adaptation in the challenging, changing context of the world of work of the ODL academic (Abrahamson, 2000; Stanley, Meyer & Topolntsky, 2005). Positive psychological functioning is therefore an integrated phenomenon and one which is required for well-being and optimal functioning.

To adapt successfully to the changing ODL environment, universities need to focus on both performance and health and well-being (Conley, 2007). Organisations need to consider two types of resources in order to be healthy: those that support performance and those that support health (Burke & Cooper,

2009). According to Macky and Boxall (2008), psychological well-being plays a vital role in the organisation's success. Well-being, from the perspective of positive psychology, entails two elements namely a hedonic perspective which focuses on happiness and enjoyment and secondly a eudaemonic perspective which fosuses on purpose and the potential to be involved in something larger than the self.

As the ODL university is an organisation created to pursue a specific type of endeavour in society, it has a major impact on the psychological well-being of individuals and the development of future generations and needs to remain a positive institution. Positive institutions, according to Rothmann (2013), are characterised by flourishing employees, a strength-focused approach towards work and individuals, positive relations within the organisation but also with stake holders outside the organisation, and also the implementation and maintenance of positive institutional and human resource practices. Figure 2.6 reflects the characteristics of positive institutions.

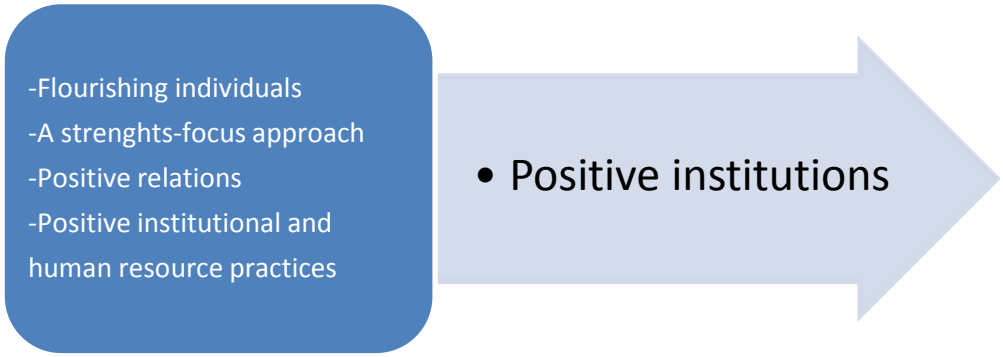

Figure 2.6 Characteristics of positive institutions (Rothmann, 2013)

The flourishing of individuals is crucial for the functioning of a positive ODL university. Two dimensions that are required for academics in South Africa to flourish have been identified (Keyes & Annas, 2009), namely feeling good and functioning well. Flourishing academics show WE, hope, efficacy, resilience and optimism (PsyCap).

The World Health Organisation (2000) states that the occupational health and well-being of working people are fundamental for productivity and crucial for overall socioeconomic and sustainable development. Given the transformation of

ODL universities globally as well as nationally, and the pressure on HEIs to contribute to sustainable development through training, without any supporting structures in place (Wiese, 2008), academics are being subjected to enormous strain (Mostert, Jackson & Montgomery, 2004).

2.5 INTEGRATION

The literature indicates that technology has reshaped ODL universities as well as resulting in the evolution of the concept of ODL. As a result of these changes, the roles and functions of the ODL academic have changed dramatically and are still in the process of transformation, moving away from traditional methods towards a constructivist pedagogy. The changes and challenges in both the global and the national HE context have complicated the roles of academics to such an extent that academics feel overwhelmed, overworked and often incompetent. As these role changes have been found to be one of the main barriers to optimal functioning or flourishing, employee RTC is a significant obstacle to effective organisational change, with resistance being manifested through dysfunctional attitudes and behaviours on the part of employees.

According to Armenakis and Bedeian (1999), for ODL institutions to prosper and survive in this changing environment, universities need to minimise RTC by motivating employees to change their behaviour in new and exceptional ways. The ODL university needs to become a positive institution, (as will be discussed in Chapter 4) triving to ensure that academics experience well-being through multidimensional models of positive psychological functioning. Academics that possess a wide range of positive psychological resources are generally better able to adapt to changes in their work environment, in the opinion of Griffin and Hesketh (2005). Furthermore, Avey et al. (2008) contend that employees' PsyCap, through positive emotions, relates to their relevant attitudes and behaviours that could facilitate positive organisational change.

Challenges in ODL are becoming more complex and the flourishing of both individuals, expressed as feeling good and functioning well, as well as the ODL university is a necessity for establishing a strong field of expertise which could help to meet the increasing demand for scares skills, globally as well as in South Africa.

2.6 CHAPTER SUMMARY

Chapter 2 outlined the meta-theoretical framework, namely the ODL context that forms the boundary for the research. The ODL work environment was outlined and the global context influencing multidimensional changes in the world of work of the ODL academic was highlighted. In view of the changes in the work environment and the RTC of academics, a broader knowledge base on positive organisational psychological functioning, specifically WE and PsyCap, could enhance the optimal functioning of ODL academics within a mega-university in a developing economy.

The following literature research aim was achieved in this chapter:

Research aim 1: To conceptualise the context of the work environment of the ODL academic in the 21st century.

Chapter 3 addresses the construct of RTC with the aim of providing clarification on the second research question.

CHAPTER 3: RESISTANCE TO CHANGE

This chapter focuses on the construct of resistance to change (RTC) as a variable that influences the behaviour and attitudes of academics in a changing world of work, represented in this study, by an ODL University. This will enable the researcher to explore the meaning of RTC as a psychological construct and explore the related theoretical models.

3.1 CONCEPTUALISING RESISTANCE TO CHANGE

The origin of one of the most widely accepted mental models that drive individual employees' behaviour lies in the idea that there is RTC. Kurt Lewin (1945) introduced the term as a systems concept, affecting the individual as well as the organisation. His conceptualisation of the phrase, however, is very different from today's usage. Lewin evolved his concept "based on the 'person' as a complex energy field in which all behavior could be conceived of as a change in some state of a field" (Marrow, 1969, p. 30). Lewin acknowledged RTC, but in his opinion resistance could occur anywhere in the system. Kotter (1995) found that it is possible for the resistance to be sited within the individual, although it is much more likely to be found elsewhere in the system.

Lewin's work has been strongly challenged over the past 20 years for taking an overly simplistic view of organisational change (Burnes, 2004d). However, in the changing organisational landscape globalisation, technological innovation and economic fluctuations have led to a desperate search for increased competitiveness through more and more radical forms of change (Cooper & Jackson, 1997; Savickas, et al., 2009; Veldsman, 2002) and forced organisations to spend huge amounts of time and human capital on the evaluation thereof. Similarly, Burnes (2003) reasons that in current turbulent environments change is one of the most pertinent and critical challenges for organisations. Change is so pervasive that it has become an integral part of any organisation, rather than an exceptional phenomenon (McGuiness & Morgan, 2005). Similarities between

Lewin's approach and complexity theories are evident. Dent and Goldberg (1999) came to the conclusion that a mental model exists that is universally accepted in the changing work environment – people resist change.

3.1.1 Change in the work environment

Change is ubiquitous and a constant reality for all individuals in all organisations (Brunton & Matheny, 2009). Moreover, Burnes (2004c) states that in our fast moving and unpredictable world of work there can be little doubt that change is one of the most important issues organisations need to deal with.

According to Burke (2002), many organisations fall into the trap of defining and understanding change as organisational change versus individual change. Furthermore, many organisations have failed to implement change successfully in the past because organisational and individual change should not have been weighed up against each other or seen as competing with each other (Burke, 2002). Several researchers (Champy, 1995; Clark & Koonce, 1997; Hammer, 1996; Kotter, 1995; Mauer, 1996; Porras & Robbertson, 1992) have come to the conclusion that more than fifty percent of change efforts do not succeed. A lack of participation, commitment, communication and involvement from employees with regard to change often has serious consequences for organisations (Beer, 1987). The interdependence between individual and organisational change is currently unknown because many managers are still unaware of the need to focus on individuals in the change process, and therefore organisations repeatedly fail (Beer & Nohria, 2000b). In particular, this may lead to high levels of resistance across the organisation.

3.1.2 Defining change

Kanter, Stein and Jick (1992) state that throughout the ages philosophers have found it difficult to define change. Their views range from the famous dictum of Heraclitus that nothing endures but change, to the ancient Greeks' view that it is

disastrous to deliberately change the basic character of something, which explains why they viewed adaptability as a limited phenomenon.

From a classical perspective, Lewin (1951) see change as a sequence of activities emanating from disturbances in the stable force field surrounding the organisation, object, person or situation. Harper (1993) defines change as the significant modification of social structure and cultural patterns through time. Ford and Ford (1994) describe change as a phenomenon of time where something over time turns into something else.

More recently, Van Tonder (2004a) proposed a generic definition of change by indicating that change can be seen as a dynamic, time-bound and non-discrete process that become evident in an empirical difference in the state or behaviour over time, of the entity with or within it occurs. Robbins (2005) argues that change occurs when something becomes different and planned change involves change activities that are intentional and goal-oriented. Strebel (2006) argues that change entails new thinking, extra time and effort and Barth (2007) postulates that individuals strive for comfort in a change process and therefore protect the status quo.

What is of relevance for this study in the HE work environment, is that planned change deals with changing individual academics' behaviour in order to respond to changes in the environment and transformation and change of one kind or another could take place.

3.1.3 Reaction to change

According to Van Tonder (2004c), the reaction to change is defined as a response to a stimulus and within the context of the organisation, the reaction to change denotes a response to a change initiative, which may be followed by resistance. Individuals normally react emotionally to change since it evokes varying reactions that are underpinned by emotions. Oreg (2003) argues that individuals' reactions to change are influenced by their individual dispositions.

Briner and Kiefer (2005), remark that because organisational change efforts have different effects on people, very little is known about peoples' differing responses to organisational change. People react differently to change owing to differences in their perception and experience of change, which are attributed to the influence of various personal, demographic and organisational or contextual factors (Martin, Jones & Callan, 2006). Moreover, it follows that because people perceive change efforts differently as a result of the influence of the different factors, their different perceptions lead them to react differently to change events, and consequently they experience change initiatives differently (Blanchard, 2005).

Van Tonder (2004b) argues that it is at the level of the individual employee that individual responses to organisational change are formed, based on individual employees' perception and experience of change. Furthermore, the individual responses (individual support for, or resistance to, change) to organisational change translate into group responses (group support for, or resistance to, change) because of group dynamics (group support for or group resistance to change). Thus, an individual's response to change will be viewed from two perspectives, namely the individual's reaction to change and the individual's resistance to change (Van Tonder, 2004c).

Given the above, one may argue that negative experiences of change, and emotions associated with change, such as anxiety, may be aggravated by the lack of information about the change and the fear of moving from the known to the unknown. These contribute to the development of negative emotional reactions to the change, which ultimately translate into resistance to change. It is therefore significant to explore perceptions and experiences of RTC of academics in the changing ODL environment.

3.1.4 Defining RTC

Kotter and Schlesinger (1979) provide a simple definition of RTC, which refers to any opposition to a shift in the status quo. Resistance means slowing a process down or putting obstacles in the way of goal achievement. Ansoff (1990) defines RTC as a phenomenon that affects the change process, delaying or slowing its

beginning, obstructing or hindering its implementation, and increasing its cost. Furthermore, Maurer (2000) suggests that RTC is any conduct that tries to preserve the status quo, or in other words the persistence in avoiding change.

3.1.4.1 The development of the concept of RTC

Foster (2010) indicates that the concept of RTC gained popularity in the 1970s and the phenomenon has been accepted as part of change processes. It has therefore attracted the attention of both academics and IO practitioners over the past few decades (Cunningham & Kempling, 2009; Cutcher, 2009; Harley, Whright, Hall & Dery, 2006; Judge, Thoresen, Pucik, & Welbourne, 1999; Kirkman & Shapiro, 2001; Kotter & Schlesinger, 1979; Kumar, Kant, & Amburgey, 2007; Oreg, 2003; Piderit, 2000).

RTC is a multifaceted concept, originating as a psychodynamic construct. Authors like Jermier, Knights and Nord (1994) take a contrary view and describe RTC as employees' legitimate, political means of defending their own interests. It is therefore seen as a defence mechanism. It follows that some social scientists attach a negative connotation to resistance, defining it as a force obstructing the efforts of change leaders (Coch & French, 1948; Kotter, 1996; Marx, 1881/1883) although others (Ford & Ford, 1994; Goldstein, 1989; 1994; Weisbord, 1987) regard it as an important source of information for leading effective change. The third stream of thought emphasises its paradoxical nature, conceiving it as a phenomenon that can simultaneously be unconstructive and helpful (Bridges, 1986; Lewin, 1952; Mauer, 1996).

Relevant prior research has indicated that unconscious well-developed and habitual defence mechanisms arise in individuals as a response to the threats of change (Halton, 1994; O'Connor, 1993; Schafer, 2003) to protect themselves from change as well as from the feelings of anxiety change causes (De Board, 1978; Oldham & Kleiner, 1990). Halton (1994) found that these defences can obstruct and prevent the individual from adapting to change. This is based on the assumptions of the systems psychodynamic stance as reported by authors such as Gould, Stapley and Stein (2004), Haslebo and Nielsen (2000), Kets de Vries (1991) and Klein (2005).

3.1.4.2 Determining RTC

Oreg designed the RTC scale to measure the individual's natural disposition to accept or avoid change, over time and across situations (Oreg, Nevo, Metzer, Leder & Castro, 2009). Furthermore, it gauges an individual's tendency to resist or avoid making changes, to devalue change generally, and to find change aversive across diverse contexts and types of change. Oreg (2003) went on to argue that the research was also designed to formulate a conception of a generalised disposition to resist change and to develop an instrument that would assess this disposition directly. Particular attention was paid to sources of resistance that appeared to derive from an individual's personality. Six such sources were identified: (a) reluctance to lose control, (b) cognitive rigidity, (c) lack of psychological resilience, (d) intolerance of the adjustment period involved in change, (e) preference for low levels of stimulation and novelty, and (f) reluctance to give up old habits.

Most approaches to resistance to change have focused on situational antecedents (Coch & French, 1948; Tichy, 1983; Zander, 1950). More recent studies have begun to explore concepts that are related to RTC from an individual difference perspective. One example is the study by Rodda (2007), who concluded that the understanding of the psychological and behavioural foundations of RTC is significant. More specifically, Piderit (2000) postulated that RTC s a multidimensional disposition comprising behavioural, cognitive and affective components. The term RTC has undergone through a transformation in meaning, from a systems concept to a psychological one (Dent & Goldberg, 1999).

In this study, RTC will be discussed as a multifaceted construct, measuring the individual's dispositional inclination to resist change (Oreg, 2003).

3.1.5 The dimensions of RTC

A review of past empirical research indicates differences in emphases regarding the way resistance was conceptualised, namely as an emotional dimension, as a

cognitive dimension and as a behaviour. According to Piderit (2000), these three emphases can be reframed in a more integrative way by borrowing the concept of attitude from social psychology. Attitude theorists (Katz, 1960; Rosenberg & Hovland, 1960) argue that attitudes and RTC are roughly structured along the same dimensions. Piderit (2000) labels the three dimensions of attitudes the affective (emotional), the cognitive and the intentional dimensions. However, researchers know little about the multidimensional nature of resistance (Szabla, 2007), as it has not been investigated multidimensionally but only along single dimensions. Labianca, Gray and Brass (2000) adopted a cognitive approach, Vince and Broussine (1996) examined emotions during change and Brower and Abolafia (1995) emphasised behaviour.

However, from the perspective of both theory and research (Bagozzi, 1978; Breckler, 1984; Piderit, 2000) it can be argued that a response to a change in the individual's work environment comprises all three dimensions, namely emotional, cognitive and intentional. This correlates with the views of more resent researchers, who conceptualise RTC as a complex, multidimensional attitude (George & Jones, 2001; Oreg, 2006). Although it is clear that people do not resist change as such, they resist being excluded from a change process that affects every aspect of the organisation, including their work (Gravenhorst, 2003). Prior research has attempted to explicate why change efforts in technology and management practices have not met expectations or resulted in failure (Oreg, 2006). It has been argued by Szabla (2007) that a contributing factor may be that researchers are defining RTC inconsistently and studying it incompletely.

The dimensions of RTC can therefore be conceptualised as follows:

(a) Emotional dimension

Relevant prior research has described resistance in emotional (affective) terms and Coch and French (1948) suggest an emotional component of resistance – aggression – which might create frustration leading to undesirable behaviour. This dimension correlates with the definition of RTC of Piderit (2000) as a

threedimensional attitude towards change. Emotions are regarded as the most appropriate indicator of resistance and the most frequently reported emotions in change situations are insecurity, anxiety and fears (Ashford, 1988; Schweiger & De Nisis, 1991), aggression and frustration (Coch & French, 1948) and anger, relief and anxiety (Piderit, 2000). Diamond (1986), reasoned that the underlying nature of resistance is portrayed as highly emotional.

The emotions expressed as indicators of RTC depend on the characteristics of the changes proposed by the organisation, but also on the context-specific rules of emotional regulation in the organisation (Heinrich, 2004). The emotional dimension of an attitude refers to the employees' feeling in response to the attitude object (Piderit, 2000) and the more negative these feelings are, the higher the affective resistance will be. According to Connor (1992), the loss of control in a change situation has been found to be the primary cause of RTC. This also correlates with the emotional reaction of academics to imposed change in the work environment, as predicted by Oreg (2003), and measured by the RTC scale, which reflects the amount of stress and uneasiness an individual experiences when confronted with change.

(b) Cognitive dimension

From the literature, it is clear that the cognitive dimension of RTC depends on how the change is experienced by the employee or to what extent the employee understands or accepts the reasons for the changes (Heinrich, 2004). The change may be perceived as a threat or as a challenge. This results in a distinction between rational resistance and irrational resistance (Hultman, 1995; Kreitner, 1992). In addition, Carnall (1994) found that certain cognitions are crucial for resistance, for example, if the change initiative is not clear to the employee, if it is regarded as unreliable or if the employee expects no positive outcome from the change. Fugate, Kinicki and Scheck (2008), underline the importance of social support in any change process.

Furthermore, Watson (1982) argues that behaviour which is often labelled as resistance is sometimes merely reluctance. Armenakis, Harris and Mossholder (1993) define resistance in behavioural terms as another preceding cognitive state called “unreadiness”. It would follow that participation of employees in workrelated changes may have motivational and cognitive effects on RTC, which would imply that cognition is part of the phenomenon of resistance (Bartlem & Locke, 1981).

The cognitive dimension of an attitude refers to an individual’s beliefs or thoughts about the change (Piderit, 2000). The employee needs to assess both the benefits of and the necessity for the change. The more negative these beliefs are, the higher the cognitive resistance will be. Cognitive factors are crucial in mediating the impact of change on individual responses and if the change is experienced as complex, it will evoke feelings of loss and insecurity (Kotter & Schlesinger, 1979).

This correlates with Oreg’s (2003) cognitive rigidity dimension, which refers to the frequency and ease with which employees change their minds. Furthermore, it may indicate a form of stubbornness and unwillingness to consider alternative ideas and perspectives (Oreg et. al., 2008).

(c) Behavioural dimension

Resistance is defined by behaviour that is intended to hinder the goals of the change effort, resulting in an aggressive response to the change (Zander, 1950). Many years ago Coch and French (1948) formulated definitions of performance–related behaviour and negative interpersonal behaviour such as aggression against management, conflict and a lack of cooperation with supervisors. Their definitions correlate with a finding by King and Anderson (1995) that RTC is indicated by observable behaviour (for example cynicism) as well as objective performance measures (for example quality). Shapiro, Lewicki and Devine (1995) similarly reported negative interpersonal RTC behaviour towards people in authority positions.

Behavioural definitions of RTC do not necessarily take the intentional dimension into account; low performance by an employee is not always an indicator of RTC. Ashforth and Mael (1998) identify resistance behaviours as refusal, denial or rejection (intentional acts of omission) with respect to the change. This correlates with Oreg's (2003) routine seeking subscale namely a behavioural dimension consisting of employees' inclination to adopt routines or to act or intend to act in response to a change in the environment (Oreg et al., 2008) Negative behaviour can therefore be described as behavioural resistance.

(d) Intentional dimension

Conceptually, Ashforth and Lee (1990) studied the general intention to reduce a perceived threat or to avoid an undesirable demand by an individual employee or group of employees. The intentional dimension of an attitude reflects an individual's evaluation of an attitude object based on past behaviours and future intentions to act (Piderit, 2000).

This may explain why employees with a short-term focus, become distracted by the short-term inconvenience involved in change, preventing them from realising the long-term benefits (Oreg et. al., 2008). Recently, Beal III, Stavros and Cole (2013) reported intentional resistance in the form of complaints and the intention to avoid change.

3.2 THE AETIOLOGY OF RESISTANCE TO CHANGE

Aetiology is the accumulated knowledge of the causes of a phenomenon; in this section, the cause or origin of RTC is in question. Conceptually, the notion of RTC is accredited to Kurt Lewin (1948). Resistance manifests through employee dysfunctional attitudes and behaviour according to Avey et al. (2008). French, Bell and Zawacki (2005) argue that change means the new state of things is different from the old state of things.

RTC arises as a response or reaction to change (Mabin, Forgeson & Green, 2001). This response is viewed as natural as change involves unlearning habitual patterns and learning new ways of thinking and feeling, which results in new behaviours in the work environment (Claxton, 1999; Gratton, 2001). According to Folger and Skarlicki (1999), change can generate scepticism and resistance in employees. Stanley, Meyer and Topolntsky (2005) argue that resistance manifests through disengagement and cynicism and therefore makes it difficult or impossible to implement organisational improvements. This process often provokes anxiety and results in resistance (Kets de Vries, 2002). Two terms which are closely associated with describing resistance to change, according to Coker (2000, p. 24), are “fear of loss” and “fear of the new”.

3.2.1 Factors contributing to RTC

ODL academics may regard the aspect of loss as particularly important and the following factors may contribute to a fear of loss (Coker, 2000; Kets de Vries, 2002; Mabin et al., 2001; Pheng, 1999; Seely, 2000):

a) Individual factors - personality factors such as a high need for control, locus of
control, need for achievement and attitudes based on previous experiences of
change.
b) Economic loss - loss of job, reduction in earnings or less opportunity for career growth.
c) Inconvenience - more work for the same remuneration, greater responsibility with no additional rewards
d) Threats - such as increased insecurity, anxiety or worry.

3.2.2 Internal forms of RTC

Booysen and Beaty (1997) report internal forms of RTC. These may include the following:

a) Fear of the unknown – relates to uncertainty about the causes and effect of change. De Jager (2001) argues that most people are reluctant to leave the familiar behind, and are naturally concerned about learning something new and risking failure.
b) Habit – change requires new ways of doing tasks and challenges people to develop new skills, which may cause fear and anxiety.
c) Self-interest – an unwillingness to give up existing benefits that have predominantly been provided to select advantaged individuals.
d) Economic insecurity – changes within the organisation have the potential to threaten jobs and economic security.
e) Failure to recognise the need for change, general mistrust and social disruption.
f) Selective perceptions – changes in the organisation may be perceived by some employees as threatening, and by others as challenging.

3.2.3 The role of RTC in the change process

In certain instances, employee resistance may play a positive and useful role in organisational change. Insightful and well-intended debate, criticism, or disagreement do not necessarily equate to negative resistance, but may contribute to better understanding as well as to additional options and solutions. Research by De Jager (2001) indicates that the idea that anyone who questions the need for change is displaying an attitudinal problem is simply wrong because it discounts past achievements and it oversees lessons learnt from past change processes.

Piderit (2000) points out that what some managers may perceive as disrespectful or unfounded RTC might be motivated by an individual's ethical principles or by their desire to protect what they feel are the best interests of the organisation. This correlates with research by De Jager (2001), which indicates that resistance is an effective, powerful and useful survival mechanism in the changing work environment.

3.3 CONCEPTUAL MODELS OF RESISTANCE TO CHANGE

Although many theoretical models of change exist in the literature (Coch & French, 1948; George & Jones, 2001; Kotter & Schlesinger, 1979; Lawrence, 1954; Lewin, 1947; Oreg, 2003), organisations have increasingly been viewed through the lens of complexity theory over the past few decades and seen as systems that are constantly changing (Beeson & Davis, 2000; Haigh, 2002). A comprehensive review of all the models falls outside the scope of this research study, but the following relevant models will be presented:

3.3.1 Classic model of RTC

Change is necessary to maintain competitiveness in the work environment and therefore the concerns of employees caused by uncertainty about the change process need to be considered and a solution found. Furthermore, RTC is not necessarily a technical problem, but mainly one of motivation (Coch & French, 1948).

According to the classic model of RTC (Coch & French, 1948; Kotter & Schlesinger, 1979; Lawrence, 1954), resistance is related to two key factors, as illustrated in Figure 3.2, namely the content of change and the process of change.

- Extent to which employees perceive a change as being either beneficial or detrimental to their own interests
- Extent to which employees are involved in the process of change (King & Anderson, 1995; Kotter & Schlesinger, 1979; Lawrence, 1954)

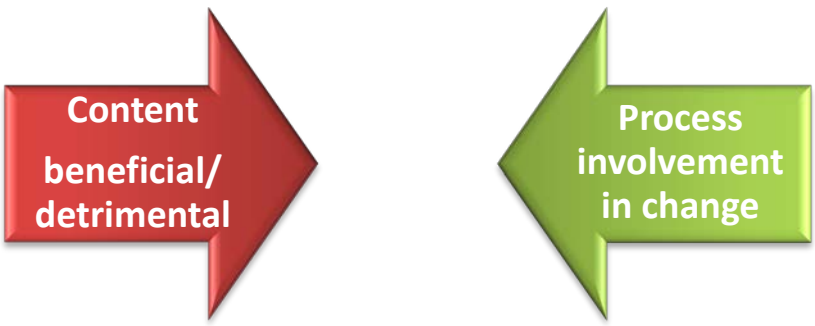

Figure 3.1 Two key factors of resistance (Coch & French, 1948)

Fedor, Caldwell and Herold (2006) refer to these two factors as the perceived favourableness and fairness of change. Recent research by Peccei, Giangreco and Sebastiano (2011) indicate that if employees are actively involved in the change process, they view the change in a positive light and are more supportive of the change, as well as exhibiting lower levels of resistance.

Similarly, research focused on employees' perception of change consequences, according to their status in the organisation, as well as their individual characteristics. Related concepts include: coping styles (Fugate, Kinicki & Prussia, 2008; Fugate, Kinicki & Scheck, 2002), employees' modes of confronting change, locus of control (also referred to as change-related sense of control), employees' individual characteristics and their beliefs about their ability to influence the change (Näswall, Sverke & Hellgren, 2005; Paulsen et al., 2005; Rotter, 1966; Wanberg & Banas, 2000). The assumption related to locus of control is that the more control over change the individuals perceive themselves as having, the more positive their acceptance of change. The concept of efficacy is related to individuals' perception of their own capacity to successfully complete the required tasks (Cunningham et al., 2002; Wanberg & Banas, 2000). It therefore follows that the stronger the employees' efficacy, the more positive their acceptance of and participation in change.

3.3.2 Individual Difference Measure Model

The HE environment changes through processes of change at the individual level. Change is often initiated and carried out by individuals in organisations (Bartunek, 1984; Porras & Robbertson, 1992). However, some individuals seem to resist even changes that are consonant with their interests (Oreg, 2003). Who are these people and what are the personality characteristics that drive such resistance? Recently, the concept of dispositional RTC has been recognised and the Oreg (2003) RTC scale was designed to measure this personality component of RTC.

3.3.2.1 Dispositional RTC

Oreg (2006) argues that people differ in their internal inclination to adopt or resist change in their work environment. This would suggest that these differences could predict employees' attitudes towards specific changes – both voluntary and imposed.

Employees who are *high* on dispositional RTC, which is conceptualised as a stable personality trait, are less likely to voluntarily incorporate changes into their lives, and when they have to change, they are likely to experience negative emotional reactions, such as anxiety, anger and fear (Oreg, 2006). Regarding affect, behaviours and cognition, a strong link has been established between personality and affect (Larsen & Ketelaar, 1991; Yik, Russel, Ahn, Dols & Suzuki, 2002). Moreover, personality traits have often been considered fundamentally affective in nature (Lucas, Diener, Grob, Suh & Shao, 2000). Oreg (2003) is of the opinion that a strong component of the definition of the RTC personality trait involves an employee's emotional predispositions towards change. Diamond (1986) has reported on the same phenomenon, as indicated in 3.1.5.

It was therefore expected in the present study that dispositional RTC would be found to be correlated with employees' affective RTC. Of particular importance for this study are the attitudes of ODL academics towards the changing work environment of the HEI.

3.3.2.2 Context and RTC

According to Oreg (2006), theories and research on RTC have primarily addressed the context-specific antecedents of resistance. Many contextual variables have been proposed as being related to employees' RTC (Armenakis & Harris, 2002; Tichy, 1983; Wanberg & Banas, 2000). According to Oreg (2006), some antecedents focus on the outcomes of change, whereas others focus on the way in which change is implemented. Conceptually, this indicates a distinction between perceptions of distributive and procedural justice (Greenberg & Cropanzano, 2001). It follows that, according to Greenberg (1990), whereas

perceptions of distributive justice are about the fairness of organisational outcomes, procedural justice involves the fairness of the procedures required to achieve those outcomes.

In considering a multifaceted view of RTC in this study on ODL academics, the distinction between resistance to outcomes and resistance to the process may become clearer. However, it is expected that a positive attitude towards change will be associated with improved outcomes (Oreg, 2006). This model considers three levels of individual difference, as indicated in Figure 3.4.

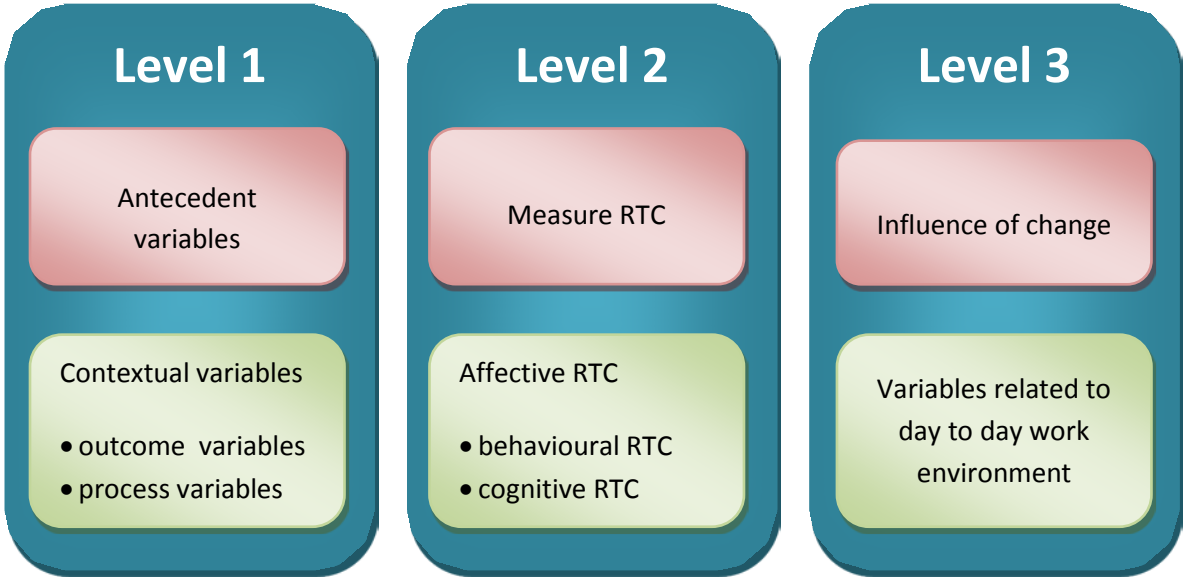

Figure 3.2 Three levels of Individual Difference Measure model (Oreg 2006)

Level 1 includes firstly *antecedent variables* related to the personal characteristics of the individuals that may support or reject change and secondly *contextual variables*. The contextual variables are divided into two categories: firstly *outcome variables* or the expected influence of the transformation and secondly *process variables* or the implementation modality of the transformation.

An outcome variable that is important in this study is *autonomy*, which refers to the intrinsic rewards variable in Oreg's model. It relates to the influence of organisational changes in individual motivation (Oreg 2006), so that individuals' wellbeing is largely dependent on their ability to satisfy intrinsic needs such as the

need for autonomy and self-determination (Ryan & Deci, 2000). Process variables could be information and communication, social influence and participation.

The efficacious distribution of information and the process of communication regarding changes in the work environment among employees have a positive effect on the employees and their reactions. Transparency improves employees' trust in managers and prevents fears and hostile attitudes. Wanberg and Banas (2000) state that communication perceived by employees as sufficient, useful and timely increases acceptance of organisational changes. Similarly, Miller and Monge (1985) state that information diffusion helps to reduce employees' fears and anxiety.

The influence of the social environment within which employees work and their perception of the changes in the work environment play a substantial role in determining employees' attitudes, as emphasised by Oreg (2006) as well as by Burkhardt (1994) and Gibbons (2004). Employees' opinions and attitudes may be influenced by diverse group mechanisms and group pressure associated with social exclusion of those who think differently from the majority of the group. Furthermore, according to Oreg (2006), another reason for adaptation towards majority opinions and attitudes may be indifference and convenience. It is easier to adapt to the majority opinion than to confront justification pressure related to deviance behaviour.

Employees' participation before and during the implementation process constitutes another commonly included factor in explanation models of RTC. Participation is expected to have a positive effect in the transformation process. A more active participation produces a feeling of interest which positively affects the employees' reaction towards change (Bartunek, Rousseau, Rudolph & DePalma, 2006; Wanberg & Banas, 2000).

Technology acceptance is a crucial issue and research indicates the importance of the definition of factors that cause people to accept and make use of systems developed and implemented by others (King & He, 2006). Research by Meier,

Ruiz and Schuppan (2013) indicates that technological acceptance has a significant influence on RTC.

Level 2 comprises the measurement of RTC based on a multidimensional definition and includes *affective, behavioural and cognitive* RTC.

In **level 3** the influence of change on the variables related to the employees' day-to-day work environment is measured.

3.3.2.3 Contribution of model

The contribution of Oreg's model can be summarised as follows:

- Firstly, the empirical combination between the three distinguished levels of analysis enables the analysis of processes and interdependencies contributing to RTC in organisations,
- Secondly, the significant connection between individual and context-related variables is identified,
- The model therefore covers a wide spectrum of levels and factors influencing RTC in organisations, offering an excellent theoretical basis.

3.3.2.4 Sources of RTC

Six sources of RTC, as indicated in Table 3.3, that appear to derive from an individual's personality were identified by Oreg (2003), and corroborate prior relevant research.

Table 3.1

Sources of RTC

Sources of RTC	Characteristics	Author
1. Reluctance to lose control	• Loss of control seen as the primary cause of resistance. • Employee involvement and participation in organisational decision making as a means of overcoming RTC.	(Conner, 1992) (Coch & French, 1948; Sagie & Koslowsky, 2000)
2. Cognitive rigidity	• Cognitive processes underlying people's responses to organisational change. • The trait of dogmatism might predict an individual's approach to change.	(Bartunek, Lacey, & Wood, 1992; Bartunek & Moch, 1987; Lau & Woodman, 1995) (Fox, 1999; Rokeach, 1960)
3. Lack of psychological resilience	• Change is a stressor, and therefore resilience should predict an individual's ability to cope with change. • Resilient individuals were in fact more willing to participate in an organisational change and exhibited improved coping with change.	(Ashforth & Lee, 1990; Judge et al., 1999). (Judge et al., 1999; Wanberg & Banas, 2000)
4. Intolerance to the adjustment period involved in change	• A distinct aspect of individuals' psychological resilience is their ability to adjust to new situations. People resist change because it requires more work and adjustment.	(Kanter, 1985).
5. Preference for low levels of stimulation and novelty	• Distinction between adaptive individuals, who are best at performing within a well-defined and familiar framework. Innovative individuals generally exhibit a greater need for novel stimuli.	(Goldsmith, 1984; Kirton, 1980, 1989)
6. Reluctance to give up old habits	• Reluctance to give up old habits seen as a common characteristic of resistance to change. • Familiarity breeds comfort and when individuals encounter new stimuli, this leads to stress.	(Tichy, 1983; Watson, 1971) (Harrison, 1968; Harrison & Zajonc, 1970)

3.4 DEMOGRAPHIC FACTORS AND RESISTANCE TO CHANGE

Several studies have been conducted to determine the relationships between RTC and biographical factors such as gender, ethnicity, age and level of education.

3.4.1 Gender

Research by Waseela (2005), suggests that there is a difference between males and females in respect of their reactions to change. Males display a higher frequency of RTC if benefits and payoffs cannot be seen. This correlates with research by Hofstede, Hofstede and Minkov (2010), who argue that males and females display a very different state of mind and males will resist change more than females if change takes more time and energy.

Waseela (2005) explains that females are more prone to resist change than males if change makes it harder to meet goals. According to Hofstede et al. (2010), females believe that one works in order to live whereas males believe that one lives in order to work. Furthermore, he argues that female employees resolve conflict caused by forced changes, through compromise and negotiation while male employees resolve conflict by letting the strongest win.

3.4.2 Ethnicity

According to Hofstede (1986), much of the research into cultural resistance has been associated with levels of individualism/collectivism, power/distance, uncertainty avoidance, or masculinity versus femininity. However, people have different ethnic backgrounds, demonstrate different capabilities for learning and for handling responsibility, and reveal different attitudes, beliefs and aspiration levels (Gibson, Ivancevich & Donnelly, 2000).

Change implies loss, which is an emotional experience associated with stress and anxiety (Carr, 2001; Elrod II & Tippett, 2002). Evidence was found that black employees react to stressful events with greater psychological distress than white employees (Mirowsky & Ross, 1990; Myers, Lewis, & Parker-Dominguez, 2002).

Some researchers (Erwee, 1994; Møller, 1998) even suggest that the impact of the Employment Equity Act in South Africa, which encourages the promotion of more women to managerial positions, may lead to increased levels of stress and resistance among black women because of their lack of training and the negative impact of gender discrimination on the adjustment of women. Certain cultural differences also apply in the expression of emotional resistance in organisations (Briner, 1999).

In many cases, failed organisational change initiatives are blamed on the employees' RTC (Coch & French, 1948; Cummings & Worley, 2001) and more specifically, RTC has been introduced as a variable without taking employee social or cultural interpretations of change into consideration.

3.4.3 Age

RTC has seldom been explored with reference to the age factor (Heinrich, 2004) but it seems to be significant for this study given the ageing of academics and the impact thereof on the HE environment. According to some authors, it is particularly older employees in contrast to younger employees who react to changes in the work environment with disapproval or rejection and resistance (Boerlijst & Van Der Heijden, 2003; Furnham, 2004). Finkelstein, Burke and Raju (1995) report that older employees are typically associated with lower potential for development, including learning new skills and attempting challenges and are also associated with higher degrees of stability, both of which imply increased levels of RTC.

Heinrich (2004) and Posthuma and Campion (2009) state that no empirical evidence exists to prove or falsify age stereotypes for RTC but evidence suggests that age forms one of the principal bases for the general stereotypical characterisation of people (Brewer, Dull & Lui, 1981; Fiske, 1993). Kunze, Boehm and Bruch (2013) however, reported on research in 93 German organisations ranging from services, manufacturing, trade and finances that younger employees are more resistant to change than their older colleagues. Furthermore, research has indicated that employees tend to become more emotionally stable (Williams et

al., 2006), and process positive psychological information more deeply than negative psychological information (Carstensen, Isaacowitz & Charles, 1999) as they age. Therefore, older employees should exhibit a better capability to cope with changes occurring in their work environment.

Therefore, as organisational success during change processes seems to be more dependent on performance and motivation of individual employees (Anderson & West, 1998), general age stereotyping may apply. The ageing of academics is a concern that could beessed through lifelong learning and flexible working conditions to promote longer active participation in the labour market.

For this study, it is of particular interest to IOP and the HEI to identify the groups of employees that display significant levels of RTC and as a result may be less adaptive to changes in the work environment. The purpose of this research is not to provide advice on how to deal with older academics, but to provide an empirical contribution on the differences in age groups. More specifically, the study set out to determine whether age group differences can be empirically found in RTC. Heinrich (2004) identified this as a gap in IO psychology literature.

3.4.4 Level of education

As level of education reflects an individual's cognitive ability and skills, high levels of education are associated with a high capacity for information processing and the ability to discriminate among a variety of stimuli (Schroder, Driver & Streufert, 1967). For this study, therefore, high levels of education have consistently been associated with receptivity to innovation and change (Bekker, 1970; Iverson, 1996; Kimberley & Evanisko, 1981). Wiersema and Bantel (1992) state that employees with high levels of education are expected to be aware of and receptive to the need for change in the work environment. Employees with higher levels of education have increased opportunities for skills utilisation (Cordery, Barton, Mueller & Parker**,** 1992), are therefore able to meet new occupational challenges and are more flexible and adaptable.

No South African research studies could be found on the manifestation of RTC in academics with different levels of education.

3.5 THE POSITIVE EFFECTS OF RESISTANCE TO CHANGE

Some authors argue that changes in the organisation can be experienced negatively and lead to RTC but can also be experienced positively, such as in offering hope for positive change (Kiefer, 2002; Rousseau & Tijoriwala, 1999), and the strong implicit and explicit assumption that employees experience high RTC has, according to Kiefer (2005), not been tested.

The organisational level and the group level will first be discussed and then the focus will be on the individual level, as the individual ODL academic is the focus of this study.

3.5.1 Organisational level

The HEI is defined as an open system (Nadler & Tushman, 1980) which needs to adapt continuously to external challenges and develop in order to maintain its means of survival. Therefore, by selectively accepting external input, the organisation can differentiate itself from the environment and thereby maintain internal stability. Research has dealt with the causes and consequences of a specific change, as well as with RTC. However, Albert, Ashfort and Dutton (2000) argue that change in the organisation is more accurately understood as multiple and ongoing rather than isolated or discrete. Kiefer (2005) reasons that change affects everyday work experiences positively.

Relevant prior research, especially by the proponents of complexity theories, has indicated that change is a condition of possibility for organisations (Brown & Eisenhardt, 1997; Burnes, 2004a; Stacey, Griffiin, & Shaw, 2002; Styhre, 2002; Tetenbaum, 1998). More specifically, change is inherent in human action and necessarily occurs in a context of human social interactions (Ford & Ford, 1995).

Gittell, Cameron, Lim and Rivas (2006) explain that positive relationships in the organisation can motivate employees to make optimistic attributions and to develop resilience when faced with change.

Therefore, organisations are in a continuous state of change and in order to survive they need to develop the ability, through positive employees, to continuously introduce incremental and fundamental changes (Burnes, 2004b).

3.5.2 Group level

Some distinct characteristics are considered when analysing group RTC. Lewin (1947) has indicated that the individual is constrained by group pressures to change or to conform, but research indicates that social support can reduce RTC. Social psychological research has identified phenomena such as counterproductive group norms and the creation by groups of shared negative attitudes towards organisational changes (Schuler, 1995), However, Coch and French (1948), reason that groups that are allowed to participate in the design and development of changes show much lower resistance than those that are not.

Although some of the references in this section seem to be dated, it is considered a reflection of the original conceptualisation of RTC. There is suggestive evidence in the literature that social support can buffer the psychological impact of change in the work environment and in life (Antonovsky, 1979; Cobb, 1976; Liem & Liem, 1978; Dean, Lin & Ensel, 1980). Furthermore, some studies report on the positive relationship between social support and well-being (Berkman & Syme, 1979; Henderson et al., 1978; Roy, 1978).

Further elaboration on the group level is beyond the scope of this study because the individual ODL academic is the focus of this study.

3.5.3 Individual level

Evidence was found that employees displaying RTC may be either those affected by the change or those responsible for initiating or implementing the change (Kotter & Schlesinger, 1979). Individual RTC can manifest on a behavioural level or a motivational level, for example as negative or positive attitudes towards the change (Heinrich, 2004). Change can provide a wealth of opportunities for individual growth and development (Cartwright & Cooper, 1992; Kotter, 1995). As change is inherent in human action, organisations should recognise the importance of individuals' readiness for change, which is grounded in the concept of unfreezing elaborated by Kurt Lewin (Armenakis et al., 1993).

According to Avey et al. (2008), there has been little research on the impact that positive employees can have on organisational change. Although the importance of positive constructs has been recognised right from the beginning of organisational behaviour research and the study of change (Quick & Quick, 2004; Wright & Cropanzano, 2004), more research is necessary on a positive approach. Evidence was found by Avey et al. (2008) which indicates that employees with the confidence (efficacy) to adapt to organisational change as well as the resilience to bounce back from setbacks that might occur during the change process, and with positive emotions, may exhibit attitudes and behaviour that could lead to effective and positive change processes. It follows that positive emotions may help employees cope with organisational change by broadening the options they perceive, maintaining an open approach to problem solving, and supplying the energy required to adjust behaviour to the changing work environment (Baumeister, Gailliot, DeWall & Oaten, 2006).

A need has been expressed for more research on the individual level of RTC. Piderit (2000) states that intra-individual or interpersonal factors should be taken into consideration when investigating this phenomenon. RTC in individual ODL academics must be regarded as a symptom of RTC in the system itself (Lewin, 1948) however, Porras and Robertson (1992) argue that organisational change requires changes in individuals' work-related behaviour and therefore the

organisation must consider behaviour modification and individual motivation. Employees might even serve as a legitimate source of information regarding the implementation of change (Ford, Ford & D' Amelio 2008; Knowles & Linn, 2004; Piderit, 2000).

As predicting the phenomenon of RTC at the individual level, allows an aggregation of data at the group level, this study may also contribute to understanding of the RTC of specific groups of academics at this HEI. Katz and Kahn (1978) refer, however, to the individual fallacy or the limitations of an individualist approach. Situational factors influencing an individual's behaviour should not be disregarded and Mabin et al. (2001) imply that RTC is a problem that needs to be overcome or eliminated.

Academics at ODL institutions experience change as a very personal and emotional issue on a psychological and behavioural level, and evidence has been found by many authors (Ford & Ford, 2010; Haberman, 2010; Mauer, 1996; Strebel, 1994; Waddell & Sohal, 1998) that the reasons for failure of change initiatives lie in RTC. Therefore, the place to begin when an organisational change is required is with knowledge of the attitudes and behaviour of individuals (Dent & Goldberg, 1999).

Oreg et al. (2008) note that change is everywhere and some individuals accept change or actively seek it out whereas others avoid it and even resist it. Employees are inclined to resist change, preferring to maintain the status quo and adhere to routine and habitual behaviours (Oreg, 2003; Ford et al., 2008). However, preventing RTC in an organisation is of practical relevance because it largely determines how successful change will be (Van den Heuvel & Schalk, 2009). According to Oreg (2003), organisations need to value employees who are willing and able to respond positively to change.

3.6 INTERVENTIONS TO COUNTERACT RESISTANCE TO CHANGE

Intervention strategies are needed to assist employees to identify and interpret their own perceptions of RTC and unconscious processes, thus creating personal awareness and understanding of self, and reducing levels of RTC. Change processes are driven by strategic considerations, according to Schilling and Steensma (2001) including the need to improve performance (Balogun & Hailey, 2008).

Armenakis et al. (1993) state that creating *readiness for change* involves changing the individual's cognitive interpretation of changes. Employees act on their own interpretation of the work environment and therefore understanding needs to change if the actions of employees are to change substantively (Davidson, 2006). Beckhard and Harris (1987) state that readiness for change is reflected in employees' willingness, motives and aims regarding the proposed change. It is important to note that, according to Hultman (1995), readiness for change means both wanting to change and being able to change and is manifested in active initiation of changes. Absence of RTC does not necessarily indicate readiness for change.

Chreim (2006) considers *framing* to be a major role player in change responses as it affects acceptance of change or RTC. Framing denotes the establishment of the frames or boundaries within which an employee can make sense of a particular phenomenon (Bean & Hamilton, 2006). Furthermore, Bean and Hamilton (2006) and Bartunek et al. (2006) consider that employees make changes through a cognitive interpretation. Although Gardner (2004) emphasises that RTC can hamper change efforts, framing strategies need to be such that employees are able to see that organisational changes have beneficial results for them and do not simply lead to greater gain for the organisation.

Through perceptions employees create their own understandings, perspectives and interpretations of what is likely to happen to them and their organisation as a result of organisational change. Accordingly, these different understandings,

perspectives, interpretations and experiences of change influence individuals' reactions to change and ultimately their RTC. According to Van Tonder (2004a), causes of RTC are unavoidably mediated by perceptions and it is therefore important to note that change needs to be *communicated* frequently, continuously and enthusiastically to employees (Ford et al., 2008; Lewis, Schmisseur, Stephens & Weir, 2006).

It became relevant to explore why willingness to change is used so little and what the alternatives are to make change a more collaborative effort (Gravenhorst, 2003). There is insufficient investment in the communication, training and follow-up needed to successfully implement change (Schneider & Goldwasser, 1998). Some organisations resort to questionable techniques such as manipulation and coercion to overcome resistance (Carr, 1994; Hultman, 1995) with resultant mistrust and resentment (New & Singer, 1983).

For the purposes of this study, RTC in ODL academics can be seen as the social, technological and systemic ability to try new things and to change (Beer & Noria, 2000a). Strategies to overcome RTC include *participation, education, facilitation, negotiation, manipulation and implicit and explicit coercion* (Aldag & Stearns, 1991; Griffin, 1993; Kreitner, 1992) but the focus of this study is not interventions.

3.7 CHAPTER SUMMARY

The first section of this chapter focuses on conceptualising and defining RTC in the broader context of change. It is clear that change in the work environment and RTC of employees are not only a very complex phenomenon but also a constant reality for individuals as well as for organisations. The definitions that were provided all conveyed the same message, namely that change happens when something has to become different in order to result in something better. The multiple dimensions of employee RTC as well as how they are related to one another, need further clarification through empirical research. Conceptualising employees' responses to change in the work environment as multidimensional

attitudes, may enhance insight into ways in which employees respond to change or resist change. The aetiology of RTC was presented to illustrate the complexity thereof as well as the multitude of factors that influence change. An overview of some theoretical models on RTC, as well as their usage, is discussed. As this study was conducted within the paradigm of positive psychology, the positive effects of RTC were discussed as well as some interventions to counteract RTC.

The following literature research aim was achieved in this chapter:

Research aim 2: To conceptualise the psychological behavioural construct of RTC, (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) as experienced by ODL academics and as explained by theoretical models in the literature.

Chapter 4 focuses on the discussion of positive organisational psychology and related models and also focuses on the positive psychological constructs of flourishing, WE and PsyCap from the perspective of the humanistic and positive psychology paradigms.

CHAPTER 4: POSITIVE WORK AND ORGANISATIONAL PSYCHOLOGY

Chapter 4 addresses the conceptualisation of positive work and organisational psychology as well as constructs of importance for this study. The constructs of work engagement (WE), vigour, dedication and absorption, and positive psychological capital (PsyCap), hope, efficacy, resilience and optimism as well as the constructs of and the related theoretical models will be explored from the perspective of a positive psychological paradigm. The chapter concludes with the gains achieved through positive work and organisational psychology, highlighting the contributions of relevance to this research.

4.1 CONCEPTUALISING POSITIVE WORK AND ORGANISATIONAL PSYCHOLOGY

Psychology's heritage is based on the Schopenhauer-Freud framework, which implies that the best we can do is to relieve misery (Seligman, 2010). However, a shift in psychologists' focus on repairing what is broken to nurturing what is best, took place around the turn of the century after the speech delivered by Martin Seligman at his inauguration as President of the American Psychological Association in 1998 and the publication of a frequently cited article by Seligman and Csikszentmihalyi (2000).

The concept of individuation is strongly related to the idea of people becoming all that they can be (Jung, 1933). According to Peterson and Seligman (2004), focusing on 'what is right' with a person, rather than 'what is wrong', showed better end-results in a shorter period of time. As positive psychology is the scientific study of ordinary human strengths and virtues, it deals with ordinary people, with an interest in finding out what works, what is right, and what is improving (Kristjánsson, 2010; Seligman & Csikszentmihalyi, 2000). It is concerned with the nature of the effectively functioning human being, who successfully applies evolved adaptations and learned skills (Sheldon & King, 2001).

Seligman and Csikszentmihalyi (2000) characterise positive psychology as a science of positive subjective experience, positive individual traits, as well as positive institutions. Snyder and Lopez (2002) assert that the field of positive psychology is rapidly attracting interest in industrial psychology and is a rapidly expanding new subdiscipline in psychology as a science. More specifically, positive psychology promotes the role of positive emotions and individual strengths as associated with successful outcomes in the work environment (McMohan, 2009). It is important to note that positive psychological constructs are often highly correlated with one another, but are studied independently (Friedman & Kern, 2014).

According to Weinberg and Cooper (2007), organisations need healthy and motivated employees to prosper and survive in a continually changing environment, characterised by increasing flexibility in working practices and the creation of a 24-hour economy where fewer people do more work. Employees often feel that organisations do not care about their well-being. Research on subjective well-being (Diener, Suh, Lucas & Smith, 1999), psychological well-being (Ryff & Singer, 1998) and positive emotions (Frederickson, 1998) prompted Keyes (2007) to operationalise flourishing as a pattern of positive feelings and positive functioning in the work environment. Furthermore the dimensions of subjective well-being are summarised as emotional well-being, psychological well-being and social well-being.

4.1.1 Defining positive work and organisational psychology

Positive work and organisational psychology is concerned with the science of subjective experiences, positive institutions and individual traits that improve the quality of life and prevent the onset of psychopathology, or in short the science of positive well-being, combined with a sense that one's life is meaningful, good and worthwhile (Seligman, 2002). Seligman and Csikszentmihalyi (2000) regard positive psychology as the science of positive subjective experience of individuals, positive individual traits, and positive organisations. Gable and Haidt (2005) and Linley, Joseph, Harrington and Wood (2006) describe this phenomenon as a scientific field that studies the flourishing and optimal functioning of individuals.

According to Seligman and Csikszentmihalyi (2000, p. 5), “the field of positive psychology at the subjective level is about valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent and wisdom. At the group level, it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance and work ethic”.

Snyder and Lopez (2002) support the view that positive work and organisational psychology is defined as the study and optimisation of positive behaviours and feelings in the work environment. Furthermore, at the meta-psychological level, it aims to redress the imbalance in psychological research and practice by calling attention to the positive aspects of human functioning and experience. At the pragmatic level, it is about understanding the processes and mechanisms that lead to desirable outcomes.

Positive work and organisational psychology is also considered to be the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups and institutions (Gable & Haidt, 2005). Furthermore, positive psychological functioning in an organisation focuses on the dynamics within the organisation that lead to the development of human strength, foster vitality and enable employees to flourish and be resilient, as well as leading to optimum individual and organisational performance (Cameron, Dutton & Quinn, 2003a). Wissing and Van Eeden (2002) contend that psychofortology/positive psychology emphasises the manifestation, origins, dynamics and strengths of individuals, groups and communities.

Work and organisational psychology is defined as an applied division of psychology which involves the study of human behaviour related to work, organisations and productivity (Cascio, 2001). Furthermore, it is the application of

psychological principles to optimise the success of the organisation (Schultz & Schultz, 2014).

The focus of this study is on the positive psychological behaviour and well-being of ODL academics.

4.1.2 Development of positive work and organisational psychology

Humanistic psychology or positive psychology has always been interested in human beings' potential for fulfilment and research into positive psychology topics has been going on for decades. This field of research may even date back to the origins of psychology itself, for example, in William James' writings we find references to ''healthy mindedness'' (James, 1902). Furthermore, positive psychology has interests in common with areas of humanistic psychology, and its emphasis on the fully functioning person (Rogers, 1961), self-actualisation and the study of healthy individuals (Breedt, Cilliers & Visser, 2006; Maslow, 1968). In particular, it is noted that more than 50 years ago Maslow lamented psychology's preoccupation with disorder and dysfunction. Two broader empirical research streams emerged in parallel to positive psychology. These streams both aim to produce positive individual and organisational outcomes, namely positive organisational behaviour (POB) (Luthans, 2002a) and positive organisational scholarship (POS) (Cameron et al., 2003b).

Firstly, POB has been defined as the study and application of positive human resource strengths and psychological capacities that can be assessed, developed, and effectively managed for performance improvement in today's changing work environment (Luthans, 2002a). This implies a strong focus on individual factors such as hope, optimism, resilience and efficacy (Luthans, Youssef, & Avolio, 2007). Luthans (2002b) is of the opinion that to be considered part of POB, the positive construct must be grounded in theory and research; it must have valid and reliable measures; it must be "state-like" and thus be open to development, and it must demonstrate a positive impact on attitudes, behaviours and workplace performance. Luthans (2002a) came to the conclusion that the psychological

resources that have been shown to best meet these criteria of positive organisational behaviour include hope, efficacy, resilience, and optimism. According to Beal III, Stavros and Cole (2013), little empirical research has investigated the application of POB in organisations in the changing environment and Youssef and Luthans (2012) suggest that the role of PsyCap in educational institutions should be investigated.

Secondly, POS has evolved since 2003 and according to Luthans and Church (2002) it refers to positively oriented human resource strengths and psychological capacities that can be measured, developed and effectively managed in the changing work environment. POS is the study of that which is positive, flourishing and life-giving in organisations or the generative dynamics that cause organisations and individuals in organisations to thrive, as well as factors that enable positive consequences for individuals, groups and organisations (Cameron & Caza, 2004; Cameron et al., 2003b).

Work and organisational psychology can be divided into work psychology (also described as human resource management) and organisational psychology (also described as organisational behaviour). For this study, the focus will be on organisational psychology or organisational behaviour which is directed at the behaviour of groups or individuals in the work environment. Wissing et al. (2014) indicate that organisational psychology can be divided in the following subfields: individual differences and diversity; motivation; group dynamics; communication, leadership; organisational design and development and lastly well-being at work. Rusk and Waters (2015) present well-being from a system-based perspective which focuses on psychological and social functioning, known as psycho-social functioning. This study will focus on psychological functioning.

Most members of the human race achieve a state which could be described as “thriving”, rating themselves as happy and satisfied with their lives and work (Myers, 2007). Breedt et al. (2006) are of the opinion that the operationalisation of positive psychological constructs is increasingly being used to explain how people cope with the rapidly changing world of work. More specifically, Breedt et al.

(2006) indicate that positive psychology includes many behavioural constructs, such as self-actualisation (Maslow, 1968), sense of coherence (Antonovosky, 1979), hardiness (Kobasa, 1979), potency (Ben-Sira, 1985), self-efficacy (Bandura, 1982), learned resourcefulness, internal locus of control (Strümpfer, 1990), coping (Somerfield & McCrae, 2000), well-being (Lyubomirsky, 2001), creativity and flow (Nakamura & Csikszentmihalyi, 2001; Simonton, 2000), resilience (Masten, 2001), emotional intelligence (Lopez & Snyder, 2003), engagement (Rothmann & Van Rensburg, 2002), authenticism (Seligman, 2003), happiness (Diener, 2000), humour (Fredrickson, 2001), positive affect (Folkman & Moskowitz, 2000), courage, gratitude (Lopez & Snyder, 2003), faith and optimism (Peterson, 2000).

Moreover it follows that positive psychology focuses not only on the positive aspects of the individual's functioning in the work environment, but also on the negative experiences that can be regarded as part of human life, as reflected by resilience, when the individual bounces back and even grows through severe challenges (Parks, 2011; Ungar, 2012). Wong (2011) describes virtue, meaning, resilience and well-being as the four pillars of positive psychology and argues that no individual can survive or flourish without any one of these constructs. In addition, a high level of WE and well-being increases our capacity for virtue, meaning and resilience (Lyubomirsky, King & Diener, 2005). Research into existential meaning has been conducted and empirical research strongly supports the association between meaning in life and positive psychology (De Klerk, Boshoff & van Wyk, 2004).

South African organisations, like global organisations, are currently facing enormous challenges regarding employee psychological well-being and South African HEI's are currently involved in research that forms part of a world-wide initiative to formalise the field of positive psychology (Barkhuizen et al., 2014; Rothmann, Jorgensen & Marais, 2011). This study will therefore add to a new emerging paradigm in psychology research and application.

4.1.3 Positive psychology at the meta-psychological level

*Firstly***,** it is important to understand positive psychology at the meta-psychological level, or to understand the aims and vision of positive psychology (Linley et al., 2006). The aim of positive psychology is to begin to catalyse a change in the focus of psychology from preoccupation with repairing the worst things in life to building positive qualities as well (Seligman & Csikszentmihalyi, 2000). The perception has been that positive psychology emphasises the positive at the expense of the negative (Held, 2004; Lazarus, 2003), and that positive psychology is ‘‘independent’’ from what has gone before (Snyder & Lopez, 2002).

Secondly, another facet of this meta-psychological perspective is that positive psychology has provided a different lens through which to understand human experience, and perhaps most importantly, has begun the creation of a shared language and understanding that is beginning to locate the study of positive states, traits, and outcomes in relation to each other (Linley et al., 2006).

Thirdly, at this meta-psychological level, positive psychology offers a different lens through which to study and understand psychological phenomena. In contrast, positive psychology asks ‘‘what works, what is right, and what is improving?’’ (Sheldon & King, 2001, p. 216).

Fourthly, the processes of interest to positive psychology may be defined as those psychological ingredients (for example, strengths and virtues) that lead to the good life, or equally the obstacles in the way of leading a good life (King, Eells, & Burton, 2004; King & Napa, 1998). Positive psychology should seek to understand the factors that facilitate optimal functioning as much as those that prevent it (Linley et al., 2006).

Lastly, our philosophical assumptions influencing what we believe to be real and important are increasingly being explored (Fowers, 2012; Waterman, 2013). The cultural embeddedness of notions, expressions and evaluation of well-being is being explored worldwide (Majuro & Neto, 2014; Ungar, 2008). The South African multicultural context could also contribute extensively to the deeper understanding

of flourishing and well-being (Keyes et al., 2008; Khumalo, Theman & Wissing, 2011; Theron 2012; Wissing, 2013).

Positive work and organisational psychology as well as the subdisciplines within psychology are applied to improve the human condition in many areas of organisational life and this study will therefore contribute to the knowledge on well-being of academics in the ODL environment.

4.2 POSITIVE PSYCHOLOGY AND THE POSITIVE INSTITUTION

There is still a dearth of empirical evidence supporting the proposed beneficial effects of positive psychology principles in the work environment for employees as well as for institutions and organisations (Cameron, Mora, Leutscher & Calarco, 2011). However, positive psychology enables individuals as well as organisations to flourish by focusing on the optimal expression of potential through positive well-being and positive organisations (Seligman & Csikszentmihalyi, 2000).

Positive organisations, according to Wissing et al. (2014), have a purpose, provide safety and ensure fairness and dignity to all employees. Various disciplines have developed which focus on the study of positive institutions, for example POB (Luthans, 2002a) and POS (Cameron & Spreitzer, 2012). Positive psychology, according to Sheldon and King (2001), appreciates human potential and capacities and facilitates important skills to facilitate adaptation to a changing environment.

Sin and Lyubomirsky (2009) summarised results from 51 studies that investigated the effects of positive psychology interventions on well-being on an individual level and the results of their meta-analysis reveal that positive psychology interventions in the work context consistently enhance employee well-being. Thompson, Peura and Gayton (2015) point out that positive psychology interventions are activities designed to improve subjective well-being. However, according to Meyers, Van Woerkom and Bakker (2013) there is no existing literature review that focuses on positive psychology interventions in the organisational context only. More

specificaly, two out of four studies corroborated the positive effect of positive psychological interventions on performance (Meyers et al., 2013).

Cameron et al. (2011) reason that positive practices in organisations influence positive individual behaviour, which eventually translates into changes in organisational effectiveness. Nevertheless, it might be argued that enhancing organisational effectiveness is much more difficult than enhancing positive individual behaviour, and might therefore take much longer. Various positive constructs have been researched (Cameron et al., 2011; Nelson & Cooper, 2007) but so far the four that have been identified as best influencing positive organisational behaviour are hope, efficacy, optimism and resilience (Luthans, 2002a; Luthans, 2002b; Youssef & Luthans, 2007). Similarly, previous studies on flourishing and more specifically WE focused strongly on outcomes which are directly relevant for organisations (Diedericks & Rothmann, 2013). Furthermore, WE makes an important contribution to the flourishing of employees and relevant and sufficient research (Hallberg & Schaufelli, 2006) indicates that WE is an important motivational construct for the positive organisation.

Relevant research (Fredrickson, 1998; 2001; 2003) contribute to theory that examines the role that positive behaviour and emotions play in generating broader ways of thinking and behaving and explains the role that positive employees can play in a positive organisation. Research on positive emotions shows that a ratio of about 3:1 of positive to negative emotions leads to flourishing, including high levels of functioning and well-being (Keyes, 2002). Furthermore, empirical evidence demonstrates that positive behaviour and emotions can engender better decision making (Chuang, 2007) and are positively related to various measures of success and well-being for individuals as well as for the organisation (Lyubomirsky et al., 2005).

It is important to note that positive organisations benefit from the development of PsyCap, which is an extension of economic, human and social capital, in the organisation. Luthans, Avolio, Walumbwa and Li (2005) and Luthans, Avolio et al. (2007) suggest that an organisation can increase its competitive advantage by developing and managing PsyCap among its employees. Heled, Somech and

Waters (2016) reported several models in the research literature which provide a theoretical rationale explaining why individuals' positive attitudes and behaviours can come to characterise the positive organisation. The field of positive organisational psychology has experienced rapid growth and expansion and has also flourished in HEI (Parks, 2011). Positive psychology has been taught and applied in HEI for almost as long as it has existed as a field and there are many potential applications of positive organisational psychology in HE that have not yet been developed.

The available literature on positive psychology interventions in organisations almost exclusively investigated individual-level dependent variables, which represents an important shortcoming of the literature to date (Meyers et al., 2013). The challenge for this study, therefore, is to demonstrate the value-added association with the construct of WE and the other relevant positive psychological constructs of PsyCap for the ODL academic.

4.3 PSYCHOLOGICAL WELL-BEING AND MENTAL HEALTH

Poverty, insufficient growth, unemployment and socio-economic factors affect people's mental health and well-being and positive institutions are increasingly involved in promoting well-being in the work environment.

4.3.1 Conceptualising well-being

Mental health includes the absence of psychopathology and according to Keyes (2002) it is defined as the presence of high levels of emotional, psychological and social well-being, also labelled as flourishing. Psychologists have utilised the principles of positive psychology to treat pathology and enhance psychological well-being in the work environment (Seligman, Steen, Park, & Peterson, 2005) and positive institutions have a purpose and shared vision, namely to safeguard against threats, danger and exploitation, to ensure fairness and humanity and to

treat all individuals with dignity. Positive institutions therefore benefit the individual, the communities and society at large (Wissing et al., 2014).

Psychological well-being has three defining characteristics. First, well-being is a phenomenological event (Diener, 1994), which indicates that people feel good when they subjectively believe themselves to feel good. Second, well-being involves some emotional conditions, more specifically, psychologically well people are more prone to experience positive emotions and less prone to experience negative emotions (Argyle, 1987; Diener & Larsen, 1993) and thirdly, well-being refers to one's life as a whole; it is a global evaluation (Diener, 1994; Myers, 1992).

Positive work and organisational psychology emphasises that individuals have strengths and potential that can be expressed and realised in individual and social well-being (Wissing et al., 2014). Various researchers, namely Cohn and Fredrickson (2010), Hart and Sasso (2011), Waterman (2013) and Wong (2011), reported the rapid development of positive psychology from merely describing the nature and dynamics of well-being to exploring the ways in which well-being and mental health can be achieved and the way the outcomes of interventions can be evaluated. According to Carr (2004), Erikson (1950), Frank (1968) and Snyder (2004), few psychological constructs have been more frequently linked to health and well-being than hope. Scioli, Scioli-Salter, Anderson and Fedele (2016) are of the opinion that hope can be defined as a stable trait or a set of endlessly revisable specific aims which encompass basic trust and openness.

4.3.2 Defining well-being

Ryff and Singer (1998) contended that well-being is an issue of engagement in living, involving expression of a broad range of human potentialities such as intellectual, social, emotional and physical ones.

Seligman and Csikszentmihalyi (2000) consider well-being to be the value of subjective experiences, contentment and satisfaction in the past, hope and optimism about the future and flow and happiness in the present. Seligman (2011)

remarks however, that well-being cannot be defined by a single measure, but is comprised of various aspects that are more readily measured.

Weinberg and Cooper (2007) are of the opinion that in order to prosper and survive in a continuously changing environment, individuals need to be healthy and motivated. Well-being therefore implies achieving optimal physical, mental and emotional well-being (Wissing et al., 2014).

4.3.3 Perspectives on well-being

Two different manifestations or a multidimensional measure (Huppert, 2014) of well-being can be distinguished in positive organisational psychology, namely *feeling good* and *functioning well* (Keyes & Annas, 2009). The feeling good component of well-being, or *subjective well-being*, is measured and indicated in most instances by happiness, positive emotions and satisfaction (Bradburn, 1969; Keyes, 2006; Keyes, Rath & Harter, 2010; Shmotkin & Ryff 2002). The functioning well component of well-being, or *psychological well-being,* is referred to in terms of meaning, realisation of potential and perceived flourishing despite changes and challenges in the work environment (Baumeister, Vohs, Aaker & Garbinsky, 2013; Keyes et al., 2002; Waterman, 2007). Furthermore, Ryan and Deci (2001) and Waterman (2008) distinguish between *hedonic well-being,* which is equated with happiness, enjoyment, pleasure and satisfaction and *eudaimonic well-being,* which is equated with meaning, purpose, expression of potential and involvement in something larger than the self.

Well-being can be regarded as an integrated phenomenon and reflects the conceptual integration of feeling well and functioning well, as the two components enhance each other and create space for each other. Feeling good and functioning well can be pathways towards well-being and experiencing them at the same time contributes to flourishing in life and work (Wissing et al., 2014). Morgan and Robinson (2013) are of the opinion that well-being can be perceived as the result of how the individual pursues activities that satisfy the need for efficacy, and find that females often devote more energy towards these goals than males.

4.4 MODELS OF POSITIVE WORK AND ORGANISATIONAL PSYCHOLOGICAL FUNCTIONING

In the following section, two models of positive work and psychological functioning, namely Flourishing and PsyCap, are explored.

4.4.1 Flourishing

The flourishing of individual employees is an important determinant of positive organisations and individual well-being.

4.4.1.1 Conceptualising flourishing

Flourishing represents a general conceptualisation of psychological well-being, characterised by individuals who perceive that their life is going well and that they are functioning effectively (Diener, Helliwell, Lucas & Schimmack, 2009). Similarly Keyes (2002) is of the opinion that flourishing and engaged individuals are generally well-adapted and function well, whereas languishing individuals experience emptiness and stagnation and live a shallow, despairing life that is devoid of meaning. Positive psychological well-being can increase resilience (Keyes, Dhingra & Simoes, 2010) and it focuses on strengths and resourcefulness or flourishing.

Flourishing lies on one side of a continuum of psychological well-being. Languishing, which is on the opposite side of the continuum, is defined as the absence of psychological well-being (Keyes, 2002). Relevant studies (Keyes & Annas, 2009; Keyes et al., 2008) show that flourishing is associated with various advantages, including improved health, coping, stress management and positive organisational outcomes. Furthermore, positivity in proximal work experiences strongly affects levels of flourishing. Feeling satisfied with a job and functioning well by engaging with one's work could make an important contribution towards the flourishing of individuals in the work environment. A healthy workplace,

characterised by the availability of resources and experiencing WE also seems to promote the well-being of employees (Keyes, 2007),

In this study, the well-being literature is expanded to hypothesise that positive psychological functioning affects the flourishing of individuals via WE and PsyCap as WE makes an important contribution to the flourishing of individuals in an organisation (Diedericks & Rothmann, 2013).

4.4.1.2 Defining flourishing

Flourishing is defined as an employee's appraisal regarding the quality of his or her life as expressed in terms of multidimensional indicators (Keyes & Annas, 2009; Rothmann, 2013) and includes two dimensions, according to Keyes and Annas (2009) namely, feeling good (hedonic well-being) and functioning effectively (eudaimonic well-being). Furthermore, feeling good includes being satisfied with life and/or one's job and experiencing more positive than negative emotions. Feeling well includes being engaged at work, being selfdetermined and showing hope, efficacy, resilience and optimism at work.

Keyes (2007) sees flourishing as a pattern of positive feelings and positive functioning in life. Flourishing, as defined by Seligman (2011), consists of encompassing factors that include positive emotions, engagement with what one is doing, a sense of accomplishment and good relationships. Furthermore, according to Youssef and Luthans (2012), flourishing can be defined as functioning within the optimal range and is characterised by growth and generativity. For purposes of this research, flourishing could imply positive feelings leading to engagement and positive functioning in a changing ODL work environment.

4.4.1.3 Dimensions of flourishing

The relationship between flourishing and positive work outcomes is under-researched (Bakker & Schaufeli, 2008). Flourishing represents the highest level of

the well-being spectrum and individuals are therefore expected to experience high positive affect when they flourish (Bakker & Oerlemans, 2011).

Individual as well as organisational outcomes are strongly related to individuals' flourishing in the organisational context (Diedericks & Rothmann, 2014; Swart & Rothmann, 2012) and the dimensions of flourishing in institutions, as reported by Wissing et al. (2014), are indicated in Figure 4.1. Flourishing employees show hope, efficacy, resilience, and optimism when they encounter challenges in the work environment. Furthermore, they are engaged in their work, experience meaning and purpose in their work, are intrinsically motivated and experience high levels of work-related emotional well-being.

Figure 4.1 Dimensions of flourishing in institutions (Wissing et al., 2014)

It is important to note that Demerouti, Bakker and Gevers (2015) reported that the more engaged individual employees are in their work, the more they flourish in general. Shrira, Bodner and Palgi (2016) found in a study of Israeli participants that older individuals show higher levels of well-being and flourishing, and this was similar to the findings reported by Diehl, Hay and Berg (2011). Shrira et al. (2016) furthermore indicated that flourishing individuals may show different profiles of

well-being, for example either high psychological well-being or high social well-being.

WE has proved to have a strong positive relationship with work functioning that goes beyond formal job requirements. WE represents willingness to dedicate resources to work and is actionorientated (Bakker & Xanthopoulou, 2013; Christian, Garza & Slaughter, 2011; Demerouti & Cropanzo, 2014) whereas flourishing largely connotes feeling good and functioning well. WE makes an important contribution to the flourishing of employees and relevant and sufficient research (Hallberg & Schaufelli, 2006) indicates that WE is an important motivational construct for positive work performance.

In this study, it was decided on the basis of the abovementioned argument, to focus on the positive psychological construct of WE within the flourishing model. The positive psychological construct of WE has been researched extensively and as WE can make a real difference to the positive psychological behaviour of employees, it is of importance for the HEI that ODL academics in the changing work environment be engaged, be able to flourish and therefore experience high levels of psychological well-being.

4.4.2 Work engagement

This section focuses on WE as a positive psychological construct of importance for the flourishing and well-being of ODL academics. Langelaan, Bakker, Van Doornen and Schaufeli (2006) and Rothmann (2002) are of the opinion that WE research should be conducted across a range of professions and occupational groups. Bakker and Schaufeli (2008) suggest researching engaged employees in flourishing organisations.

4.4.2.1 Conceptualising work engagement

Positive organisational behaviour fosters engaged employees and results in high performance and overall wellness for both the organisation and the employee (McHugh, 2001). An interest in WE arose with the shift in focus in the field of

psychology at the turn of the century, from weaknesses, malfunctioning and damage towards happiness, human strengths and optimal functioning (Rothmann, 2003; Seligman & Csikszentmihalyi, 2000; Strümpfer, 2005). Psychology has been criticised as primarily addressing mental illness rather than mental ‘‘wellness’’. However, the science of positive psychology emerged (Kristjánsson, 2010; Seligman & Csikszentmihalyi, 2000). WE, according to Rothmann and Rothmann (2010), as a component of happiness entails that employees pursue gratification by applying their strengths. Research on WE, according to Bakker et al., (2008), is in the early stages of its development. Pech and Slade (2006) reported that only 17% of employees are truly engaged with their organisations, while 63% are not engaged and 20% are disengaged, which implies that they have uncoupled themselves from work roles and have withdrawn cognitively and emotionally.

Simpson (2009) identified four lines of engagement research, namely, personal engagement (Kahn, 1990), employee engagement (Harter, Schmidt & Hayes 2002), burnout/engagement (Leiter & Maslach, 2004) and work engagement (WE) (Schaufeli & Bakker, 2004). In this study, the focus will be on one such POB-construct, namely the WE conceptualisation of Schaufeli and Bakker (2004). Positive organisational behaviour (POB) research, as noted by Bakker and Schaufeli (2008), can be defined as the study and application of positive human resource strengths and psychological capacities that can be measured, developed, and managed for performance improvement and WE in the workplace (Luthans, 2002b). WE is aligned with POB, as both engagement and the facets of POB are considered to be state-like positive psychological capacities (Bakker, Schaufeli, Leiter, & Taris, 2008; Youssef & Luthans, 2007). WE is, however, considered to be more stable and longer lasting (Hallberg & Schaufeli, 2006) and is therefore regarded as important for the positive psychological behaviour of ODL academics in a changing work environment.

(a) Defining work engagement

WE is defined as a positive, fulfilling, affective, motivational state of work-related well-being that is characterised by vigour, dedication and absorption (Bakker, Schaufeli, Leiter & Taris, 2008). In summary, it can be stated that engaged

employees have high levels of energy and are enthusiastic about their work. Moreover, they are often fully immersed in their work so that time flies when working and they have difficulty in detaching themselves from their work (Macey & Schneider, 2008; May, et al., 2004).

Furthermore, engaged employees have a sense of energetic and affective connection with their work and they see themselves as able to deal with the demands of their job (Schaufeli, Salanova, González-Romá & Bakker, 2002).

(b) Aetiology of work engagement

Conceptually, the notion of WE was first described by Kahn (1990) as a construct that refers to the investment of physical, cognitive, and emotional energy at work. The aetiology or causation of the phenomenon of WE will be discussed, highlighting the reasons for WE, the drivers of WE and daily WE.

i) Reasons for the occurrence of work engagement

Research indicated that WE can occur on an individual as well as an organisational level.

Individual level:

- Schaufeli and Bakker (2001) argue that WE may have its roots in underlying personality traits in the individual.
- Engaged employees may possess inborn high energy levels (Rothman, 2002). This correlates with research (Macey & Schneider, 2008; May et al., 2004) that has suggested that engaged employees have high levels of energy.
- Personal resources such as self-efficacy and organisation-based self-esteem are related to WE (Mauno et al., 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007c).

- Self-efficacy and optimism have been recognised as crucial for individuals' psychological well-being in general, and for work-related well-being and WE in particular (Hobfoll, 2002; Luthans et al., 2005).
- According to Sonnentag (2003), WE is positively related to the extent to which employees recover from their previous working day.
- Engaged employees do not work hard because of a strong and irresistible inner drive, but because they regard work as fun (Gorgievski, Bakker & Schaufeli, 2010).

Organisational level:

- Job resources are important correlates of WE (Halbesleben, 2009; Mauno, Kinnunen & Ruokolainen, 2007; Saks, 2006), particularly under conditions of high job demands (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).
- Hakanen, Bakker, and Schaufeli (2006), Saks (2006) and Xanthopoulou et al., (2007a) confirm that several job resources that are crucial for the majority of organisations, namely autonomy, social support, supervisory coaching, performance feedback and opportunities for professional development, relate positively to WE.

ii) Drivers of work engagement

Research has consistently shown that job resources and personal resources facilitate WE (Bakker & Demerouti, 2008; Bakker & Leiter, 2010). Bakker and Demerouti (2008) identify the following drivers of WE:

- *Job resources*

Job resources refer to those physical, social, or organisational aspects of the job that may:

- reduce job demands and the associated physiological and psychological costs;
- be functional in achieving work goals; and

- stimulate personal growth, learning, and development (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004).

Job resources are not only necessary to deal with job demands, they are also important in their own right (Hobfoll, 2002). Job demands are those physical, psychological, social or organisational aspects of the job that require sustained physical and/or psychological (cognitive or emotional) effort and are associated with certain physiological and/or psychological costs (Schaufeli & Bakker, 2004).

Job resources are assumed to play an intrinsic motivational role because they fulfil basic human needs, such as the need for autonomy, relatedness, and competence (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). Furthermore, job resources foster employees' growth, learning and development (Schaufeli & Bakker, 2004). Supportive colleagues and performance feedback increase the likelihood of being successful in achieving one's work goals and WE is likely to occur (Schaufeli & Bakker, 2004; Schaufeli & Salanova, 2007). When employees are confronted with high job demands, their jobs are seen as so-called ''active jobs'' (Karasek, 1979), namely jobs that actively motivate employees to learn and develop their skills.

Schaufeli and Bakker (2004) consider that job resources also play an extrinsic motivational role as they are instrumental in achieving work goals.

- *Personal resources*

Personal resources are positive self-evaluations that are linked to resiliency and refer to the individuals' sense of their ability to control and impact upon their work environment successfully (Hobfoll, 2002). Furthermore, in addition to job resources, according to Bakker, Albrecht and Leiter (2011), personal resources or psychological capital (PsyCap) can be important predictors of WE. Bakker et al., (2006) have shown convincingly that employees with the most personal resources scored highest on WE and personal resources facilitate vigour, dedication and absorption (Bakker, 2011; Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009a).

iii) Daily work engagement

Most research on WE has focused on differences between individual employees and treated day-to-day fluctuations in engagement as measurement error (Sonnentag, Dormann, & Demerouti, 2010). However, employees who are highly engaged in their work might experience low performance levels from time to time and furthermore WE is regarded as an active positive concept where the individual might be positive towards the content of the work but not necessarily towards the organisation (Bakker, 2014).

Sonnentag (2003) was the first to challenge the fundamental view that engagement refers to a persistent and pervasive affective-cognitive state (Schaufeli et al., 2002). It follows that WE should not only be seen as a long-term experience; on the contrary Sonnentag et al. (2010) indicate that levels of WE may vary within the same employee from one day to the next, depending on specific situations and specific personal conditions. Enduring WE refers to how engaged employees feel in relation to their work in general, over long periods of time. In contrast, daily engagement reflects a temporary state of mind that exists at a given moment and fluctuates within the same individual over short periods of time (e.g., day-to-day or hour-to-hour). (Sonnentag, et al., 2010). Daily WE is therefore complementary to enduring WE.

Bakker (2014) suggests two approaches for assessing WE namely:

- Firstly, the *between-person approach*, which assesses continuing engagement and is particularly valuable in organisations for finding differences in WE between teams or departments;
- Secondly, the *within-person approach* which assesses daily or state WE and is particularly valuable for finding differences between occasions or activities that coincide with high or low levels of WE.

Relevant previous research provides evidence for substantial within-person fluctuations in WE. At a weekly level, a study by Bakker and Bal (2010) showed

that 47% of the total variance in engagement was attributable to within-person fluctuations and therefore 53% of the variance was attributable to between-person variance. Similarly, Xanthopoulou and Bakker (2012) found that the amount of total variance in engagement that may be attributed to within-person fluctuations is 42% on average across different occupational settings.

- Daily drivers of work engagement

Research has convincingly indicated that job and personal resources are the most important predictors of WE, and that job demands can strengthen this relationship. Bakker (2014) has inquired into whether job and personal resources operate in a similar way on a day-to-day basis and whether individuals are more engaged on the days they have access to many psychological resources.

During the past decade, around 20 studies have considered daily WE and have found that engagement fluctuates substantially from day to day (Xanthopoulou & Bakker, 2012), and that these fluctuations can be predicted using the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007, 2008, 2014). Table 4.1 shows some of the research that is of significance for this study, highlighting daily drivers of engagement (Bakker, 2014).

Table 4.1

Daily drivers of WE

Author	Characteristics	Drivers of WE
Xanthopoulou et al. (2008)	• Positive effect on self-efficacy and WE. • Social support enhances WE and enhances work performance. • WE mediates the relationship between self-efficacy and work performance.	Daily collegial social support.
Simbula (2010)	• Positive effect on WE. • Indirectly contributes to mental health and well-being. • Daily job resources predict daily WE.	Daily support from colleagues.
Bakker and Xanthopoulou (2009)	• Daily WE crosses over from one employee to another. • Cross-over of vigour and absorption might be unconscious modelling process (Hatfield, Cacioppo & Rapson, 1994). • Cross-over of dedication might be a conscious process – dedication expressed by employees might have a positive impact on colleagues' level of dedication. • Vigorous co-workers facilitate each other's work performance.	Daily employee interactions – formal and informal contact.
Xanthopoulou, Bakker, Demerouti and Schaufeli (2009b)	• Positive effect on employee personal resources – daily levels of optimism, self-efficacy. • Higher levels of daily WE.	Daily job resources – daily levels of autonomy, daily levels of positive team climate.
Kűhnel, Sonnentag and Bledow (2012)	• Higher levels of WE. • Daily fluctuations in job characteristics.	Daily specific resources – recovering by the morning.

In this study, WE will be regarded as how engaged academics experience in relation to their work, in respect of both daily WE and enduring WE (Sonnentag et al., 2010).

- Daily job crafting

A study by Petrou, Demerouti, Peeters, Schaufeli, and Hetland (2012) focused specifically on daily job crafting and its relationship with daily WE. Job crafting was conceptualised as ‘‘seeking resources,’’ ‘‘seeking challenges,’’ and ‘‘reducing demands’’, or the process of employees shaping their jobs (Demerouti, 2014; Wrzesniewski & Dutton, 2001). According to Berg, Dutton and Wrzesniewski (2008), job crafting implies actions that employees take to alter the physical task boundaries, the cognitive task boundaries and the relational boundaries of their work, with the main objective of increasing WE. In the changing work environment, Crawford, LePine and Rich (2010) found that job demands and challenges were positively associated with WE.

One implication of the JD-R model is that employees may actively change the design of their jobs by choosing tasks, negotiating different job content, and assigning meaning to their tasks or jobs (Parker & Ohly, 2008). By changing the content of their work or the work environment, employees may give more meaning to their work, increase their person job-fit, and increase their own WE (Bakker, Tims, & Derks, 2012; Tims, Bakker, & Derks, 2012). Bakker and Bal (2010) have found evidence that employees also engage in job crafting on a weekly and daily basis and these findings are consistent with the JD-R model (Bakker, 2011; Bakker & Demerouti, 2008) and suggest that when employees are more engaged, they are more inclined to craft their own job resources.

Similarly Petrou et al. (2012) confirm that engaged employees often craft their jobs on a daily basis, although Wrzesniewski and Dutton (2001) state that employees do not necessarily change their perceptions of the significance of their work, or their cognitive perceptions, on a daily basis. However, by crafting their work environment, they influence their own daily WE, especially when they have the

autonomy to do so. Daily job crafting is therefore a predictor and outcome of daily WE, well-being and flourishing (Bakker, 2011). The more employees craft their job resources, the higher the possibility that they will be engaged in their work and that they will flourish in their everyday lives (Demerouti et al., 2015).

(c) Application of work engagement

Relevant research indicated that WE contributes to employees' experiencing good health, as well as a positive work affect (Demerouti, Bakker, De Jonge, Janssen & Schaufeli, 2001, Rothbard, 2001). Certain other scholars have studied the individual's psychological well-being and ability to cope with the demands of the changing work environment from a health and growth psychology perspective (Coetzee & Cilliers, 2001; Rothmann, 2002). Turner, Barling and Zacharatos (2002) argue that failing to recognise the positive aspects of work is inept. For the purposes of this study, it is necessary to explore the positive aspects of work as well as to gain an understanding of the meaning and effects of work as WE can make a real difference to the behaviour of employees and may offer organisations a competitive advantage (Bakker et al., 2008; Cartwright & Holmes, 2006; Demerouti & Cropanzano 2014).

It can be clearly seen from Table 4.2 that engagement is multidimensional. Modern organisations, and specifically the HEI where this study was undertaken, expect their employees to be proactive and show initiative, take responsibility for their own professional development, and to be committed to high performance standards. Thus, they need energetic and dedicated employees who are emotionally and cognitively engaged with their work (Bakker & Schaufeli, 2008). Views on WE differ, as is indicated in Table 4.2.

Table 4.2

Different views on WE (Bakker et al., 2008)

Researcher	*Definition of WE*	*Manifestation of WE*	*Dimensions*
Kahn (1990)	People employ and express themselves physically, cognitively, emotionally, mentally.	Dynamic, dialectical relationship between the personal energies (physical, cognitive, emotional, mental) and the work role of the individual.	Engagement as behaviour manifest in a psychological presence – key reference, work role.
Rothbard (2001)	Two-dimensional motivational construct including attention and absorption.	Attention – cognitive availability, amount of time thinking about a role; absorption – intensity of focus on a role.	Positive antithesis of burnout – key reference, the individuals work activity.
Schaufeli, Salanova, González-Romá and Bakker (2002)	Positive, work related state of mind.	Vigour, dedication, absorption.	Vigour – high levels of energy and mental resilience; dedication – enthusiasm, pride, challenge; absorption – difficulty to detach from work.
May et al. (2004)	Degree of employment during performance.	Cognitions, emotions, behaviour.	Cognitive, emotional, physical engagement.

4.4.2.2 Dimensions of work engagement

According to Schaufeli, Salanova, González-Romá and Bakker (2002), WE consists of three different but related dimensions which can be conceptualised as follows:

(a) Vigour (Vi)

Vigour is characterised by high energy levels, the willingness to invest effort in work, perseverance regardless of difficult circumstances and mental resilience while working (Schaufeli & Bakker, 2003). Mauno et al. (2007), suggest that employees who feel vigour at work are highly motivated by their job and are likely to remain very persistent when encountering difficulties at work. Typical statements by an employee experiencing Vi would be: “At my work I always persevere, even when things do not go well”, or “I can continue working for very long periods at a time.”

(b) Dedication (De)

Dedication is marked by a sense of meaningfulness, a feeling of being challenged, and feelings of pride, enthusiasm and inspiration (Langelaan et al., 2006; Schaufeli, 2004). Employees scoring high on De identify strongly with their work and are involved. Involvement, like dedication, is usually defined in terms of psychological identification with one’s work or one’s job (Kanungo, 1982; Lawler and Hall, 1970). According to Mauno et al. (2007), dedication is characterised by a strong psychological involvement in one’s work, by feeling a sense of significance and enthusiasm, being inspired and proud, and viewing work as a challenge. Dedication is not only related to a cognitive state, but includes an affective dimension as well. Typical statements by a dedicated employee are: “To me, my job is challenging”, and “My job inspires me” (Schaufeli & Bakker, 2003).

(c) Absorption (Ab)

Absorption refers to being fully focused on and immersed in one’s work to such an extent that there is unawareness of time passing and one has difficulty with detaching from work (Schaufeli & Bakker, 2004; Langelaan, Bakker, Van Doornen & Schaufeli, 2006). Being fully absorbed in one’s work comes close to what has been called ‘flow’ or a state of optimal experience that is characterised by focused attention, a clear mind, effortless concentration, complete control, loss of self-

consciousness, distortion of time, and intrinsic enjoyment (Csikszentmihalyi, 1990; Schaufeli, Salanova, González-Romá, & Bakker, 2002). Mauno et al., (2007), state that the experience is so enjoyable that an employee will do it even at great cost. An employee experiencing high absorption will typically use statements such as: “When I am working, I forget everything else around me” and “I feel happy when I am working intensely” (Schaufeli & Bakker, 2003).

(d) The relationship between the three dimensions

Vigour and dedication are considered the core dimensions of WE (Schaufeli & Bakker, 2004), where absorption may be a consequence of WE (Langelaan et al., 2006). Furthermore, absorption, found to be a relevant aspect of WE after some 30 in-depth interviews (Schaufeli, Salanova, González-Romá & Bakker, 2002) has not been found to be the direct opposite of reduced efficacy. More specifically, efficacy seems to be an engagement element instead of a burnout component (Schaufeli, Martinez, Pinto, Salanova & Bakker, 2002) and accordingly both absorption and efficacy may be included under the broader concept of engagement.

According to Rothmann (2002), WE has not yet received enough attention in academic research, and in a recent study on academics, Barkhuizen et al. (2014), indicated high scores on vigour and dedication as indicative of WE.

WE represents a motivational process that is driven by the availability of resources (Schaufeli & Bakker, 2004). Both job resources (supervisory coaching, financial rewards, performance feedback, autonomy, career opportunities, etc.) and personal resources (optimism, self-efficacy, self-esteem, etc.) may engage employees, who then work hard (vigour), are involved (dedicated), and feel happily engrossed (absorbed) in their work (Bakker et al., 2008).

4.4.2.3 Conceptual models of work engagement

Although various theoretical models of WE exist, the first models were found in burnout literature. Karasek (1981) suggested the demand-control model, Pines (1993) suggested the existential model of burnout and Hobfall and Shirom (1993) the conservation of resources model. All of these models, however, described a "positive antipode" of burnout. A comprehensive review of these models falls beyond the scope of this chapter on WE. The following models considered to be relevant will, however, be presented:

(a) Job Demands-Resources (JD-R) model and work engagement

Bakker and Demerouti (2007) suggest that the evidence regarding the antecedents and consequences of WE can be organised in a model of WE which draws on two assumptions from the job demands-resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti, Bakker, De Jonge, Janssen & Schaufeli, 2001; Demerouti, Bakker, Nachreiner & Schaufeli, 2001).

The first assumption is that job resources such as social support from colleagues and supervisors, performance feedback, skills variety, and autonomy start a motivational process that leads to WE, and consequently to higher work performance.

The second assumption is that job resources become more salient and gain their motivational potential when employees are confronted with high job demands. In the HEI this may be workload, emotional demands or mental demands. On the other hand, the JD-R model assumes two processes: a) an energetic process of overtaxing and wearing out in which high job demands exhaust the employee's energy backup and b) a motivational process in which inadequate resources preclude dealing effectively with high job demands and foster mental withdrawal or disengagement (Schaufeli & Bakker, 2004).

The JD-R model can be used to study the effects of job demands and job resources on the engagement of academics, and has been extended to include motivation, caused by work engagement (Hakanen, Schaufeli & Ahola, 2008; Schaufeli & Bakker, 2004). Xanthopoulou, Bakker, Demerouti and Schaufeli (2007a, b, c) expanded the JD-R model by showing that job and personal resources are mutually related, and that personal resources can be independent predictors of WE. Thus, employees who score high on optimism, self-efficacy, resilience and self-esteem are well able to mobilise their job resources and are generally more engaged in their work. The JD-R model of WE (Bakker & Demerouti, 2007) is graphically depicted in Figure 4.2.

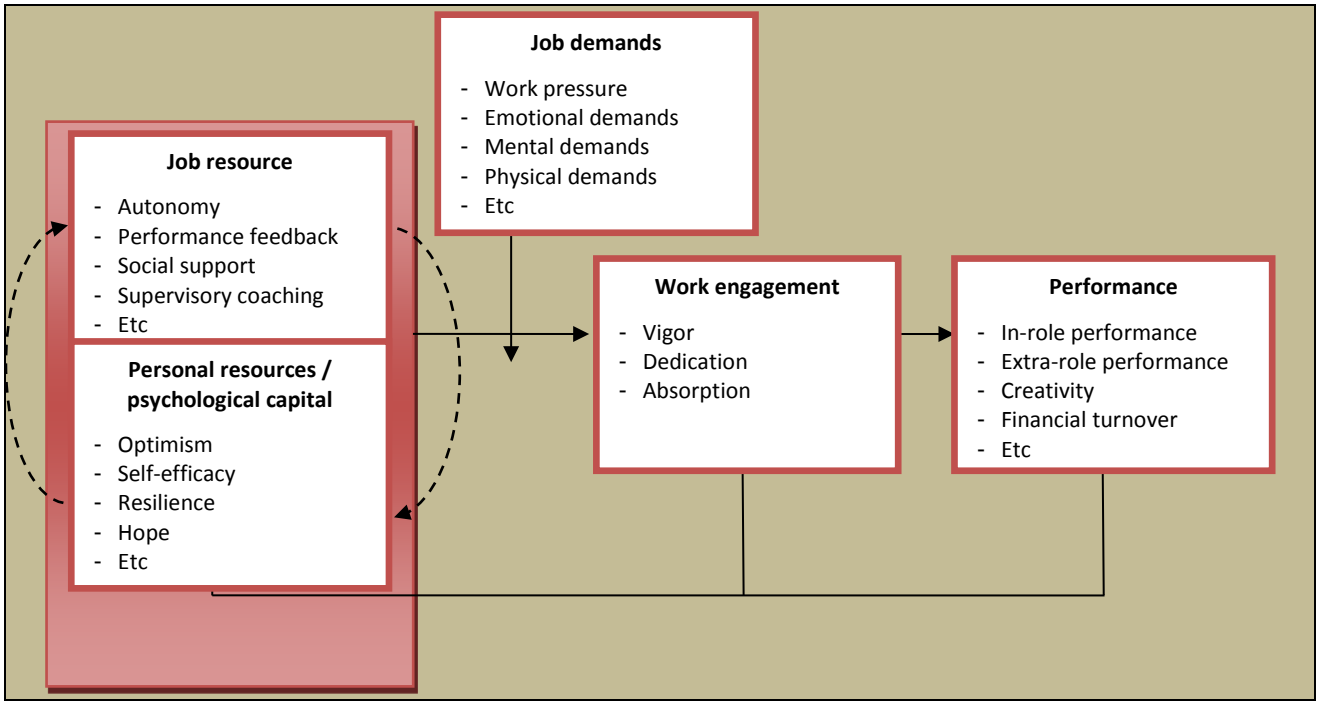

Figure 4.2 The JD-R model and WE

Figure 4.2 illustrates that job resources and personal resources may predict WE, either independently or in combination. Furthermore, job and personal resources in particular have a positive impact on WE when job demands are high. WE, in turn, has a positive impact on job performance (Bakker & Demerouti, 2008). Finally, employees who are engaged and perform well are able to create their own resources, which then foster engagement again over time and create a positive psychological spiral.

The process of employees' actively changing or influencing their work environments and job characteristics is referred to as job crafting (see section 4.2.2). Job crafting is defined as the self-initiated changes that employees make in their own job demands and job resources to attain or optimise their work goals (Tims, Bakker & Derks, 2012). WE is an important indicator of occupational well-being for both employees and organisations. The JD-R model has been applied to various occupational backgrounds and has been tested in South Africa by Rothmann and Joubert (2007).

(b) The Affective Shift model of work engagement

The Affective Shift model of WE (Bledow, Schmitt, Frese & Kűhnel, 2011) is based on the assumption that both positive and negative affect have important functions for WE (Carver & Scheier, 1990; George & Zhou, 2007; Kuhl, 2000). The model proposes that high WE is a shift from negative to positive affect. WE results if people move from a situation in which negative affect is experienced to a state of high positive affect. As a dynamic motivational state, WE can alter as a person moves through a working day, shifts between different tasks, and encounters events that occur at work (Fisher, 2002; Sonnentag, Dormann, & Demerouti, 2010). However, Bakker and Bal (2010) and Salanova, Agut and Pieró (2005) argue that evidence for the positive consequences of WE is accumulating but its psychological underpinnings have been insufficiently explored. Investigating the dynamic mechanisms from which WE develops could potentialy improve psychological understanding of WE and may indicate ways to facilitate WE.

There is broad theoretical agreement and abundant empirical evidence that work motivation in general is closely tied to affect (Carver & Scheier, 1990; Ilies & Judge, 2005). As WE is characterised by high involvement of the self and the presence of positive work-related feelings (Kahn, 1990; Rich, Lepine, & Crawford, 2010), it is particularly dependent on affect, compared with more passive ways forms of behaviour, in which the individual invests less effort and focused attention (George, 1989; Schaufeli et al., 2002). Various mechanisms underpin the Affective Shift model, namely:

i) *Work engagement as a dynamic motivational state*

As an affective-motivational state, WE can be distinguished from constructs such as job satisfaction, job involvement and commitment (Macey & Schneider, 2008; Rich et al., 2010). Where the attitudinal component of WE engagement overlaps with these constructs, WE is distinct as it also comprises an energetic component that reflects high involvement of the self (Sonnentag et al., 2010). Therefore, WE reflects high degrees of motivation and suggests high levels of performance.

ii) Affect and work engagement

High levels of WE suggests positive work-related feelings such as happiness and enthusiasm while performing work tasks (Kahn, 1990; Schaufeli et al., 2002). When employees experience positive affect, they expect that engaging in a task will yield positive outcomes (Hakanen, Bakker & Schaufeli, 2006; Ilies & Judge, 2005). Positive affect plays an important role in initiating goal-directed action, which is a precondition for WE (Kaze´n, Kaschel & Kuhl, 2008).

Negative affect, on the other hand, does not indicate being absorbed in an ongoing activity, feeling vigorous at work, and being dedicated to a task and does therefore not indicate high WE. In consequence, the person focuses closely on the pursuit of the goal, and additional effort is invested so that the rate of progress towards goal achievement returns to the desired level (Carver & Scheier, 1990). Under some conditions, negative affect can have motivating potential and can lead to subsequent increases in effort and WE (Bledow et al., 2011).

iii) Affective shift and work engagement

The core characteristic of the Affective Shift model is that WE will only result from the experience of negative affect if a shift to positive affect takes place. WE is expected to be low if employees remain in a negative affective state without experiencing positive affect (Bledow et al., 2011).

In contrast, if people move to a positive affective state, the motivating potential of negative affect could unfold and WE could increase (Lyubomirsky et al., 2005). The temporal sequence of negative affect followed by positive affect is regarded as an affective shift, as indicated in Figure 4.3:

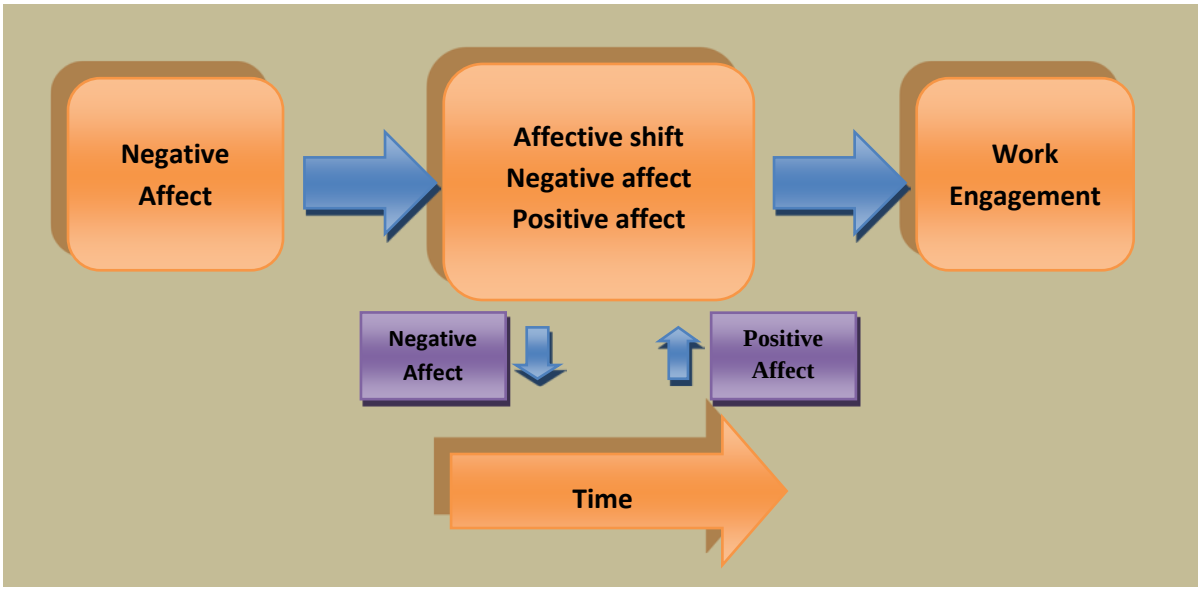

Figure 4.3 The Affective Shift model of WE

The higher the level of negative affect that is first experienced and the higher the level of positive affect that is subsequently experienced, the more prominent the affective shift. It is important to note that an affective shift does not imply that people first experience only negative affect and then exclusively positive affect. Positive and negative affect are not two poles on one dimension but two dimensions, and employees can experience both positive and negative affect simultaneously (Ilies, Dimotakis, & Watson, 2010; Larson & Csikszentmihalyi, 1980).

iv) Dispositional positive affectivity

Positive affectivity is accompanied by a generalised approach and is positively related to WE (Fredrickson, Tugade, Waugh & Larkin, 2003; Langelaan et al., 2006). The Affective Shift model suggests that dispositional positive affectivity buffers against the detrimental consequences of negative mood and negative events for WE (Judge et al., 1999; Lucas, Clark, Georgellis, & Diener, 2003).

In summary, according to the Affective Shift model, WE is dependent on the presence of positive affect but emerges from a dynamic interplay of positive and negative affect. This implies, as may be inferred from self-regulation theories, that negative affect can have a motivating potential that unfolds if a subsequent shift to positive affect takes place (Carver & Scheier, 1990; Kuhl, 2000). Therefore, for WE, a shift from negative to positive affect is essential because WE implies the presence of positive affect (Bledow et al., 2011).

(c) Framework for understanding the components of work engagement

Macey and Schneider (2008) recognise the variety of meanings of the WE construct and conceptualise employee engagement as state, trait and behavioural engagement.

More specifically, personality is seen as trait engagement, or an inclination or orientation to experience the world. Involvement or participation is regarded as state engagement and organisational citizenship behaviour as behavioural engagement. This statement becomes clear if one refers to Figure 4.4 below, which illustrates the framework for a deeper understanding of the various components of the engagement construct.

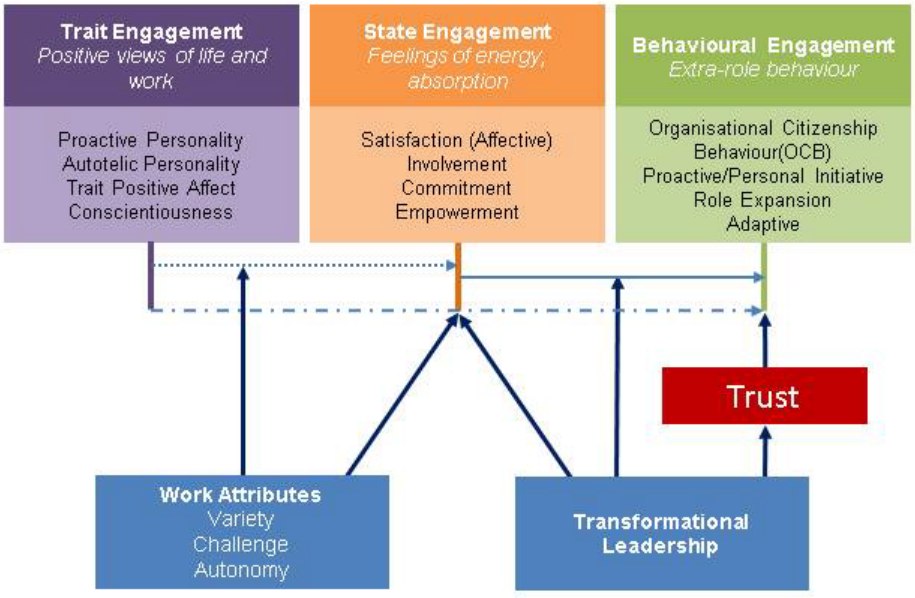

Figure 4.4 Framework for understanding the components of the WE construct (Macey & Schneider, 2008)

According to Macey and Schneider (2008), this framework demonstrates both the direct and the indirect effects of the workplace on state and behavioural engagement. The nature of the work environment is of interest to this research. The figure above shows that work has direct effects on state engagement and indirect effects as boundary conditions (moderators) of the relationship between trait and state engagement. State engagement can be defined from two perspectives, namely engagement as an extension of the self to a role (Kahn, 1990), and employees' work activities as a reference for engagement (Bakker et al., 2008; Schaufeli et al., 2002).

In this study, both state engagement and citizenship behaviour are of importance to academics in a changing ODL environment.

4.4.2.4 Demographic factors and work engagement

Although there is growing body of business-oriented literature that describes how engaged employees contribute to the overall success of an organisation, little academic and empirical research has been conducted in human service professions (Wilson, 2009). According to Koyuncu, Burke and Fiksenbaum (2006), very few researchers examined the relationship between demographic characteristics and work engagement. Therefore, other relevant findings could contribute to the understanding of this phenomenon.

(a) Gender

A relevant study by Banihari, Lewis and Syed (2013) indicated that WE is a gendered construct where it is easier for men to be engaged than for women. Even though previous research discussed engagement as a positive term, it may not always be innocuous (Bakker, Albrecht, & Leiter, 2011; Halbesleben, Harvey, & Bolino, 2009; Shantz, Alfes, Soane, & Truss, 2010; Sonnentag, Mojza, Binnewies & Schol, 2008), especially for individuals who have family responsibilities and who have less access to resources that could help them to overcome barriers in order to maintain wellness. Moreover, it follows that

disengaged male as well as female employees negatively affect their co-workers' engagement (Loehr & Schwartz, 2003).

According to Schaufeli, Bakker and Salanova (2006), research shows inconsistent results in the relationship between WE and gender. Research in Canada, Australia, and France has indicated no gender differences in the level of WE. In the German, Belgian, Norwegian and Finnish samples, men were found to have a higher WE than women, whereas in the South African and Spanish samples women were found to have a higher WE than men. Bezuidenhout and Cilliers (2011), confirm that female academics in South Africa in the middle and late career stages are demonstrating high levels of WE. Furthermore, these academics are vigorous, energetic and resilient.

It is, however, important to note that Schaufeli and Bakker (2003) have found that men achieve significantly higher scores than women on dedication and absorption, whereas no gender differences in levels of vigour seem to exist. Therefore, the notion of WE remains largely gender-neutral where men and women experience and demonstrate WE equally.

(b) Ethnicity

Wissing and Van Eeden (2002) found significant differences between the scores of white and black individuals on indexes of psychological well-being. Furthermore, research has indicated that culture and ethnicity do have a dramatic impact on human behaviour (Massimini & Delle Fave, 2000), and the influence thereof can be characterised by high involvement, cognition and intrinsic motivation to be engaged. Van den Berg and Van Zyl (2008) further revealed that black career-oriented women tend to experience higher levels of stress than their white counterparts and that this relates significantly to their levels of WE.

Jones and Harter (2005) report that different ethnic groups view their workplace environment in very different ways. Dixon, Storen and Van Horn (2002) argue that ethnic groups experience different support from colleagues from cross-ethnic

groups and this results in discrepancies in WE. This is significant given the fact that the work environment is becoming continuously more heterogeneous.

(c) Age

Countries are facing demographic developments that imply that older workers will become an increasingly substantial part of the workforce in the near future (Van Veldhoven & Dorenbosch, 2008). The correlation between the age factor and WE is significant for this study given the ageing of academics as a workforce. Barry and Sawyer (2008) report that 50% of academic staff in South Africa are older than 50 years. Schaufeli and Bakker (2003) found a correlation between age and the total UWES score of 0.14. More recently, evidence has been found that the average level of WE among employees aged 30-39 is lower than among those aged 40-49 and those aged 50 and above (Sarkisian et al., 2011).

Organisations may consider the WE of older workers significant in maintaining their competitive advantage. At the same time, as the 30-39 year age group may be more at risk for lower levels of engagement compared to the two older groups, organisations might want to explore what types of work truly inspire this age group (Sarkisian et al,. 2011). In addition, employers could take steps to ensure that workers in this age group have opportunities to deepen their dedication and absorption in work, such as involving them constantly in challenging assignments. Evidence was found that self-development appears to be especially practised by older employees (Van Veldhoven & Dorenbosch, 2008). Bezuidenhout and Cilliers (2011) suggest a positive relationship between being an older female academic and being absorbed, fully engaged and happily engrossed in your work. Zavatsky (2014) arrived at a similar conclusion, noting that age is a significant independent variable for WE, specifically for absorption and dedication. The older the individual, the stronger the relationship between age and WE.

In this study, it is of particular interest to IOP and the HEI to identify the groups of employees that display significant levels of WE and to provide an empirical

contribution on the differences in age groups. More specifically to determine whether age group differences can be empirically found in WE.

(d) Level of Education

Previous research on WE has found that a more educated workforce, along with job autonomy and work environment resources, (e.g. adequate staffing), predicts an intention to engage and stay within a position (DeLange, DeWitte, & Notelaers, 2008). Although substantial evidence is lacking, it appears that a higher level of education may relate positively to WE (Lawrence, 2009).

4.4.2.5 Positive effects of work engagement

WE has been found by practitioners and academics to have positive outcomes for both organisations and employees (Saks, 2006).

(a) Organisational level

WE is conceptualised as a “positive” concept (Bakker & Schaufeli, 2008). Negative states, such as burnout play a mediating role in an effort-based energetic process which is driven by high job demands and may eventually lead to health problems. Positive states, such as engagement, play a mediating role in a motivational process that is driven by available resources and could lead to organisational attachment (Schaufeli & Bakker, 2004). WE represents a positive process that aligns with ‘positive psychology’ and this could indicate a positive phenomenon in the work context (Mauno et al., 2007). An assumption of this perspective is that positive experiences are likely to have positive health-promoting effects (Mauno et al., 2007).

Therefore, the outcomes of being engaged range from positive emotional outcomes (Schaufeli & Bakker, 2004; Schaufeli et al., 2008) to improvement in organisational performance (Harter et al., 2002).

Bakker, Demerouti, Hakanen and Xanthopoulou (2007) indicate that WE is positively related to organisational commitment and performance, which could include customer satisfaction, loyalty, profitability and productivity. Engaged employees tend to work harder and are more likely to produce the results the organisation requires.

(b) Individual level

At the individual level, research has shown that engaged workers perform better than non-engaged workers (Bakker, 2009). Furthermore, Bakker (2009) argues that there are four reasons that make engaged workers perform better than non-engaged workers: engaged workers experience positive emotions such as happiness, enthusiasm and joy; they have better health (Schaufeli & Bakker, 2004; Schaufeli et al., 2008); they are able to create their own job and personal resources (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007b) and they often transfer their engagement to others (Bakker, Emmerik & Euwema, 2006).

(c) Positive emotions

Schaufeli, Bakker and Van Rhenen (2009) argue that engaged employees often experience positive emotions and this may be the reason why they are more productive. More recently, Bakker and Xanthopoulou (2013) confirmed that engaged workers are more productive than non-engaged workers and that they experience positive emotions and better health. Soane, Alfes, Truss, Rees and Gatenby (2010) investigated a managerially focused model of engagement and found that WE influences the well-being and performance of employees positively.

(d) Good health

Schaufeli et al. (2002) have shown that engaged workers report less psychosomatic complaints than their non-engaged counterparts, which suggests that engagement is positively related to health, and this would imply that engaged workers are better able to perform well.

(e) Ability to mobilise resources

Xanthopoulou et al. (2007b) argued that there is evidence for an upward spiral of WE and resources. This would indicate that WE results in more personal resources (optimism, self-efficacy, and organisation-based self-esteem) and more job resources (social support from colleagues, autonomy, coaching, and feedback) over time. Conceptually, similar results have been found (Llorens, Schaufeli, Bakker & Salanova 2007; Salanova, Bakker & Llorens 2006), suggesting that high levels of engagement trigger gain cycles and gain spirals with engagement being associated with increased levels of efficacy beliefs, which are related to higher future levels of engagement.

(f) Crossover of work engagement

If colleagues influence each other through their level of WE, the performance of the whole team may improve (Westman, 2001). Similarly, research by Bakker et al., (2006) indicates that team-level WE is related to individual team members' engagement (vigour, dedication, and absorption). It would therefore follow that engaged workers who communicate their optimism, positive attitudes and pro-active behaviours to their colleagues create a positive team climate, independent of the demands and resources they are exposed to.

(g) Off-job time

Sonnentag et al. (2008) argue that the experience of being fully engaged at work has positive outcomes, but might be detrimental to an individual's affective state. This is especially likely when thoughts about work or work-related activities intrude upon the home domain after the end of the formal working day (Snir & Zohar, 2008).

Opposing this, Oerlemans, Bakker and Demerouti (2014) indicated in a recent study that work-related activities in off-job time are not always associated with negative consequences. Employees who enjoy being engaged in work-related activities during the evening hours experience higher levels of energy and

recovery at bed- time than individuals who do not enjoy their work-related activities. In line with this finding, it can be expected that engaged employees, who see work as a positive experience, have fewer problems in terms of recovery and experiencing well-being.

Secondly, according to Derks, Van Duin, Tims and Bakker (2014), the experience of WE during the day is associated with a high level of stimulation which is transferred to the private domain when returning home from work. However, Bakker (2014) has shown that engaged employees succeed in reducing this high activation level during after-work hours, resulting in mental disengagement from job-related thoughts and activities during the evening. Therefore, engaged workers are able to distance themselves from their work during off-job time; unlike workaholics, engaged workers manage to stop working and engage in other activities, including social activities and hobbies (Bakker, Demerouti, Oerlemans & Sonnentag, 2013). Evidence has been found (Kűhnel, Sonnentag & Westman, 2009) that engagement at work and disengagement from work during off-job time are positively related. Similarly, Ten Brummelhuis and Bakker (2012) have shown that daily relaxation and psychological detachment from work while at home coincide with daily engagement at work.

4.4.2.6 Negative effects of work engagement

Although virtually all research on WE shows that high levels of WE manifest in positive organisational outcomes, the question here is whether there could also be a dark side to WE.

It should be mentioned that a few researchers have reported that WE may have negative consequences for engaged employees such as mental illness (Bakker, Albrecht & Leiter, 2011; Halbesleben et al., 2009; Shantz, Alfes, Soane & Truss, 2010; Sonnentag et al., 2008). Similarly, in a review of WE, Bakker et al. (2011) argue that WE may possibly have negative consequences for employees.

Bakker et al. (2011) explain that although engaged employees are not workaholics, they may become so immersed in their work that they take their work home with them. Beckers et al. (2004) have found that WE is positively related to working overtime. Work–home interference undermines the employee's recovery and may consequently lead to health problems (Geurts & Demerouti, 2003). Halbesleben et al. (2009) argue that WE might have a negative effect on life outside work.

Highly engaged employees are often so enthusiastic about their work that they take on additional tasks and supervisors prefer assigning tasks to them rather than to non-engaged employees (Sonnentag, 2011). The increased level of job demands may contribute to poor health and psychological well-being (De Lange, Taris, Kompier, Houtman & Bongers, 2003). Furthermore, May et al. (2004), argue that it is difficult for an employee to become fully engaged in a task that he or she assumes to be meaningless or dislikes.

It has also been found that disengaged employees negatively affect their co-workers' engagement (Loehr & Schwartz, 2003) and that work disengagement has high cost implications for organisations (Flade, 2003; Frank, Finnegan & Taylor, 2004; Loehr & Schwartz, 2003).

4.4.2.7 Interventions to promote work engagement

Organisations in the 21st century need employees who are psychologically connected to their work and therefore intervention strategies are needed to assist employees to identify and interpret their own perceptions of WE and unconscious processes in order to create personal awareness and understanding of how to increase WE.

Avey, Hughes, Norman and Luthans (2008) argue that empowered employees demonstrate the characteristics of an engaged employee and similarly Stander and Rothmann (2010) have found that competence in dealing with job demands and self-efficacy lead to WE.

Research has indicated that WE has positive effects in both the short- (Sonnentag, 2003) and the long term (Mauno et al., 2007). On the other hand, Sonnentag et al. (2008) argue that the level of engagement can be too high if an employee is in a continuous state of high engagement which could lead to burnout. WE is predicted by typical job resources, is related to personal resources and leads to higher job performance (Bakker & Demerouti, 2008) and therefore it is important to note that WE is an important indicator of occupational well-being for employees as well as for organisations. This can be determined by the measurement of WE and its drivers among employees.

Job crafting comprises the changes introduced by employees in order to balance the job demands and personal resources against personal needs and abilities (Tims et al., 2012). In most cases engaged employees practise job crafting – in order to stay engaged - by altering task-related aspects of their jobs in order to attain personal and work-related goals. Hakanen, Perhoniemi and Toppinen-Tammer (2008) have found a positive relationship between engagement and job crafting.

Individual employees will have to take responsibility for their own personal development in future (Cooper, 2005). The changing and dynamic work environment forces employees to juggle different work demands and stakeholders, and can easily lead to a lifestyle of long working hours and workaholism. It nevertheless remains important to appreciate the importance of sustaining a personal and family life outside work. Therefore, WE in the workplace gives individuals choices and control, but individuals have to be equipped with the right skills and attitudes.

The most valuable contribution made by this study is that it does not focus only on positive behaviour, but works directly on increasing the occurrence or frequency of positive relationships with work in a changing work environment. The sequence in which PsyCap and WE occur has not been extensively researched although some authors have postulated a likely reciprocal relationship ((Bakker, Schaufeli, Demerouti & Euwema, 2007; Sweetman & Luthans, 2010). No evidence exists as

to whether engagement leads to, is the consequence of, or interacts reciprocally with employees' PsyCap. This study investigates the relationship between PsyCap and WE.

4.4.3 Psychological capital

Avey, Luthans and Jensen (2009) and Luthans (2002a) are of the opinion that the construct of PsyCap, may contribute to employee well-being. In this section, the focus will specifically be on the construct, PsyCap.

4.4.3.1 Conceptualising psychological capital

The identified positive behaviour states of hope, efficacy, resilience, and optimism represent a single latent, core factor termed psychological capital, or simply PsyCap (Luthans, Avolio et al., 2007). These four capacities, when taken together, are assumed to produce synergy effects leading to high efficiency. This study on ODL academics indicates, on the basis of empirical research, that positive behaviour engenders better decision making (Chuang, 2007) and is positively related to various measures of success and well-being (Lyubomirsky et al., 2005).

POB - and more specifically PsyCap - makes no claim regarding the importance of positivity in the workplace but simply calls for a focus on relatively unique positive, state-like constructs and behaviour that have an impact on optimal performance in the work environment (Luthans, 2002a, 2002b). PsyCap is characterised by an underlying common thread and shared characteristics running through each of the psychological resource capacities, (efficacy, optimism, hope, and resiliency) of a positive intentional striving towards flourishing and success, no matter what changes and challenges arise in the work environment (Avey et al., 2008).

(a) Defining psychological capital

Luthans, Avolio et al. (2007) define PsyCap as an individual's positive psychological state of development that is characterised by: (1) persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to

succeed; (2) having confidence (efficacy) to take on and put in the necessary effort to succeed at challenges; (3) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success and (4) making a positive attribution (optimism) about succeeding now and in the future.

Luthans, Luthans and Jensen (2012), more recently defined the phenomenon of PsyCap as going beyond “what you have” (economic capital), “what you know” (human capital), “who you know” (social capital), and consisting of “who you are” and – which is of most relevance for ODL academics in a changing work environment - “what you can become”.

(b) Aetiology of psychological capital

PsyCap has its theoretical foundation in positive psychology (Larson & Luthans, 2006). The construct was introduced by Luthans, Luthans and Luthans (2004) as a measure comparable and complementary to measures of human (or intellectual), social and traditional physical capital. Luthans (2002a) has changed the grouping of psychological resource capacities, underlying to the aetiology or causation of the construct of PsyCap.

When the concept was initially introduced, the proposed capacities consisted of confidence/efficacy, hope, optimism, well-being/happiness and emotional intelligence. Similarly in another publication during the same year Luthans (2002b) refers to confidence, hope and resilience as principle psychological resource capacities. Although a number of positive constructs have been researched, according to Cameron et al. (2003b) and Nelson and Cooper (2007), the four subconstructs that have been identified as best meeting the criteria of the definition of positive work and organisational behaviour are hope, efficacy, resilience and optimism (Luthans, 2002a; Luthans, Youssef et al., 2007). When combined, these four have been conceptually (Luthans & Youssef, 2004; Luthans, Youssef et al., 2007) and empirically (Luthans, Avolio et al., 2007) demonstrated to represent a second-order, core factor called psychological capital.

(c) Application of psychological capital

PsyCap allows individuals to put extra effort into the task they have to accomplish, motivates them to do so by causing them to expect positive results, enables them to generate various solutions if problems occur and allows individuals to cope well in case of eventual setbacks (Luthans, Avey, Avolio, & Peterson, 2010). PsyCap is the combination of individual psychological resource capacities that form a higher order construct, integrating various positive psychology criteria (Larson & Luthans, 2006).

Several PsyCap empirical studies have been conducted over the past decade in a myriad of fields. Avey et al. (2008) designed a study around understanding employee RTC and investigated the relationship between PsyCap, positive emotions and relevant attitudes and behaviours. In particular, this study investigated the impact that positive employees, represented by their PsyCap and positive emotions and their relevant attitudes and behaviours had on organisational change. Avey et al. (2008) established that a positive correlation exists between PsyCap, positive emotions and behaviours relative to changes in the organisation. Research indicated that the four PsyCap dimensions are conceptually independent (Luthans, Avolio et al., 2007; Luthans & Jensen, 2002; Snyder, Rand & Sigmon, 2002) and empirically valid (Bryant & Cvengros, 2004; Carifio & Rhodes, 2002; Magaletta & Oliver, 1999).

Luthans, Avolio et al. (2007) found that PsyCap was best modeled as a second-order factor. Furthermore, the four components of PsyCap, namely hope, efficacy, resilience and optimism, were modeled separately in various combinations and then in a model where they were fitted to overall PsyCap. Although research on PsyCap is still in its infancy, it is playing an important role in predicting employees' attitudes, behaviours and performance (Avey, Reichard, Luthans & Mhatre, 2011). PsyCap is a cognitive state that includes the individual's beliefs and expectations with regard to a specific task or context (Avey et al., 2011). Although each of the dimensions of PsyCap is able to influence motivation and performance, Luthans et al. (2005) assert that the combination of the dimensions has a much greater impact on individual attitude, functioning and performance.

4.4.3.2 The dimensions of PsyCap

PsyCap will be conceptualised as a combination of psychological resource capacities in this study, indicating the link between the individual's behaviour relative to changes in the work environment. A discussion of the dimensions of PsyCap will follow.

Figure 4.5 shows a theoretical model of a higher order positive psychological capital construct, summarising the manner in which each component affective state is defined within the integrated construct.

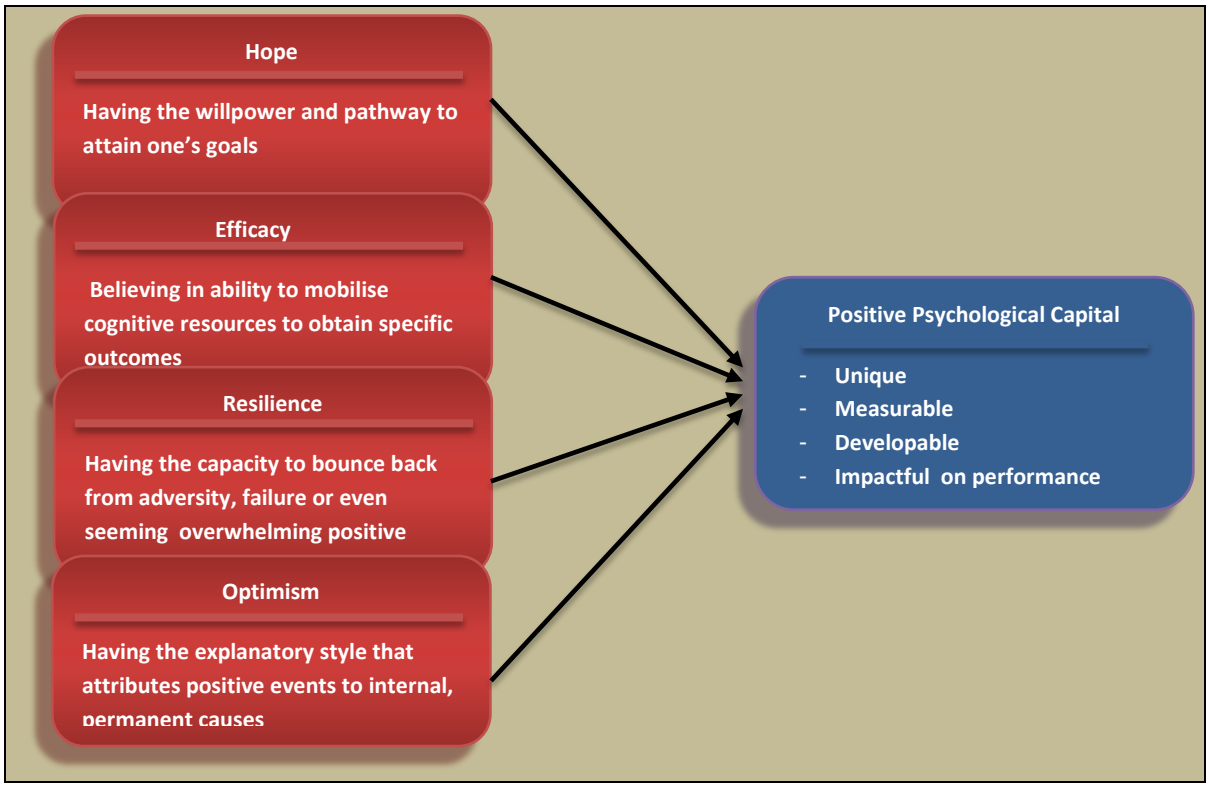

Figure 4.5 Dimensions of PsyCap (Luthans & Youssef, 2004)

(a) Hope as a psychological resource capacity

In the 1950's, an early stream of literature reflected the role of hope in human adaptation. French (1952) and Menninger (1959) drew attention to the significance of hope in initiating change, willingness to learn and a sense of well-being. Snyder et al. (1991) then laid the groundwork for the hope theory and the influence of

hope on psychological development was also observed (May, 1991; Merton, 1961).

Furthermore, the phenomenon of hope is seen as a "positive motivational state interactively derived sense of success" (Snyder, Harris, & Anderson, 1991, p. 287). The theory has been developed within the field of positive psychology (Helland & Winston, 2005) that hope is comprised not only of emotion, but has a cognitive component as well. Hope is therefore considered a goal-directed cognitive process that always includes three components, namely goals, pathway thinking and agency thinking (Snyder, Feldman & Rand, 2002).

The PsyCap model describes hope as “having the willpower and pathways to attain one’s goals” (Luthans & Youssef, 2004, p. 152). This definition is derived from Snyder et al. (1991), who described hope as a motivational state whereby two elements, agency (or goal-directed determination) and pathways (or planning to achieve those goals) interact. In particular, it is both the presence of (and desire to attain) goals or objectives (which implies an effect on or relationship to motivation), and the ability to conceive a strategy for attaining those goals or objectives (Page & Donohue, 2004).

Research has indicated that the function of agency and pathway thinking is an iterative cognitive process (Snyder, Feldman et al., 2002). Agency and pathways are two distinct components of hope, with both cognitions working together. Snyder et al. (1991) argue that the relationship between agency and pathways is equal, such that a change in one causes a commensurate change in the other. Hope clearly meets the POB criteria of being positive, having extensive theory and research foundations and valid measures. Furthermore it is clear that hope is quantifiable (Lopez, Snyder, & Teramoto Pedrotti, 2003), has a clear impact on performance (Snyder, Rand, & Sigmon, 2002) and can be developed.

Numerous relevant empirical studies have been conducted in which hope was regarded as a psychological phenomenon, meeting the POB criterion of being positive (Snyder, 1994a; 1994b; Snyder, Harris, Anderson et al., 1991; Snyder,

Harris & Anderson, 1991; Snyder et al., 1996). Furthermore, hope is well established in the literature as a POB psychological resource capacity (DiPietro, Welsh, Raven & Severt 2007; Helland & Winston, 2005; Norman, Luthans & Luthans, 2005) and as a resource capacity within the PsyCap construct (Avey et al., 2009; Larson & Luthans, 2006; Walumbwa, Byron & Myrowitz, 2009; Youssef & Luthans, 2007).

Snyder, Rand et al. (2002) found that participants consistently referred to the necessity of identifying pathways in order to reach their objectives in a changing work environment.

(b) Efficacy as a psychological resource capacity

Efficacy refers to an individual's persuasion or confidence about his or her ability to mobilise the motivation, cognitive resources, or courses of action needed to successfully perform a specific task within a given work environment (Stajkovic & Luthans, 1998a). This draws on earlier work, especially that of Bandura (1986, 1997), who while studying social cognitive theory, predicted that efficacy beliefs mediate changes in behaviour. Social cognitive theory implies that individuals are proactive, self-organising and are not simply reacting to their environment. It follows that thought processes are central to understanding how an individual thinks about successfully completing a task (Bandura, 2007). Moreover, Bandura characterised efficacy as the strongest predictor of behaviour. This may explain why individuals who demonstrate efficacy could be more likely to set goals, take on difficult tasks, are motivated and focused on achieving their goals and overcoming obstacles (Stajkovic & Luthans, 1998a, 1998b).

Efficacy is defined in the PsyCap model as believing in one's ability to activate cognitive resources to obtain specific outcomes (Luthans & Youssef, 2004; Stajkovic & Luthans, 1998a). Maddux (2002) argues that such beliefs are the most important causes of the behaviours individuals choose to engage in and the extent to which they persevere in their efforts to overcome obstacles and challenges. According to positive psychology, the concept is measurable (Stajkovic & Luthans,

1998a), can be developed (Bandura, 1997), and has a clear impact on performance. Furthermore, efficacy has the best established theoretical foundation and the most extensive research support (Luthans & Youssef, 2007). Additionally, efficacy has been identified as the most state-like resource capacity and the presence of efficacy develops differently over time and is also domain-specific. Having efficacy in one domain does not mean transferability to another domain (Bandura, 1997). It is also important to note that efficacy best fits positive psychology criteria because of the strong relationship between efficacy and work-related performance (Luthans, 2002b).

Luthans, Youssef et al. (2007) consider that an individual will probably make at least five important discoveries about efficacy:

- Efficacy is domain-specific and previously built confidence in one domain may not be transferable to another domain.
- Efficacy is based on practice mastery or on people's estimate of their future probability of success, and therefore, it requires that people have some previous relevant experience so as to come up with a positive estimate of efficacy.
- There is always room for improvement in efficacy.
- Efficacy is influenced by others and what others say affects an individual's self-evaluation.
- Efficacy is variable, meaning efficacy levels depend on many factors such as the level of knowledge, skills and abilities needed to accomplish a task.

(c) Resilience as a psychological resource capacity

Kobasa (1979) is credited with the argument that resilient individuals may view change or stress as a challenge or opportunity and his description of how they are committed to reaching their goals. Resilience in the PsyCap model is defined as the individual's capacity to bounce back from adversity, failure or even positive but seemingly overwhelming changes, such as increased responsibility (Luthans & Youssef, 2004). Snyder (2000) also suggests that employees even prosper as a

result of negative or positive stressful circumstances. In this study, resilience refers to the capacity to bounce back and even prosper after setbacks and cope positively and adapt to significant changes in the current world of work (Avey et al., 2008).

Resilience can be seen to have a clear impact on performance, can be measured (Schwarzer & Knoll, 2003), and might be developed at the individual level (Luthans & Youssef, 2004). Additionally, Luthans, Avolio et al. (2007) and Wagnild and Young (1993) argue that the state of the individual's resilience changes in response to different work situations, which would make resilience state-like. Masten (2001) considers resilience as a learnable capacity that any individual could develop. However, in positive psychology, resilience is regarded as a process and not an outcome and according to Luthans and Youssef (2007), a resilient individual will develop further than just an outcome after a change. Therefore, according to Luthans (2002a) resilience has not yet been included in POB as the challenge for POB is to better understand it and unleash its potential. Hope, efficacy and optimism are proactive constructs, whereas resilience is more of a reactive capacity when faced with adversity or risk (Luthans, Luthans & Avey, 2014).

In the ODL work environment, academics with resilience are those who have the ability to adapt positively and thrive in a very challenging, changing ODL work environment.

(d) Optimism as a psychological resource capacity

Scheier and Carver (1992; 1998) and Carver and Scheier (2002) developed another construct similar to hope, that of optimism; they define optimism as a generalised expectancy that good things will happen to one whereas pessimists are people who expect bad things to happen to them. According to Scheier and Carver (1992), optimism leads to persistence in goal-directed striving and, in parallel to Bandura's characterisation of efficacy, Sheier and Carver (1992; 2009) have characterised optimism as the most powerful predictor of behaviour.

Optimism is the tendency to look on the more favourable side of events (Avey et al., 2008). Seligman (2002) describes two dimensions of optimism in terms of the degree of permanence one perceives in a variable, where optimists will see a negative event as temporary and a positive event as permanent, and pervasiveness, where optimists will see a negative cause, for example, as specific to an event and not to all events.

In the PsyCap model optimism is considered to be an explanatory style that attributes positive events to internal, permanent and pervasive causes, and negative events to external, temporary, and situation-specific ones (Luthans & Youssef, 2004). The inclusion of optimism in the work environment as part of PsyCap provides insights into the reasons and attributions an employee uses to explain why certain events occur (Luthans et al., 2005). Optimism supports a positive relationship with performance in the workplace (Luthans et al., 2005; Seligman, 1998; Youssef & Luthans, 2007).

Optimism appears to be future-focused, whereby the optimist is more likely to anticipate that future events will be positive in nature, regardless of present circumstances. Furthermore, Luthans and Youssef (2007) argue that optimism is state-like because the individual's optimism can change, depending on the work environment. Seligman (1990) indicates that optimism can be developed within individuals.

In this study, PsyCap allows the researcher to observe multiple facets of individual attitudes simultaneously and adds to the existing literature by illustrating how the four factors of PsyCap have a common underlying link representing a core second order (Luthans, Youssef et al., 2007).

4.4.3.3 Distinctions in the psychological resource capacities

Although a lot of overlap between the different psychological resource capacities as suggested in the literature exists, each PsyCap dimension has been shown to be conceptually independent (Bandura, 1997; Luthans & Jensen, 2002; Luthans,

Youseff et al., 2007; Snyder, 2000; 2002) and empirically valid (Bryant & Cvengros, 2004; Carifio & Rhodes, 2002; Luthans, Avolio et al., 2007; Magaleta & Oliver, 1999; Youssef & Luthans, 2007).

Page and Donohue (2004) suggest a value contribution to PsyCap by each component affective state. Table 4.4 summarises the value added to PsyCap.

Table 4.3

Contribution to PsyCap

Researcher	*Affective State*	*Manifestation*	*Contribution*
Snyder, Harris and Anderson (1991); Luthans and Youssef (2004).	Hope	Future directed.	Goal directed cognitive processes, planning to attain goals (motivation), strategic response to enable goals.
Bandura (2007); Stajkovic and Luthans (1998a).	Efficacy	Present-to-future directed.	Activate beliefs and desire for openness to challenges and willingness to invest effort in challenges in pursuit of a goal.
Snyder (2000); Luthans and Youssef (2007); Avey et al. (2008).	Resilience	Past-to-present directed.	Provides for recovery from previous or present unfavourable events or stressors and maintains or exceeds the status quo.
Snyder (2000); Luthans and Youssef (2007); Avey et al. 2008.	Optimism	Future directed.	Availability of buffers between negative impact of unfavourable events and positive expectation for the future; capitalises on positive impact of favourable events.

(Adapted from Page & Donohue, 2004)

4.4.3.4 Demographic factors and Psychological Capital

Previous research on gender, ethnicity, age and level of education in terms of PsyCap will be discussed.

(a) Gender

Research by Snyder and Lopez (2002) as reported in over 40 studies has indicated no significant difference in hope as a subconstruct of PsyCap, between males and females. No research on the other subconstructs of PsyCap and gender could be found.

(b) Ethnicity

Research by Seligman et al. (2005) on positive psychological interventions was done mainly with a white, well-educated population. No relevant South African research studies on PsyCap with regards to ethnicity could be found.

(c) Age

Seligman et al. (2005) reported higher levels of hope as a subconstruct of PsyCap, among younger employees than older employees. Older employees have often been stereotypically perceived as experiencing the deterioration of cognitive ability and emotional well-being (Ranzijn, 2002; Shapira, Barak, & Gal, 2007) however research indicated that older employees are better at regulating their emotions and psychological behaviour than younger employees when dealing with a problem or a stressful situation (Blanchard-Fields & Coats, 2008; Carstensen, Pasupathi, Mayr, & Nesselroade, 2000).

(d) Level of education

The level of education reflects an individual's cognitive ability and skills, therefore higher levels are associated with a higher capacity for information processing and the ability to discriminate among a variety of stimuli (Schroder et al., 1967). It would follow that, according to Luthans (2002), POB such as PsyCap can be developed through training programmes, interventions in the work place, management skills or self-development.

In terms of the manifestation of PsyCap in individuals with different levels of education, no South African research studies could be found.

4.4.3.5 Interventions to encourage positive psychological functioning

Fredrickson (2003) contends that facilitating positive emotions can trigger positive upward spirals, in which the created personal resources lead to the experience of positive emotions which, in turn, produce more personal resources, such as social, physiological and cognitive resources. Positive psychology interventions, according to Sin and Lyubomirsky (2009), are intentional activities that aim to cultivate positive feelings, behaviours or perceptions.

Seligman et al. (2005) describe interventions that identify, develop, broaden or use positive individual traits or trait-like characteristics and individual strengths. Research indicates that working with an individual's strengths is fulfilling and engaging and helps individuals to be true to themselves (Peterson & Seligman, 2004). Therefore, using strengths should contribute to enhanced well-being and result in performance gains.

Relevant prior research points to another intervention, namely solution-focused coaching (Grant, 2003). This form of coaching focuses on the development of strengths and solution generation rather than on problem analysis (Grant, 2003). Furthermore, the coaching process makes use of elements that are similar to PsyCap interventions. It comprises goal setting, which is a method of developing hope (Luthans & Youssef, 2004), and motivates people by increasing efficacy (Grant, Curtayne, & Burton, 2009). Luthans and Youseff (2007) report that formal training programs and informal approaches such as mentoring or coaching are very effective for building efficacy in an individual.

The four constructs of PsyCap - efficacy, optimism, hope, and resilience - (Luthans, Avolio et al., 2007), are assumed to produce synergy effects leading to the highest possible efficiency. PsyCap results in individuals putting extra effort into the task they have to accomplish, motivates them to do so by leading them to

expect positive results, enables them to generate various solutions if problems occur, and causes individuals to cope well in the event of setbacks (Luthans et al., 2010).

Luthans et al. (2006) have developed a PsyCap Intervention training model (PCI) designed to increase levels of hope, efficacy, resilience and optimism in individuals as well as the overall level of PsyCap for performance improvement in the work environment. The development of the PCI is reflected in Table 4.4.

Table 4.4

Development of the PCI

Construct	Development of construct
Hope	Individuals identify work-related, personally valuable, challenging goals. Generate multiple pathways to reach goals, identify potential obstacles. Receive group feedback. Increase pathway generation, capacities and ability to plan for obstacles.
Efficacy	Through the development of the hope construct, the individual's efficacy in accomplishing goals is enhanced. Multiple pathway generation allows the selection of alternative pathways when the original pathway is blocked. Individuals can "bounce back," overcome the setback, be more confident (efficacious) and successful.
Resilience	Through deriving multiple pathways to accomplish goals, it is expected that resilience will be developed. Resilience involves positively coping with failures or setbacks when a goal is not reached, multiple pathway generation allows individuals to select alternative pathways if the original pathway becomes blocked, giving them the wherewithal to "bounce back,"
Optimism	This process should also lead to more positive expectations of future success, thus enhancing levels of optimism.

A study by Luthans, Avey, and Patera (2008) indicates that PCI training has been shown to cause the participants' PsyCap to increase significantly. In another cross-sectional study, Luthans et al. (2010) were able to demonstrate that PsyCap

can be developed. This is consistent with Bandura's (1997) truism that we are both products and producers of our positivity.

4.5 CHAPTER SUMMARY

The aim of chapter 4 was to conceptualise and define positive work and organisational psychology. Two models of positive psychological functioning, namely flourishing, as defined by WE and PsyCap and their related cognitive constructs, were discussed through the medium of a comparative examination of the basic literature and research on these constructs.

The following literature research aim was achieved in this chapter:

Research aim 3: To conceptualise positive work and organisational psychology as explained by two theoretical models namely flourishing as defined by WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as experienced by ODL academics.

In the following section, an integration of the literature on the research constructs, RTC, WE and PsyCap will be presented.

THE INTEGRATION OF THE LITERATURE ON THE RESEARCH CONSTRUCTS OF RESISTANCE TO CHANGE, WORK ENGAGEMENT AND PSYCHOLOGICAL CAPITAL

To conclude the literature study of the previous three chapters, the integration of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) is presented in order to amalgamate the results of the empirical research with the literature study.

INTRODUCTION

In adapting to a vibrant, changing external as well as internal work environment and new developments in technology, the ODL academic is becoming part of a complex process which depends on political, administrative, organisational, strategic, cultural and professional factors. This requires change resilience and dynamic interaction between the academic and this complex environment (Luthar & Cicchetti, 2000).

The ODL university where this study was conducted emphasises that academics need to be able to adapt to transformation in the world of work. However, RTC among academics is seen as a huge obstacle in the way of the endeavours of HEIs to transform the existing HE landscape. Furthermore, the ODL student environment in South Africa, consisting of many unemployed students who are not all capable of coping with the demands of HE (Scott et al., 2007), is creating potentially more complex and increased workloads for ODL academics (Kearsley, 2000; Weller, 2002).

In this research, it is important to note that positive work and organisational psychology, which appreciates human potential and facilitates psychological principles such as flourishing (WE), well-being and PsyCap, may contribute to optimising success and growth for ODL academics in this changing work environment, as depicted in Figure A:

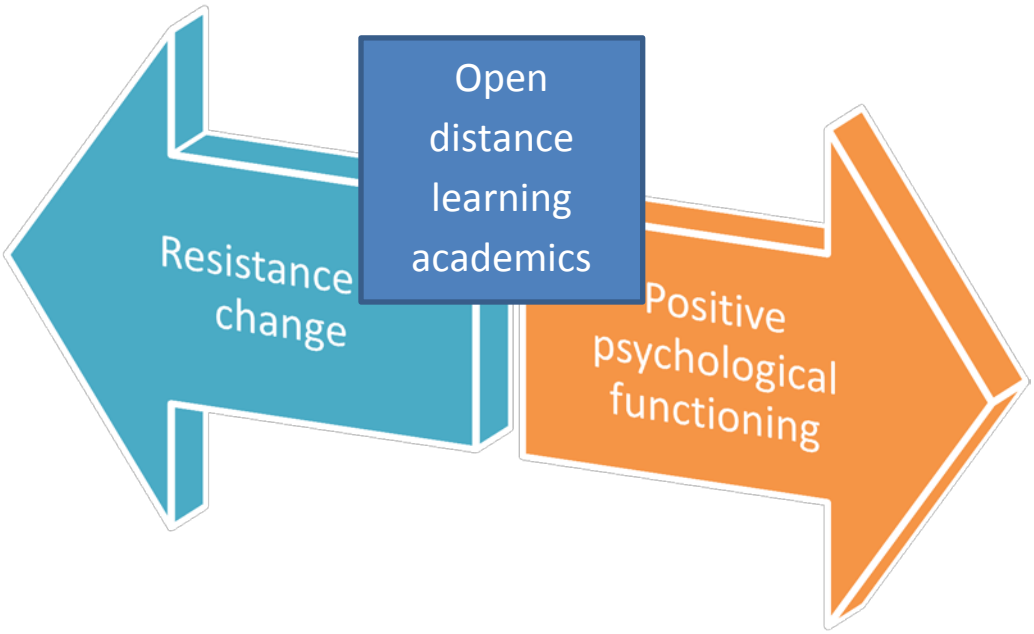

Figure A *Integration of the literature on the research constructs (own compilation)*

THE INTERRELATIONSHIP OF THE CONSTRUCTS

ODL, RTC, ODL and positive psychological functioning will be discussed.

ODL and RTC

There are clear indications in the literature that RTC is the result of a response to, or reaction to, change (Mabin et al., 2001). ODL academics therefore need to regard this reaction as a natural phenomenon since change, according to Claxton (1999) and (Gratton, 2001), stimulates new ways of thinking which could result in new behaviours in the work environment.

Oades, Robinson, Green and Spence (2011) state that key drivers of organisational change in the past 20 years include the increased internationalisation of the HE sector, increased use of information and communication technology and competitiveness regarding teaching and quality demanded by the 'student consumer'. Similarly, research by Bokor (2012) indicates that in a global economy, adapting to new developments in technology and online learning, academics face constant challenges such as rapidly changing

technologies and pressure to productively employ and enhance technology. Furthermore, they are expected to incorporate appropriate teaching methods into a rapidly changing, diverse environment. Dispositional attribution from academics, varies in terms of their susceptibility to change and Welch (2014) reports that it is specifically difficult to change WE and commitment to change.

It is necessary for ODL academics to perceive changes in the work environment as beneficial and also to have a sense that they are constantly being involved and engaged in the process. On the other hand, Giangreco and Peccei (2005) describe a form of dissent that can manifest through low engagement in pro-change behaviour. Change must therefore be seen as a source not only of problems but also of positive opportunities for the organisation as well as the individual. Resistance, which is a natural part of the change process, occurs because change involves going from the known to the unknown in the work environment (Coghlan, 1993; Steinburg, 1992). It is therefore noteworthy that employees tend to seek a comfortable level of arousal and stimulation in the process of maintaining that state (Nadler, 1981; Zaltman & Duncan, 1977).

This research on ODL academics considers RTC from a people-centred perspective. As change occurs in a context of human social interactions (Ford & Ford, 1995), positive relations and social support could help ODL academics to develop change resilience (Luthar & Cicchetti, 2000) and adapt to the changing world of work.

ODL and positive psychological functioning

Luthans (2002b) argues that a proactive positive work and organisational psychological approach is necessary for contemporary as well as global organisations to survive. Previous research indicated that it would appear that PsyCap and WE of individuals could make a difference to the behaviour of academics and could present a competitive advantage (Bakker et al., 2008). Bakker and Schaufeli (2008) and Luthans et al. (2008), support this view and draw attention to the importance of, and interplay between, positive employees and a

positive work environment for organisational success and competitiveness in a changing work environment.

The literature suggests that flourishing ODL academics are a crucial component of a positive HEI. Flourishing individuals may show hope, efficacy, resilience, optimism, engagement in work, find meaning, be motivated and experience high levels of psychological well-being in a changing work environment. Flourishing employees enjoy quality of life and function optimally in their work environment and this manifests through multidimensional indicators (Keyes & Annas, 2009; Rothmann, 2013). The indicators of positive work and organisational psychological functioning of importance for this study include flourishing, WE, hope, efficacy, resilience and optimism and are all related to high levels of emotional well-being. Engaged employees may use resources such as optimism, efficacy, resilience and an active coping style to assist them to manage and influence their changing work environment with more success (Bakker & Demerouti, 2009; Luthans, Norman, Avolio & Avey, 2008). Moreover, Bakker, Gierveld and Van Rijswijk (2006) argue that employees who use their resources optimally may score high levels of WE, efficacy, resilience and optimism and this could contribute specifically to overall WE and flourishing.

According to Demerouti, et al. (2001) each occupational group, and therefore also ODL academics, may have its own specific factors that contribute to flourishing and WE, and these factors are classified as either job demands or job resources (JD-R model). More specifically, different psychological processes play a role in the development of WE and engaged ODL academics need to be aware of the organisational context and environment, and work with others to improve well-being and performance (Devi, 2009).

In addition to work being an important source of an academic's economic livelihood, being employed and being engaged can also be seen as contributing significantly to the academic's identity and well-being (Ibarra, 2002). WE emphasises the notion of positive attachment and optimal performance for the ODL academic in the changing work environment in terms of well-being (Hallberg

& Schaufeli, 2006). Coetzee and De Villiers (2010) support this view and suggest that WE in academics is associated with being physically involved, cognitively vigilant and demonstrating total emotional involvement when performing work-related tasks.

Research has consistently found that globally most employees are not fully engaged in their work (Avolio & Luthans, 2006) and similarly Loehr and Schwartz (2003) state that although employees are looking to do well and thrive and want to be completely engaged in their work, more recent research indicates that only 31% of employees worldwide are engaged, while 17% are actually disengaged (Blessingwhite Research, 2011). What is important to note is that Diedericks and Rothmann (2013) and Swart and Rothmann (2012), report that more than 50% of employees in the information technology- and agricultural industries, are not flourishing.

It is important to note for the purposes of this research that, like PsyCap, WE is a higher-order core factor comprising three interrelated constructs: vigour, dedication and absorption, and these, according to Luthans et al. (2007) bear a direct relation to the four psychological resources comprising an individual's PsyCap: hope, efficacy, resilience and optimism. It follows that a key component in developing WE in ODL academics lies in developing PsyCap.

Research supports the development and management of PsyCap in ODL HEIs to increase efficiency, productivity and the successful implementation of organisational change (Luthans et al., 2004). Furthermore, it is a state-like, rather than a trait-like order of construct, which implies that it is measurable in academics at different levels and can thus be developed in this ODL HEI. Considerable research on positive work and organisational psychology has already been published on each of the individual components of PsyCap (Snyder & Lopez, 2009) and the meta-analyses (Stajkovic & Luthans, 1998b) that demonstrate the the desirability of each subconstruct are of importance.

In this research, PsyCap can be viewed as an important personal resource. It is believed that personal resources help individuals to attain goals, and therefore academics with many resources are better able to cope with the challenges and change demands that they encounter in the ODL work environment. Sweetman and Luthans (2010) argue that PsyCap represents the positive agentic resources academics possess, which enable them to move towards success. Furthermore Bakker and Demerouti (2006) argue that, upposing job and personal resources remain constant, job demands such as constant change and challenges in the ODL work environment will create distress and counteract psychological health and well-being. However, positive psychological resources, such as efficacy and optimism, counteract the distress created by these demands, and the components of PsyCap enhance a positive relationship with psychological well-being (Avey, Luthans, Smith, & Palmer, 2010).

Organisations often cite RTC, which reduces optimism and hope, as a primary reason for lack of change in organisations (Palmer, Dunford & Akin, 2009; Stanley Meyer & Topolnytsky, 2005). Conceptually, Luthans et al. (2004) as well as Saruhan (2013), argue that enhancing the PsyCap of academics, would create positive attitudes towards change and therefore enhance the successful implementation of change and transformation that HEIs are confronted with. This implies that academics with high levels of PsyCap would present more favourable behaviours towards change. This is consistent with the views of Peterson, Luthans, Avolio, Walumbwa and Zhang (2011), who note that PsyCap is considered critical in ensuring positive work and organisational behaviour, such as motivation, cognitive processing, striving for success and the resultant performance in the workplace. Similarly, Avey et al. (2008), report that employees with high levels of PsyCap may combat the negative attitudes and behaviour which are usually negatively associated with change and affect adaptation to challenging new working conditions.

Oades et al. (2011) observe that an HEI that wants to adapt successfully to the changing environment needs to strive to be a positive institution by engaging in activities which enable academics to utilise positive traits and behaviour to reach

individual, joint and collective goals. In becoming a positive organisation, the HEI need to focus on both performance and well-being (Conley, 2007) as this is the most effective way to address both the internal and the external changes impacting on the organisation (Wilson et al., 2004). Therefore HEIs, which are constantly faced with external, internal as well as technological changes in the work environment and which experience RTC from academics, need to study and manage their positive psychological resource capacities (Avey, Wernsing & Luthans, 2008; Larson & Luthans, 2006; Youssef & Luthans, 2007). PsyCap and WE are also known to have a relationship with, and impact on, positive organisational behaviours and outcomes (Bakker & Demerouti, 2008; Stajkovic & Luthans, 1998a). Luthans et al. (2004) argue that the HEI can increase its competitive advantage through the development of PsyCap among academics. Although PsyCap is often associated with personal resources and WE with work-related phenomena, WE could predict PsyCap, according to De Waal and Pienaar (2013).

It is important for the purposes of this study to note that in theory the positive psychological constructs of PsyCap and WE reinforce each other (Siu, Bakker & Jiang, 2014). However, the underlying mechanism between PsyCap and WE has not been thoroughly explored.

In conclusion, in the dynamic, changing ODL work environment, academics experience a multitude of challenges and as RTC is a natural reaction, academics will resist change unless the HEI encourages positive psychological behaviour that enables positive organisational change and positive work-related outcomes.

No research studies could be found that investigated the positive psychological constructs of flourishing through WE and PsyCap in the context of the changing world of work of the ODL academic as applied in this study. Therefore, this research, will build on the body of knowledge relating to positive work and organisational behaviour and as PsyCap (hope, efficacy, resilience and optimism) and WE (vigour, dedication and absorption) are constructs that enable positive work-related outcomes and positive organisational change, despite RTC (routine

seeking, emotional reaction, short-term focus and cognitive rigidity) from individuals, PsyCap and WE are beneficial to the ODL HEI.

This integration concludes the literature review of the study. Chapter 5 addresses the research design and methodology.

CHAPTER 5: RESEARCH DESIGN AND METHODOLOGY

This chapter focuses on the research design and methodology for this research. The population and sample are firstly described; secondly, the measuring instruments and the data collection procedure are discussed, focusing on the measuring instruments. Lastly, the hypotheses are formulated and this is followed by the statistical data analysis. The chapter concludes with a chapter summary.

In terms of the empirical study, the specific aims were as follows:

Research aim 1: To empirically investigate the nature of the statistical interrelationships of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa.

Research aim 2: To empirically investigate whether significant differences exist between groups of academics as defined by biographical variables (age, gender, marital status, educational level, job level and years of service) between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism).

In order to address these aims, the following steps were followed:

Steps 1 to 5 will be addressed in this chapter. Steps 6, 7 and 8 will be addressed in Chapters 6 and 7.

5.1 DETERMINATION AND DESCRIPTION OF THE POPULATION AND SAMPLE

Welman, Kruger and Mitchell (2009) describe a population as a study object consisting of individuals, groups, organisations, human products or events. The empirical study for this research was conducted among a population consisting of a sample of academics at an ODL university in South Africa.

For this empirical study, probability sampling and more specific proportional stratified sampling were used (Kerlinger, 1986; Leedy & Ormrod, 2013). The population consisted of 1662 (N=1662) permanent academics at the ODL university and was stratified on the basis of 66 academic departments. Power analysis was conducted to estimate a target sample size for the study (Faul, Erdfelder, Buchner & Lang, 2009) and accordingly 26% of the sample was considered to be representative of the population, resulting in a sample of 432 academics. A total of 208 (n=208) completed questionnaires could be used, representing a return rate of 49%.

5.2 CHOOSING AND MOTIVATING THE MEASURING INSTRUMENTS

After an evaluation of the measuring instruments available in the literature, the instruments were chosen based on their relevance to the study as well as their psychometric characteristics namely, validity and reliability (Beal III et al., 2013; Coetzee & De Villiers, 2010; De Waal & Pienaar, 2013; Mostert, Jackson & Montgommery, 2004; Schaufeli & Bakker, 2003; Schaufeli, Salanova et al., 2002; Storm & Rothmann, 2003).

The measuring instruments chosen for this study were the following:

5.2.1 Biographical instrument

The biographical instrument, a self-rating measure, was developed to collect data on the following biographical variables of the participants: age, gender, marital

status, educational level, job level and years of service. The reasons for including the biographical information were based on the theoretical review of variables that might moderate the relationship between the positive psychological constructs under study.

5.2.2 Resistance to Change Scale

The 17-item version of the Resistance-to-Change Scale developed by Oreg (2006) was chosen for this study to measure the reactions to change in the work environment of ODL academics.
The following section will focus on the purpose, dimensions, administration, interpretation and the psychometric properties of the scale. Finally, the researcher will justify the use of the RTC scale for this study.

5.2.2.1 Purpose of the RTC scale

The RTC scale (Oreg, 2006), was designed to assess individuals' tendencies to resist or avoid making changes, to devalue change generally, and to find change aversive across diverse contexts and types of change.

5.2.2.2 Subscales of the RTC scale

The RTC scale comprises 17 items using a six-point Likert scale, namely 1= strongly disagree to 6 = strongly agree. The RTC scale includes four subscales, namely RS, ER, SF and CR (Oreg, 2003):

- Routine seeking (RS): the behavioural component of resistance to change or the inclination to adopt routines. It is assessed by items 1, 2, 3, 4 and 5. For example: “I generally consider changes to be a negative thing”.
- Emotional reaction (ER): the affective component of resistance to change or the amount of stress and uneasiness induced by change. It is assessed by items 6, 7, 8 and 9. For example: “when I am informed of a change of plans, I tense up a bit”.

- Short-term focus (SF): the affective component of resistance to change or the extent to which individuals are distracted by the short-term inconveniences associated with change. It is assessed by items 10, 11, 12 and 13. For example: “changing plans seem like a real hassle to me”.
- Cognitive rigidity (CR): the cognitive component of resistance to change or the frequency and ease with which people change their minds. It is assessed by items 14, 15, 16 and 17. For example: “I don’t change my mind easily”.

5.2.2.3 Administration of the RTC scale

The RTC scale is a self-administered instrument, can be completed electronically and takes about 10-15 minutes to complete (Oreg, 2003). The items are structured in a statement format. The total score is based on the sum of the four independent subscales (RS, ER, SF and CR) (Oreg, 2003). The scores for the three independent subscales, RS, ER, SF and CR are combined to obtain an overall score for RTC (Oreg, 2003).

5.2.2.4 Interpretation of the RTC scale

Respondents are asked to respond to general statements relating to sources of resistance in the instrument (Oreg, 2003). Each subscale (RS, ER, SF and CR) reflects the respondent’s dominant resistance resource, namely affective reactions, behavioural reactions as well as cognitive functioning in the work environment (Oreg, 2003). Respondents who are dispositionally inclined to resist change are more disturbed by the change and experience difficulty in continuing to work effectively. Furthermore, the higher the score on the RTC scale, the more negative the affective and behavioural response to the change (Oreg, 2006).

As the RS, ER and SF subscales are significant predictors of participants’ reaction to change (Oreg, 2003), in this research the RTC score was used to assess academics’ dispositional RTC. Reverse scoring was applied on items 4 and 14.

5.2.2.5 Psychometric properties of the RTC scale

Previous research (Del Val & Fuentes, 2003; Van den Heuvel & Schalk, 2009) indicated strong internal consistency reliability for the full RTC instrument. Beal III et al. (2013) report on using the instrument with a sample of employees of a government organisation, similarly finding strong internal consistency reliability for the full instrument (α = 0.89) and the four subscales (RS, α = 0.78; ER, α = 0.94; SF, α = 0.93; and CR, α = 0.65), as well as acceptable construct validity. No research on the instrument in the South African context could be found.

The RTC instrument also showed acceptable construct validity as evaluated via second-order CFA. The overall model fit was $\chi 2 = 162.94$; $df = 114$; $p < 0.01$; RMSEA (90% CI) = 0.07 (0.04 – 0.09); and CFI = 0.93 (Beal III et al., 2013).

5.2.2.6 Rationale for using the RTC scale

The instrument was chosen for this study to determine the levels of RTC of ODL academics in the work environment as change is universal and a constant reality for the HEI. RTC is often used in research to explain why changes in technology, management practices and management decisions fall short of expectations or even fail completely (Oreg, 2006). Therefore, the subjective experience of respondents should be addressed in order to understand what RTC is all about as the respondents reveal deeper information about how change is resisted in their world of work. Furthermore, the RTC scale was chosen for its conceptual congruence with the definition of RTC that was used in the literature study as well as for its acceptable psychometric properties as provided in the literature (Oreg, 2006).

5.2.3 The Utrecht Work Engagement Scale (UWES)

The 17–item version of the Utrecht Work Engagement Scale, developed by Schaufeli and Bakker (2003), was used to measure the levels of WE of ODL academics.

The following section will focus on the purpose, dimensions, administration, interpretation as well as the psychometric properties of the UWES. Finally, the researcher will justify the use of the UWES for this study.

5.2.3.1 Purpose of the UWES

The UWES (Schaufeli, Bakker & Salanova, 2006) is a self-rating instrument and is used to determine individuals' level of WE. The construct of WE within the flourishing model is increasingly popular and can be measured by means of the UWES scale (Schaufeli & Bakker, 2003).

5.2.3.2 Dimensions of the UWES

The instrument consists of 17 items and is scored on a seven-point frequency scale ranging from 0 (never) to 6 (always) (Redelinghuys, 2003; Sieberhagen & Rothmann, 2004). The UWES includes three dimensions, namely vigour (Vi), dedication (De) and absorption (Ab) (Schaufeli, Bakker & Salanova, 2006):

- Vigour (Vi) is characterised by high levels of energy and mental resilience while working, a willingness to invest effort in work and persistence in the face of difficulties. It is assessed by items 1,4,8,12,15 and 17. For example: "At my work, I feel bursting with energy".

- Dedication (De) is characterised by a sense of significance, enthusiasm, inspiration, pride and challenge and a strong psychological identification with work. It is assessed by items 2, 5,7,10 and 13. For example: "My job inspires me".

- Absorption (Ab) is characterised by full concentration on and being engrossed in work. It is assessed by items 3,6,9,11,14 and 16. For example: "I get carried away when I'm working".

5.2.3.3 Administration of the UWES

The UWES is a self-administered instrument which can be administered in groups or individually and takes about 15-20 minutes to complete. The items are structured in a statement format. The score for the three independent dimensions, Vi, De and Ab are combined to obtain an overall score for the WE construct (Schaufeli & Bakker, 2003; Schaufeli et al., 2006).

5.2.3.4 Interpretation of the UWES

Each dimension (Vi, De and Ab) is measured separately and reflects the respondents' level of WE. The higher the score, the higher the level of WE. High levels indicate a lot of energy and resilience, a strong identification with work, and that respondents are proud of their work (Schaufeli & Bakker, 2003). Furthermore, respondents who score low on Vi, have less energy and stamina with reference to work. Those respondents who score low on De do not identify with work and will therefore not experience it as meaningful or challenging. They generally do not feel enthusiastic about or proud of their work (Schaufeli & Bakker, 2003).

5.2.3.5 Psychometric properties of the UWES

Multiple international (Schaufeli & Bakker, 2003) and South African researchers (De Braine & Roodt, 2011; Naude & Rothmann, 2003; Storm, 2002) have reported on the internal consistency of the three dimensions of the different versions (nine-item, 17-item) of the UWES. According to Schaufeli, Martinez et al. (2002), the Cronbach's Alpha coefficients of the UWES vary between 0.68 and 0.91 internationally.

Reliability estimates for Vi range from 0.81 to 0.90, De from 0.88 to 0.95, and Ab from 0.70 to 0.88 (Schaufeli & Bakker, 2003). The internal consistency reliabilities for the Vi, De, and Ab dimensions in this study were 0.91 and 0.93 and 0.90, respectively.

Various acceptable reliability and validity results were reported for South African samples and in a sample of 405 emergency workers Naudé and Rothmann (2003), reported Cronbach's Alpha coefficients for Vi = 0.70, for De = 0.83 and for Ab = 0.67. The Cronbach's Alpha coefficient for the UWES is acceptable within the guideline of 0.70 (Nunnally & Bernstein, 1994) although the Ab scale is below the guideline. However, it is consistent with the findings of Schaufeli, Martinez et al. (2002) in their cross-national study of students' engagement and levels where alpha coefficients for Ab ranged between 0.65 and 0.73. Storm (2002) and Storm and Rothmann (2003) reported Cronbach's Alpha coefficients for Vi = 0.78, for De = 0.89 and for Ab = 0.78 with a sample of 2396 members of the South African Police Service. In an insurance company in South Africa, Coetzer and Rothmann (2007) found Cronbach's Alpha coefficients of Vi = 0.80, De = 0.87, Ab = 0.69. Coetzee and De Villiers (2010) obtained alpha coefficients of 0.77 and 0.88 for Vi and De in a financial institution (De Waal & Pienaar, 2013).

In the HE context, Takawira (2012) reported Cronbach's Alpha coefficient scores for Vi = 0.85, for De = 0.88, for Ab = 0.87 and for the total UWES scale a Cronbach's Alpha coefficient of .95 within a sample of 153 academics in a HEI in South Africa. Similarly Barkhuizen et al. (2013) indicated a total alpha coefficient for the UWES of 0.72 in a sample of 595 academics at South African universities.

It should be noted, however, that some studies, including South African, studies have failed to replicate the three-factor structure of WE (Shimazu et al., 2008; Sonnentag, 2003). This may be attributed partly to translation problems when it comes to items that contain metaphors (e.g., ‘‘Time flies when I am working’’). Sonnentag (2003) did not indicate a clear three-factor structure and it was decided to use the total score on the UWES as a measure for WE. Similarly, Storm and Rothmann (2003) decided to re-specify the model with item 4 and item 14 deleted and reported that correlations between the three engagement dimensions were high. Vi and De show the highest correlation of 0.97, followed by Vi and Ab with a correlation of 0.96, and De and Ab with a correlation of 0.90.

Confirmatory factor analysis shows the three-factor structure of the UWES to be superior to the one-factor model (Salanova & Schaufeli, 2008; Schaufeli, Salanova et al., 2002).

5.2.3.6 Rationale for using the UWES

The UWES has been used and validated extensively in several countries. The database includes studies conducted in Finland, with Finnish teachers (Hakanen, Bakker & Schaufeli, 2006), in Greece with 206 Greek employees from a large public enterprise as well as from private profit organisations (Xanthopoulou, Bakker, Kantas & Demerouti, 2012), in Spain and Portugal and with 10 000 respondents in the Netherlands and Belgium (Schaufeli & Bakker, 2003; Schaufeli, Martinez et al., 2002). In South Africa, the UWES has been assessed in several research studies, for example within the South African Police Service with more than 2000 respondents (Storm & Rothmann, 2003).

Schaufeli and Bakker (2003) concluded, on the basis of results of previous research, that the psychometric properties of the UWES are acceptable:

- The three dimensions are internally consistent and stable across time.
- The three-factor structure has been confirmed and seems to be invariant across samples from different countries.

Research conducted in South Africa yielded acceptable Cronbach alpha coefficients. However, certain studies indicated that a three-factor model of the UWES was not recognised. Rothmann, Jorgensen and Marais (2011) found that after performing a principal components analysis and factor analysis and inspecting eigen-values, they were unable to extract one single factor. Sonnentag (2003) found support for a one-factor solution for the UWES and a 16-item version respectively. Storm and Rothmann (2003) argued that a one-factor solution with correlated errors to reflect domain-specific shared variance exhibited a better fit than a three-factor solution. Storm and Rothmann (2003) obtained acceptable fit for a three-factor solution once two items had been removed from the UWES.

Researchers have also examined a two-factor representation in addition to the one-factor and three-factor models. In particular, Naudé and Rothmann (2004) as well as Nerstad, Richardsen and Martinussen (2010) reported support for a two-factor model of WE (Vi/De and Ab).

It is therefore believed that, because of acceptable reliability and validity results reported for South African samples, the UWES can be used successfully in the South African ODL university to measure the level of WE experienced by academics.

5.2.4 Psychological Capital Questionnaire (PCQ-24)

The PCQ-24 item version of the Psychological Capital Questionnaire (PCQ-24), developed by Luthans, Youssef et al. (2007) was chosen as a predictor of employee well-being and levels of positive psychological capital of ODL academics.

The following section will focus on the purpose, dimensions, administration, interpretation as well as the psychometric properties of the PCQ-24. Finally, the researcher will justify the use of the PCQ-24 for this study.

5.2.4.1 Purpose of the PCQ-24

The PCQ-24 is a self-rating instrument which indicates an employee's, positive appraisal of circumstances in a changing environment and the probability of success based on motivated effort and perseverance (Luthans, Youssef et al., 2007). An individual's positive psychological state of development as indicated by confidence (efficacy), making a positive attribution to success (optimism), redirecting paths to goals (hope) and when experiencing problems, bouncing back and even beyond (resilience) to attain success (Luthans, Avolio et al., 2007) is receiving more attention in the work environment and can be measured by means of the PCQ-24.

5.2.4.2 Subconstructs of the PCQ-24

The instrument consists of 24 items and is scored on a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The PCQ-24 includes four subconstructs, namely hope, efficacy, resilience and optimism. All four constructs were assigned an equal weight, to enable the selection of the six best items from every measure (Luthans, 2002a; Luthans, et al., 2006):

- Hope - persevering towards goals and when necessary, redirecting paths to goals in order to succeed (Snyder et al., 1996). Hope is assessed by items 7, 8, 9, 10, 11 and 12. For example: “There are lots of ways around any problem”.
- Efficacy - having confidence to take on and put in the necessary effort to succeed at challenging tasks (Parker, 1998). Efficacy is assessed by items 1, 2, 3, 4, 5 and 6. For example: “I feel confident analysing a long-term problem to find a solution”.
- Resilience - when beset by problems and adversity, sustaining and bouncing back and even beyond to attain success (Wagnild & Young, 1993). Resillience is assessed by items 13, 14, 15, 16, 17 and 18. For example: “I feel I can handle many things at a time at this job”.
- Optimism - making a positive attribution about succeeding now and in the future (Scheier & Carver, 1992). Optimism is assessed by items 19, 20, 21, 22, 23 and 24. For example: “In this job, things never work out the way I want them to”.

5.2.4.3 Administration of the PCQ-24

The PCQ-24 is a self-administered instrument which can be administered in groups or individually and takes about 15-20 minutes to complete. The items are structured in a statement format. The total score is based on the sum of the four independent subconstructs (hope, efficacy, resilience and optimism), which are combined to obtain an overall score for the PsyCap construct (Luthans, Youssef et al., 2007).

5.2.4.4 Interpretation of the PCQ-24

Each subconstruct (hope, efficacy, resilience, optimism) is measured separately and the resulting score represents the respondent's level of positive PsyCap. Total scores were calculated by reverse scoring items 13, 20 and 23 and then summing all items in the subconstructs. The higher the score, the higher the level of PsyCap and respondents with higher levels of hope tended to be more successful than those with lower levels of hope (Adams et al., 2002). High levels of efficacy represent a positive belief in and a strong positive relationship with work-related performance (Stajkovic & Luthans, 1998a). Masten (2001) is of the opinion that high levels of resilience are characterised by positive coping and adaptation despite risks or changes. High levels of optimism as a subconstruct of PsyCap are associated with positive emotions and motivation regarding work (Luthans 2002a).

Low levels of PsyCap are an indication of respondents who are less successful in the work environment, who may present a negative relationship with work, who do not cope with the changing environment and who are generally negative and unmotivated to adapt to the challenges of work.

5.2.4.5 Psychometric properties of the PCQ-24

Internal consistency for the PCQ-24 on four samples reported in Luthans, Avolio et al. (2007) ranged from 0.72 to .80 for hope, 0.66 to 0.72 for resilience, 0.75 to 0.85 for efficacy and 0.69 to 0.79 for optimism. Similarly, good internal consistency was reported for the respective subconstructs (hope: 0.72, 0.75, 0.80, 0.76; optimism: 0.74, 0.69, 0.76, 0.79; efficacy: 0.75, 0.84, 0.85, 0.75; and resilience: 0.71, 0.71, 0.66, 0.72) on the four samples utilised in the study by Luthans, Avolio et al. (2007).

The results of a series of higher-order confirmatory factor analyses (CFAs) (also cross-validated on another sample) provided strong evidence for the higher-order factor structure for the overall PsyCap measure (i.e. the root mean square error of approximation [RMSEA] = 0.046; comparative fit index [CFI] = 0.93, standardised root mean residual [SRMR] = 0.051) (Luthans, Avolio et al., 2007).

Although each of the individual subconstructs of the PCQ-24 has demonstrated convergent and discriminant validity, prior research has established that PsyCap is a higher-order construct that predicts performance and employee satisfaction better than any of the individual subconstructs that comprise it (Baron, Franklin, & Hmieleski, 2013; Luthans, Avolio et al., 2007).

Consistent psychometric properties, such as reliability and construct validity, of the PCQ-24 have been reported in several USA, but also non-USA, samples (Dawkins, Martins, Scott & Sanderson, 2013; Görgens-Ekermans & Herbert, 2013). De Waal (2011) arrived at a similar conclusion, reporting a reliability coefficient of 0.69 in a South African sample of 1300 employees in a chemical factory.

The PCQ-24 showed acceptable construct validity as evaluated via second-order confirmatory factor analysis (CFA) under full information maximum likelihood estimation (FIML). The overall model fit was χ_2 = 393.90; *df* = 243; *p* < 0.01; RMSEA (90% CI) = 0.08 (0.07– 0.10); and CFI = 0.88. These goodness-of-fit tests were acceptable using criteria that Bentler (1990) established: ratio of the chi-square statistic to the degrees of freedom (χ_2/*df*) less than 2-to-1, CFI value ≥ 0.80 and RMSEA ≤ 0.08 (Beal III et al., 2013). In a South African sample, De Waal and Pienaar (2013) report a reliability coefficient of 0.69.

5.2.4.6 Rationale for using the PCQ-24

The PCQ has been proven to be a reliable, valid instrument for measuring how individuals experience levels of PsyCap. Multiple studies have confirmed the value of PsyCap within the workplace (Gooty, Gavin, Johnson, Frazier & Snow, 2009; Luthans et al., 2010; Luthans, Youssef et al., 2007; Luthans et al., 2008; Sweetman, Luthans, Avey, & Luthans, 2011). On the basis of results, Luthans, Avolio et al. (2007) conclude that the psychometric properties of the PCQ-24 are acceptable:

- The four subconstructs that were included in the development phase of the instrument were selected on the basis of sound reliability and validity

evidence, clear relevance to the workplace and their status as measures of state-like constructs.

- A series of higher-order confirmatory factor analyses (CFAs) (also cross-validated on another sample) provided strong evidence for the higher-order factor structure of the overall PsyCap measure.
- Further competing CFAs were reported that examined statistical differences in model fit between the higher-order model and multiple three-factor models (different combinations of the facets) as well as a one-factor model, providing further rigorous evidence confirming the higher-order PsyCap factor.

It is not uncommon to use foreign-developed psychological tests (e.g. PCQ-24 developed in the USA) in South Africa (Oakland, 2004). However, the results of one of the published South African studies are not consistent with the general psychometric trends reported for the instrument in studies from other countries. Du Plessis and Barkhuizen (2011) reported with reference to a study on 131 members of the South African Board for People Practices, that the factor structure of the PCQ-24 instrument does not compare fully with the four-factor structure of the PCQ-24 designed by Luthans, Youssef and Avolio (2007). This study does not question the discriminant validity of the original PCQ-24 constructs, but explores how these constructs are represented in a specific South African sample and what meaning can be extracted from the interaction between psychological capital factors in a new context (Du Plessis & Barkhuizen, 2011).

5.3 DATA COLLECTION PROCEDURE AND ADMINISTRATION OF THE MEASURING INSTRUMENTS

The biographical instrument and the three measuring instruments namely the RTC scale, the UWES and the PCQ-24, as discussed and justified in section 5.2, were integrated into an electronic or online document.

As the target population in this research, namely academics, all have easy access to e-mail facilities, it was considered an appropriate means of distributing the

measuring instrument (Evans & Mathur, 2005). An invitation e-mail with a link was mailed to the sample group of academics of the ODL university via the electronic network requesting them to participate in the research. The letter of invitation explained that participation was voluntary, requested informed consent (Leedy & Ormrod, 2013) and gave the respondents the assurance of total anonymity and confidentiality (refer to Appendix A for letter of invitation).

This procedure was deemed suitable for this study because of its numerous advantages, such as flexibility, convenience, low-cost administration, access to a large sample, ease with which it can be followed-up, technological innovations in organisations and ease of data capturing (Evans & Mathur, 2005). When utilising self-perception measures, the results might be biased because of the tendency of respondents to be dishonest and their ability to respond to certain constructs. In addition, the nature of the instruments may eventually present limitations in terms of the nature of the methods used to determine their validity and compare them with other instruments (Tredoux & Durrheim, 2013). Unclear instructions on answering and low response rates are possible disadvantages of online surveys, according to Evans and Mathur (2005), therefore respondents in this research were provided with clear instructions on how to complete the survey, and a follow-up e-mail was sent to the sample group after three weeks to remind and encourage them to participate.

The relevant data, received electronically via e-mail from the respondents, were stored anonymously on the computer server of the ODL university. Since the measuring instrument was hosted electronically on the web server, it was impossible to trace individual responses to the questionnaire and this assured the participants of confidentiality and anonymity in the data collection process. The measuring instrument is presented in such a way that computer scoring is allowed, which excludes the possibility of human error in scoring the results (Miller, McIntyre & Lovler, 2011).

The collected data were used to systematically report the results of the research.

5.4 DATA ANALYSIS

All data were imported and analysed using statistical methods, specifically utilising the statistical programmes SPSS (Statistical Package for Social Sciences) Version 22.0 for the Microsoft Windows platform (SPSS, 2003), and AMOS Version 19 (Arbuckle, 2006). Statistical analysis was used to determine the interrelationships between RTC (routine seeking, emotional reaction, short-term focus and cognitive rigidity), flourishing as defined by WE (vigour, dedication and absorption) and PsyCap (hope, efficacy, resilience and optimism) of ODL academics in a changing world of work at an HEI in South Africa. The analysis comprised three phases, as indicated in Figure 5.1.

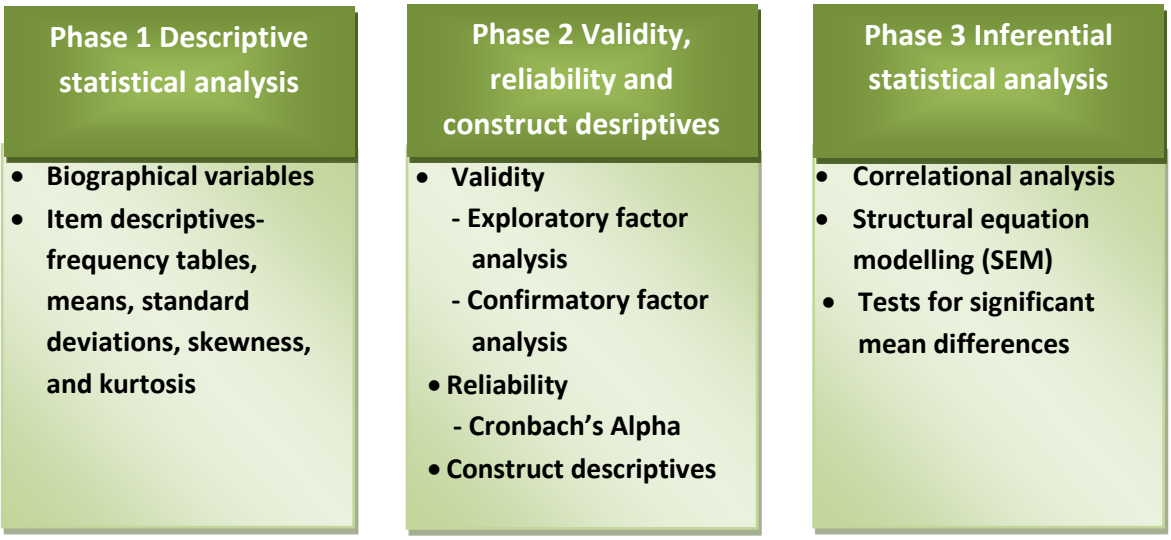

Figure 5.1 Data analysis procedure

5.4.1 Phase 1: Descriptive statistical analysis

Descriptive statistics were calculated to describe the sample characteristics in numerical data in terms of the chosen constructs as well as the relevant biographical variables. The results of this analysis will be described in tabular or graphic layout. The descriptive statistics used in this study were percentages, means, standard deviations, skewness, kurtosis and frequency tables (De Vos et al., 2011; Salkind, 2009).

5.4.1.1 Biographical variables

The profile of the sample is described according to the following biographical variables: age, gender, marital status, educational level, job level and years of service and was included in the research to investigate whether significant differences exist between respondents as defined by the biographical variables.

5.4.1.2 Item descriptives

A frequency and percentage distribution is a graphical or tabular illustration of a data set indicating the set of scores on a variable together with their frequency and percentage (Tredoux & Durrheim, 2002). In this research, it was used to organise and summarise the data in order to render them more comprehensible (Mouton & Marais, 1996) as well as to summarise the information on the number of times the given score appears within the dataset (Tredoux & Durrheim, 2002). Frequency and percentage distributions were also used in this research to present and describe the distribution of data of the sample population.

(a) Frequency tables

Frequency tables were used in this research to describe the distribution scores for the demographic variables. The main reason is that the biographical questions are categorical in nature, and responses are therefore presented by means of frequency distribution (Cohen, Manion & Morrison, 2011).

(b) Means and standard deviations

The mean was calculated to provide the arithmetic average of a group of scores, while the standard deviation was the measure of the extent to which a group of scores vary about their mean (Christensen, 2001). The means and standard deviations for all the dimensions of RTC, WE and PsyCap were determined (Cohen et al., 2011), the main advantage of the mean being that the sample mean is used as a measure of central tendency to estimate the population mean. The intended mean in this research is used to compute the score averages that are

obtained in the different dimensions of the measuring instruments, namely the RTC scale, the UWES and the PCQ-24 (Cohen et al., 2011).

According to Tredoux and Durrheim (2013), standard deviations (SD) and minimum and maximum values were calculated to describe the results.

(c) Skewness and kurtosis

According to Treiman (2014), skewness refers to a measure of symmetry (or a lack thereof), or the numerical measure of the shape of the distribution of the data. The data in this research will therefore be categorised as symmetrical if they look the same on each side of a central point. However, variables and some data sets do not always resemble a normal distribution. Kurtosis measures whether data are either peaked or flat in relation to the normal distribution. Skewness and kurtosis values ranging between the -1 and +1 normality range are recommended for conducting parametric tests (Cohen et al., 2011).

5.4.2 Phase 2: Validity, reliability and construct descriptives

Phase 2 consisted of the calculation of exploratory factor analysis, confirmatory factor analysis, Cronbach's Alpha coeffiscients and construct descriptives.

5.4.2.1 Validity

(a) Exploratory factor analysis

Exploratory factor analysis (EFA) was used to evaluate each of the three scales (RTC scale, UWES, PCQ-24) individually to confirm the validity of the factor structure of each of the scales in the sample population. To minimise error, the principal axis factor analysis with a direct oblimin rotation and the Kaiser normalisation technique were chosen as the best techniques to examine the factor structure of the three scales in this study. Catell's scree test was used to study the slope of the plotted eigenvalues to determine the factor solution (Pallant, 2010).

Factor rotation was used to indicate the pattern of loadings for this research. The direct oblimin rotation, according to Pallant (2010), is an oblique rotation used to maximise the variance of the loadings of a factor on all the variables in a factor matrix, thereby minimising the number of variables that have high loadings on any one specific factor. Each factor may have either high or low loadings of particular variables on it (Pallant, 2010). In this research, the items that loaded highest on each factor were compared with the items of the subdimensions to determine the validity of the factor structures.

The pre-established eigenvalues were evaluated to determine the number of factors to use for the factor analysis. Initial eigenvalues with a total value higher than 1.0 indicate a strong extraction (Pallant, 2010). All factors with eigenvalues below 1.0 were considered insignificant. By graphing the eigenvalues, the relative importance of each factor becomes apparent (Field, 2005). According to Cattel (1977), the cut-off point for selecting factors should be at the point of inflexion of this curve.

(b) Confirmatory factor analysis

Confirmatory factor analysis (CFA) is used for four major purposes (Hurley et al., 1997) namely:

- psychometric evaluation of measures
- construct validation and relationships between constructs
- testing method effects
- testing measurement invariance

In this research, it was used to determine construct validity and to examine the relationships among the constructs. According to Cronbach and Meehl (1955), construct validity refers to an examination of a measure of a construct that is not operationally defined or measured directly. More recently Babbie (2013) explained that construct validity is based on the logical relationships between variables. Terre Blanche et al. (2006) draw attention to three steps in construct validation,

namely: specifying a set of theoretical relationships between constructs; testing these hypotheses empirically; and interpreting the pattern of relationships in terms of how they clarify the construct validity of the measure. These steps were followed in this research.

Construct validity was determined by conducting a CFA on all three measuring instruments (RTC scale, UWES and PCQ-24) by using AMOS software. A CFA is regarded as a measurement model with correlated constructs or an analysis of the expected causal connections between variables (Hurley et al., 1997).

5.4.2.2 Reliability: Cronbach's Alpha coefficient.

The reliability of the measuring instruments, the RTC scale, UWES and PCQ-24 can be defined in terms of internal consistency, where each item on a scale correlates with another item, ensuring that a test measuring the same thing more than once, will produce the same outcome results (Terre Blanche & Durrheim, 2002). Similarly, Foxcroft and Roodt (2005) describe the reliability of the measuring instrument on the basis of the consistency with which it measures what it is supposed to measure.

In this research, the Cronbach's Alpha coefficient was used to determine the reliability of the measuring instruments (RTC scale, UWES and PCQ-24). The Cronbach's Alpha coefficient is the estimate of consistency of responses to different items of the measuring instruments, and ranges from 0 (no internal consistency) to 1 (the maximum internal consistency score) (Tredoux & Durrheim, 2002). Furthermore, according to Tredoux and Durrheim (2002), a reliability coefficient of .70 is adequate for research instruments. This means that in this research the Cronbach's Alpha coefficient of .70 would be used in the data analysis to determine the acceptable reliability coefficient of the RTC scale, the UWES and the PCQ as the measuring instruments.

Terre Blanche and Durrheim (2002) argue that the internal consistency reliability estimates refer to how strongly items on a scale relate to one another.

Furthermore, the Cronbach's Alpha is one of the most widely used methods of calculating the internal reliability consistency of measuring instruments.

5.4.2.3 Construct descriptive statistics

As descriptive statistics are necessary to understand inferential statistics and the research results, means, standard deviations, kurtosis and skewness of the data for this research were reported on and interpreted for each item of the RTC scale, the UWES and the PCQ-24.

5.4.3 Phase 3: Inferential statistical analysis

Phase 3 consisted of correlational analysis, SEM and tests for significant mean dfferences.

5.4.3.1 Correlational analysis

Correlation analysis tested the strength of the relationship between the psychological construct of RTC (routine seeking, emotional reaction, short-term focus and cognitive rigidity) and the positive psychological constructs of WE (vigour, dedication and absorption) and PsyCap (hope, efficacy, resilience and optimism).

In this study, Pearson's product moment correlation coefficient (*r) was* used to calculate the strength of the relationship between variables (Steyn, 2002):

- A negative value reflects an inverse relationship.
- The strength of the linear relationship is determined by the absolute value of ρ.
- A strong correlation does not imply a cause-effect relationship but indicate the direction and strength of the relationship between the variables.

For the purposes of this study, the value was set at a 95% confidence interval level and cut-off points of $r \geq .50$ (high effect) at $p \leq 1.0$, $r \geq .30$ (medium effect) at $p \leq .05$ and $r \geq .10$ (low effect) at $p \leq -0.3$ were used to determine the practical significance of correlation coefficients (Cohen, 1988).

One-Way Analysis of Variance, the Kruskal-Wallis test (*R* – the sum of the ranks in any column) was used to compare three or more group medians when the data are ordinal rather than interval in nature (Leedy & Ormrod, 2013). This is a non-parametric method of testing whether samples originate from the same distribution and is used for comparing two or more independent samples of equal or different sample sizes. According to Kerlinger (1986) it can be used for:

- experimental as well as non-experimental data
- research situations in which it is the only form of measurement possible, rank order or ordinal measurement

For this study 5% and 10% levels of significance were used to test for statistical significance.

5.4.3.2 Structural Equation Modeling (SEM)

SEM is a statistical procedure that tests the theoretical models containing hypothesised sets of variables to define constructs and hypothesised relationships between these constructs (Kline, 2012). For the purposes of this research, SEM as a multivariate procedure, combining multiple regression and factor analysis, was used to describe the interrelationships between the observed variables and the basic goal of providing a quantitative test of the theoretical model as hypothesised (Hair, Black, Babin & Anderson, 2010).

According to Bollen (1989), SEM is a powerful collection of multivariate analysis techniques using two sets of equations: measurement equations and structural equations. The measurement model prescribes latent variables in confirmatory factor analysis, while the structural model prescribes relationships between latent

variables and observed variables that are not indicators of latent variables (Garson, 2008; Hair et al., 2010). In this research, the interrelationships between the psychological constructs RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa were hypothesised. Furthermore, it has also been hypothesised that this basic relationship is moderated by the biographical variables of age, gender, marital status, job level, educational level and years of employment.

According to Hair, Anderson, Tatham and Black (1998), and as accepted for the purposes of this research, there are four main types of relationships between the variables as indicated below:

- association, which includes correlation and covariance
- the direct effect relationship, which is a directional relationship between two variables, such as independent and dependent variables
- the indirect effect, which is the effect of an independent variable on a dependent variable
- a relationship through one or more intervening or mediating variables

In this research, the SEM procedure allowed the researcher to distinguish between direct and indirect relationships among variables and to analyse interrelationships between latent variables without random error. This characteristic differentiates SEM from other simpler, rational modeling processes such as multiple regression (Garson, 2008; Hoyle, 1995). Furthermore, it allowed the researcher to measure any combination of interrelationships between RTC, WE and PsyCap by examining a series of dependent relationships simultaneously while considering potential errors of measurement among all variables (De Carvalho & Chima, 2014). Through path analysis, it is also useful to fit the structural model by measuring the significance of the relationship between latent variables (Hoyle, 1995; Kaplan, 2000).

The SEM process focuses on the validation of the measurement model by obtaining estimates of the parameters of the model and assessing whether the model itself provides a good fit to the data (Coovert & Craiger, 2000; Garson, 2008). For this research, the validation of the measurement model was conducted by using CFA, as CFA models are used to evaluate the role of measurement error in the model, validate a multifactorial model, and determine group effects on the factors (Hair et al., 2010). The model adequacy was evaluated by means of goodness-of-fit measures which determine whether the model being tested should be accepted or rejected (Garson, 2008).

It is important to note that the following fit indices were used to evaluate the model in this research as they are considered adequate summary for assessing model fit (Bentler & Bonnet, 1980; Bollen, 1989; Hair et al., 1998; Hu & Bentler, 1999):

- Goodness-of-fit index (GFI). A value of 0 reflects no fit, while a value of 1 is a perfect fit. Values close to 0.90 reflect an acceptable fit.
- Bentler Bonett or normed fit index (NFI). A value of 0 reflects no fit, while a value of 1 is a perfect fit. Values close to 0.90 reflect an acceptable fit.
- Comparative fit index (CFI). A value of 0 reflects no fit, while a value of 1 is a perfect fit. Values close to 0.90 reflect an acceptable fit (Byrne, 2010).
- Roots mean squared error of approximation (RMSEA). A value of 0.05 represents a close approximate fit; values between 0.05 and 0.08 suggest a reasonably approximate fit and values greater than 0.10 suggest a poor fit.

Once the structural model had been specified and the input data selected, the AMOS computer program was used to estimate the model. The AMOS computer program was selected because of its suitability for all stages of data analysis (Byrne, 2010; Kline, 2005; Schumacker & Lomax, 2004). The goodness-of fit of this model was assessed for the overall structural model.

In the context of the present study, the SEM analysis was performed to test the structural paths between the psychological constructs of RTC, WE and PsyCap as indicated in the conceptual model shown in Figure 5.2.

The GFI indicates the relative amount of variance or covariances in the sample of academics predicted by the estimates of the population. In addition, the Adjusted Goodness-of-Fit Index (AGFI) is a measure of the relative amount of variance accounted for by the model, corrected for the degrees of freedom in the model relative to the number of variables. GFI and AGFI range between 0 and 1 and when models fit well, these indices are closer to 1.0.

Chi-square was used for the purpose of this research as it is the most commonly used goodness-of-fit test when comparing models (Strasheim, 2008). Chi-square was used to test the difference between the observed data and the hypothesised model (Garson, 2008). According to Weston and Gore (2006), the chi-square index can be used evaluate the models and estimate the statistical significance of the difference between the models.

The hypothesised model was tested by using a combination of fit indices, namely the X^2 goodness-of-fit statistic and other fit indices. Owing to Chi-square's sensitivity to sample size, it is not easy to gain a good sense of fit solely from the X^2 value. Therefore, other indices of model fit have been examined, including: GFI (Goodness-of-Fit Index), AGFI (Adjusted Goodness-of-Fit Indices), CFI (Comparative Fit Index), SRMR (Standardised Root Mean Squared Residual) RMR (root mean square residual) and RMSEA (Root Mean Square Error of Approximation).

If the Goodness of Fit Index (GFI) is larger than 0.9 it reflects a good overall degree of fit and values below 0.90 simply suggest that the model could be improved. AGFI is the Adjusted Goodness of Fit Index. This considers the degrees of freedom available for testing the model. Values above 0.90 are acceptable, indicating that the model fits the data well. SRMR is the Standardised Root Mean Squared Residual, and it is a standardised summary of the average covariance residuals. The SRMR should be less than .10 (Hatcher, 2005; Hu & Bentler, 1999; Kline, 2005).

The sample size influences the chi-square values and can therefore sometimes be regarded as a limitation in research. Garson (2008) suggests that if the sample is large (more than 200 respondents), even small differences between the model and the data will result in a statistically significant result. With large samples, therefore, the chi-square will almost certainly be significant (Hox & Bechger, 1998). The problem of sample size can be overcome, according to Brown and Cudeck (1993), by using the Root Mean Square Error of Approximation (RMSEA) and the 90% confidence interval of the RMSEA. The primary principle of the RMSEA is that it evaluates the extent to which the model fails to fit the data. The RMSEA estimates the overall amount of error. The RMSEA point estimates should be 0.05 or less and the upper limit of the confidence interval should not exceed .08 (Raykov & Marcoulides, 2000). Hu and Bentler (1999) suggest a value of .06 as being indicative of good fit between the hypothesised model and the observed data. Fabrigar, Wegener, MacCullum and Strahan (1999) elaborate on these cut-off points and note that RMSEA values ranging from .08 to .10 indicate marginal fit and those greater than .10 indicate a poor fit.

The Tucker-Lewis Index (TLI), as it is termed in the statistical package AMOS 19.0, which was utilised in the present study is a relative measure of covariance explained by the model (Garson, 2008). With regard to the TLI, it is generally accepted that a value of less than .90 indicates that the fit of the model could be improved (Hoyle, 1995), although a revised cut-off value close to .95 has been advised by Hu and Bentler (1999).

In order to confirm the model fit, root mean residuals (RMR), and specifically standardised root mean residuals (SRMR), were used. RMR refers to the mean absolute value of the covariance residuals. The closer the RMR is to 0, the better the model fit. SRMR refers to the average difference between the predicted and observed variances and covariances in the model based on standardised residuals. Once again, the closer the SRMR is to 0, the better the model fit. A value of ≤ .05 indicates a good fit and a value of ≤ .08 indicates a mediocre fit (Arbuckle, 2006).

The squared multiple correlations (SMC) “indicate the amount of variance explained, predicted, or accounted for in the dependent variable by the set of independent predictor variables” (Schumacker & Lomax, 2010, p. 127).

5.4.3.3 Tests for significant mean differences

The t-test is a statistical test for analysing the data differences between the mean scores of two groups (Williams, Sweeney & Anderson, 2012). For this study, the t-test was used to determine whether there are any significant differences between the groups of respondents as defined by biographical variables (age, gender, marital status, educational level, job level and years of service) that acted as significant moderators between the levels of RTC, WE and PsyCap of academics. Tukey’s Standardised Range t-tests as post-hoc multiple comparison tests were used to determine the statistical significance of differences between each possible combination of two groups of academics when the ANOVAs indicated statistical significance (Williams, Sweeney & Anderson, 2012).

ANOVAs were used in this research to determine statistically significant differences between the groups of participants on the basis of age, gender, marital status, job level, educational level and years of employment in terms of their levels of RTC, WE and PsyCap. The analysis is only significant and valid if the probability associated with it is less than $p \leq .05$ (Tredoux & Durrheim, 2002).

The Kruskal-Wallis test was applied to compare two or more independent samples of different sample size (Pallant, 2010), or as an omnibus test equivalent to a one-way analysis of variance (ANOVA) (Tredoux & Durrheim, 2002; Williams et al., 2012). In this research, it was applied to identify significant differences between age, gender, marital status, job level, educational level and years of employment that were shown to be the variables that acted as moderators between the psychological constructs of RTC, WE and PsyCap.

5.5 FORMULATION OF THE RESEARCH HYPOTHESIS

A hypothesis is a clear statement in which something is predicted (Cohen et al, 2011). In this research, with regard to the literature review chapters, hypotheses refer to statements about the relationship between variables and are tentative propositions guiding the investigation of a problem (Leedy & Ormrod, 2013). Therefore the central hypothesis was to investigate the interrelationships between the psychological construct RTC and the positive psychological constructs of WE and PsyCap, conceptualised as indicated.

In order to address the research aims formulated in Chapter 1, the following research hypotheses were formulated as indicated in Table 5.7. The empirical research hypotheses were tested by means of descriptive, inferential statistics and the SEM procedure.

Table 5.1

Research Hypotheses

Empirical research aims	Research Hypothesis
Research aim 1: To empirically investigate the nature of the statistical interrelationships of RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa.	$H_0$1A: There is no statistical relationship between RTC (represented by RS, ER, SF and CR) and WE (represented by Vi, De and Ab). H_a1A: There is a negative statistical relationship between RTC (represented by RS, ER, SF and CR) and WE (represented by Vi, De and Ab). $H_0$1B: There is no statistical relationship between RTC (represented by RS, ER, SF and CR) and PsyCap (represented by hope, efficacy, resilience and optimism). H_a1B: There is a positive or negative statistical relationship between RTC (represented by RS, ER, SF and CR) and PsyCap (represented by hope, efficacy, resilience and optimism). $H_0$1C: There is no statistical relationship between PsyCap (represented by hope, efficacy, resilience and optimism) and WE (represented by Vi, De and Ab). H_a1C: There is a positive statistical relationship between PsyCap (represented by hope, efficacy, resilience and optimism) and WE (represented by Vi, De and Ab).
Research aim 2: To empirically investigate whether significant statistical differences exist between groups of academics as defined by biographical variables (age, gender, marital status, educational level, job level and years of service) between RTC, WE and PsyCap.	$H_0$2: There are no statistically significant differences between groups of academics as defined by biographical variables with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). $H_0$2A: There are no statistically significant differences between groups of academics as defined by age with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism).

Empirical research aims	Research Hypothesis
	$H_0$2B: There are no statistically significant differences between groups of academics as defined by gender with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). $H_0$2C: There are no statistically significant differences between groups of academics as defined by marital status with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). $H_0$2D: There are no statistically significant differences between groups of academics as defined by educational level with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). $H_0$2E: There are no statistically significant differences between groups of academics as defined by job level with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). $H_0$2F: There are no statistically significant differences between groups of academics as defined by years of service with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). H_a2: There are statistically significant differences between groups of academics as defined by biographical variables with regards to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism).

Empirical research aims	Research Hypothesis
	H_a2A: There are statistically significant differences between groups of academics as defined by age with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). H_a2B: There are statistically significant differences between groups of academics as defined by gender with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). H_a2C: There are statistically significant differences between groups of academics as defined by marital status with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). H_a2D: There are statistically significant differences between groups of academics as defined by educational level with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). H_a2E: There are statistically significant differences between groups of academics as defined by job level with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism). H_a2F: There are statistically significant differences between groups of academics as defined by years of service with regard to RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism).

The conceptual model encapsulating research hypothesis 1 is shown below in Figure 5.2.

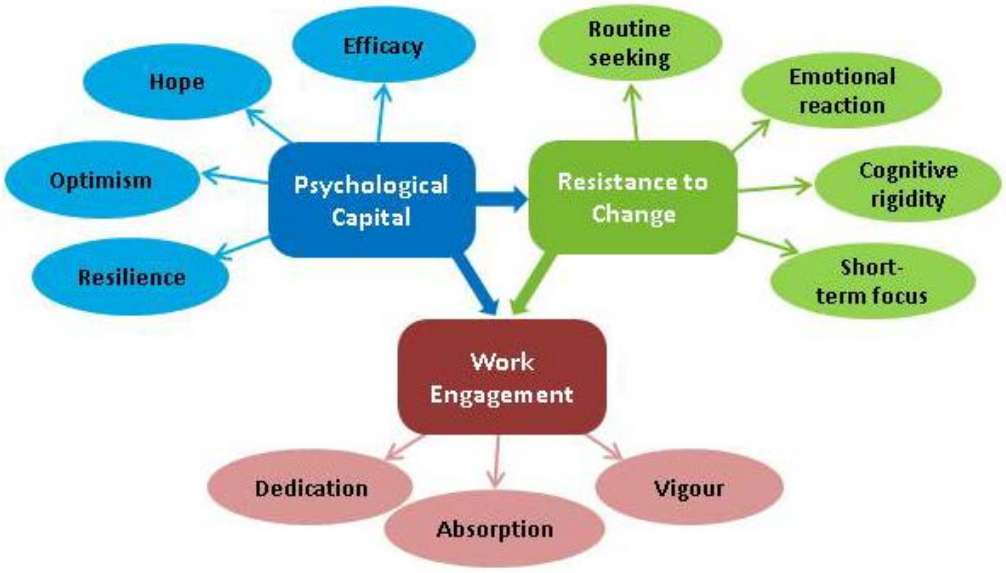

Figure 5.2 Conceptual model encapsulating research hypothesis 1

5.6 CHAPTER SUMMARY

This chapter explained the first five steps in the empirical investigation, which included the determination and description of the population and sample, the description of the rationale for choosing the measuring instruments, a description of the data collection procedure, the administration of the measuring instruments and a report on the analysis of the data. The chapter concludes with the formulation of the research hypothesis.

Chapter 6 focuses on steps 6 and 7 in the research design, namely the reporting, interpretation and integration of the research results.

CHAPTER 6 RESEARCH RESULTS

This chapter reports on the results of the research, attained through an analysis of the data. The statistical results are reported and interpreted in terms of descriptive statistical analysis, validity, reliability and construct descriptives of the three measuring instruments, inferential statistical analysis as well as SEM.

6.1 DESCRIPTIVE STATISTICAL ANALYSIS

Descriptive statistics in this research are included to illuminate the inferential statistical analysis as reported in section 6.3. Data on the biographical variables as well as the item descriptives are reported.

6.1.1 Biographical variables

This section presents the descriptive information on the biographical variables of the sample of 208 (N=208) respondents who completed the measuring instrument. The profile of the sample is described according to the following biographical variables: age, gender, marital status, educational level, job level and years of service. The decision to include these categories of biographical variables was based on the exploration of the variables that were found in the literature review to influence the psychological constructs of RTC, WE and PsyCap.

(a) Composition of age groups of respondents

The ages of the respondents are reported in categories of career development life stages according to Schein's (1988) and Super's (1980) career theories as these are regarded as classical theories. These stages comprise:

- an exploration phase when under the age of 25 years,
- an establishment phase when between the ages of 26 and 40 years,
- a maintenance stage when between the ages of 41 and 55 years and
- a late career stage when 56 and older.

Table 6.1 and Figure 6.1 indicate the age distribution of respondents within the sample. Respondents under the age of 25 years (exploration stage) comprised 3.4% of the sample and respondents between the ages of 26 and 40 years (establishment stage) comprised 35.6%. Respondents between the ages of 41 and 55 years (maintenance stage) comprised 38.5%, respondents aged 56 and over comprised 21.6% and 1% of the respondents did not indicate their age. Overall, the sample consisted predominantly of respondents in the establishment and maintenance phases of their lives (74.1%).

Table 6.1

Age distribution of sample (N = 208)

Age	*Frequency*	*Percentage*	*Valid percentage*	*Cumulative percentage*
25 years and younger	7	3.4	3.4	3.4
26 to 40 years	74	35.6	35.9	39.3
41 to 55 years	80	38.5	38.8	78.2
56 and over	45	21.6	21.8	100.0
No data	2	1.0	1.0	
Total	208	100.0		

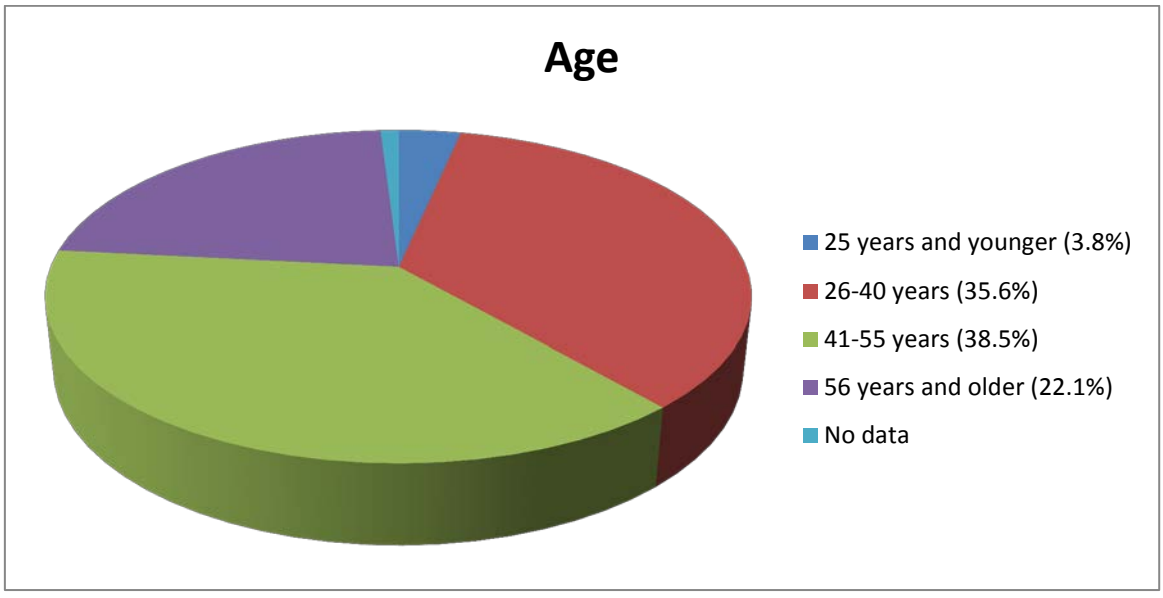

Figure 6.1 Sample distribution by age (n = 208)

(b) Composition of gender groups of respondents

Table 6.2 and Figure 6.2 indicate the gender distribution of respondents within the sample. Females comprised 63.5% of the sample and males comprised 36.5% of the sample of respondents (*n*=208). The majority of the academics at this ODL university are female, namely 57% as opposed to 43% male academics.

Table 6.2

Gender distribution of sample (N = 208)

Gender	*Frequency*	*Percentage*	*Valid percentage*	*Cumulative percentage*
Female	132	63.5	63.5	63.5
Male	76	36.5	36.5	100.0
Total	208	100.0	100.0	

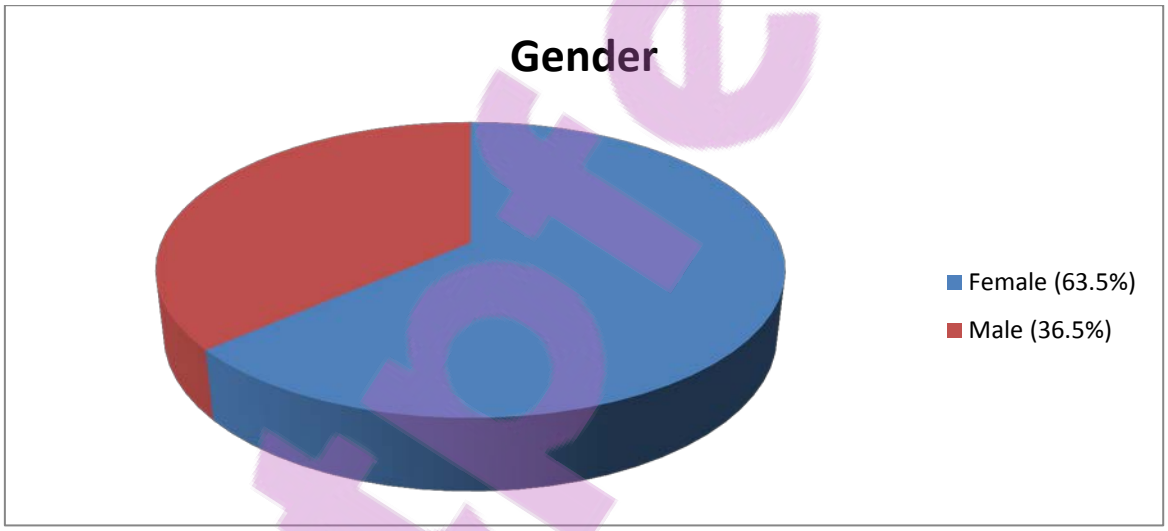

Figure 6.2 Sample distribution by gender (n = 208)

(c) Composition of marital status of respondents

Table 6.3 and Figure 6.3 indicate the marital status distribution of the respondents in the sample (*n*=208). The majority of respondents were married (65.4%). Only 9.1% of the respondents were divorced and 17.8% of the respondents indicated that they were single.

Table 6.3

Marital status distribution of sample (N = 208)

Marital status	*Frequency*	*Percentage*	*Valid percentage*	*Cumulative percentage*
Divorced	19	9.1	9.1	10.1
Married	136	65.4	65.4	75.5
Permanent relationship	13	6.3	6.3	81.7
Single	37	17.8	17.8	99.5
Widowed	1	.5	.5	100.0
No data	2	1.0	1.0	
Total	208	100.0	100.0	

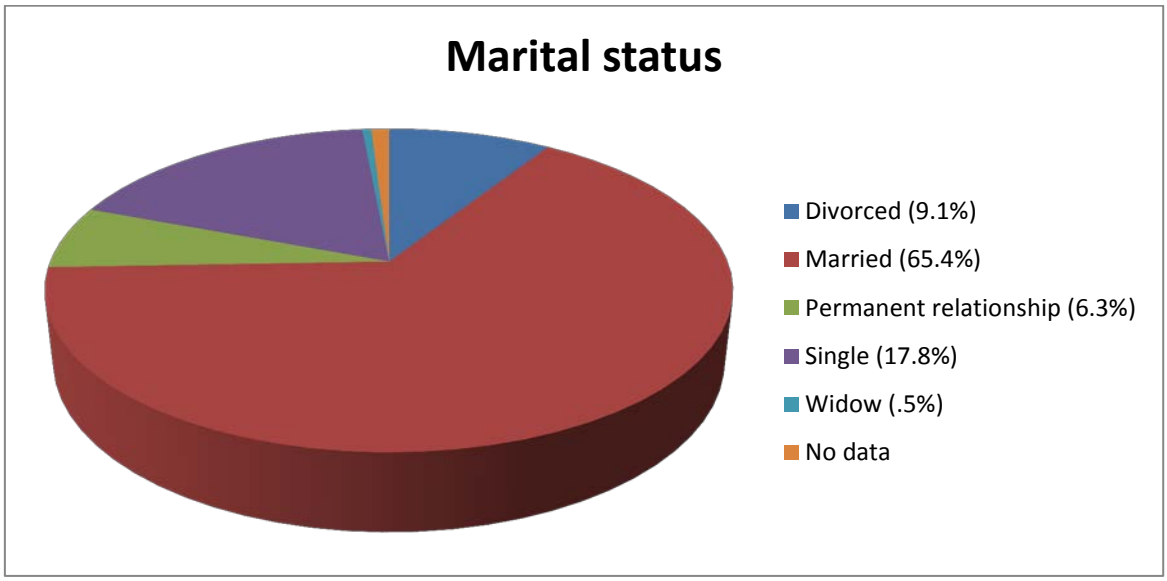

Figure 6.3 Sample distribution of marital status (n = 208)

(d) Composition of educational level of respondents

Table 6.5 and Figure 6.5 indicate the composition of the educational level distribution in the sample (*n*=208). The distribution of the sample shows that 43.3% of the respondents held a doctorate, 35.1% a master's degree, 20.2% an honours degree and 1.4% had a bachelor's degree. That is to say, over 50% of the sample held a doctorate or a master's degree.

Table 6.4

Educational level distribution of sample (N = 208)

Educational level	*Frequency*	*Percentage*	*Valid percentage*	*Cumulative percentage*
B degree	3	1.4	1.4	1.4
Doctorate	90	43.3	43.3	44.7
Honours degree	42	20.2	20.2	64.9
Master's degree	73	35.1	35.1	100.0
Total	208	100.0	100.0	

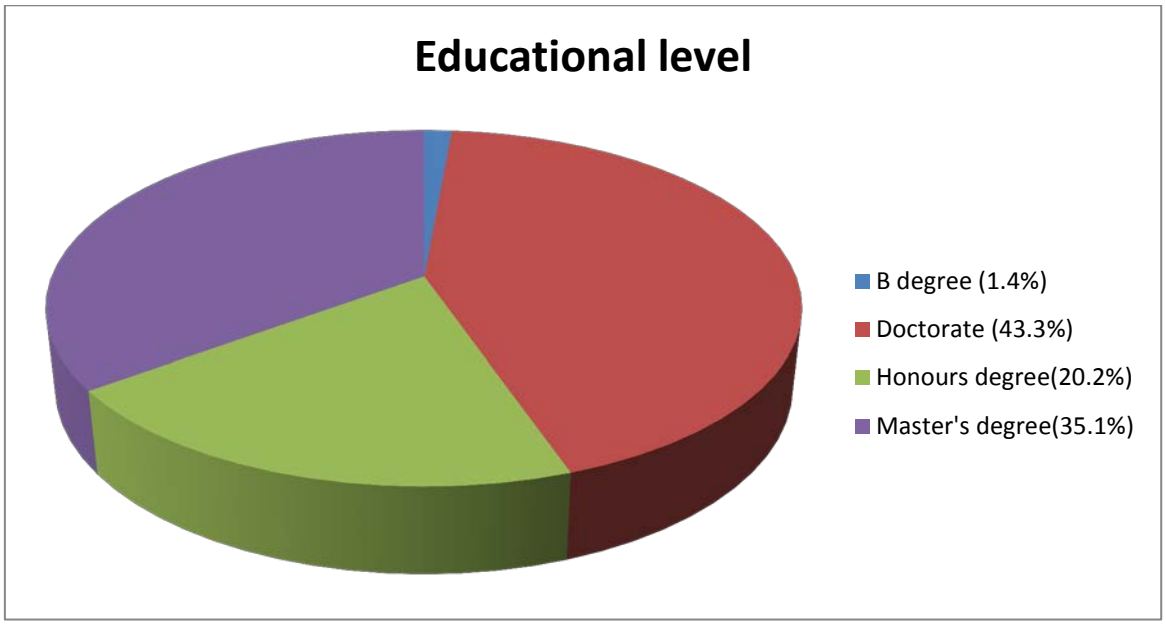

Figure 6.4 Sample distribution of educational level (n = 208)

(e) *Composition of job level of respondents*

Table 6.4 and Figure 6.4 reflect the job level distribution of the sample. The distribution of the sample implied that of the respondents (*n*=208) 5.3% were employed as junior lecturers, 34.6% were employed as lecturers, 32.2% were employed at the senior lecturer level, 10.1% as associate professors and 17.8% as professors. The biggest component of the sample was represented by respondents at the lecturer and senior lecturer level.

Table 6.5

Job level distribution of sample (N = 208)

Job level	*Frequency*	*Percentage*	*Valid percentage*	*Cumulative percentage*
Associate professor	21	10.1	10.1	10.1
Junior lecturer	11	5.3	5.3	15.4
Lecturer	72	34.6	34.6	50.0
Professor	37	17.8	17.8	67.8
Senior lecturer	67	32.2	32.2	100.0
Total	208	100.0	100.0	

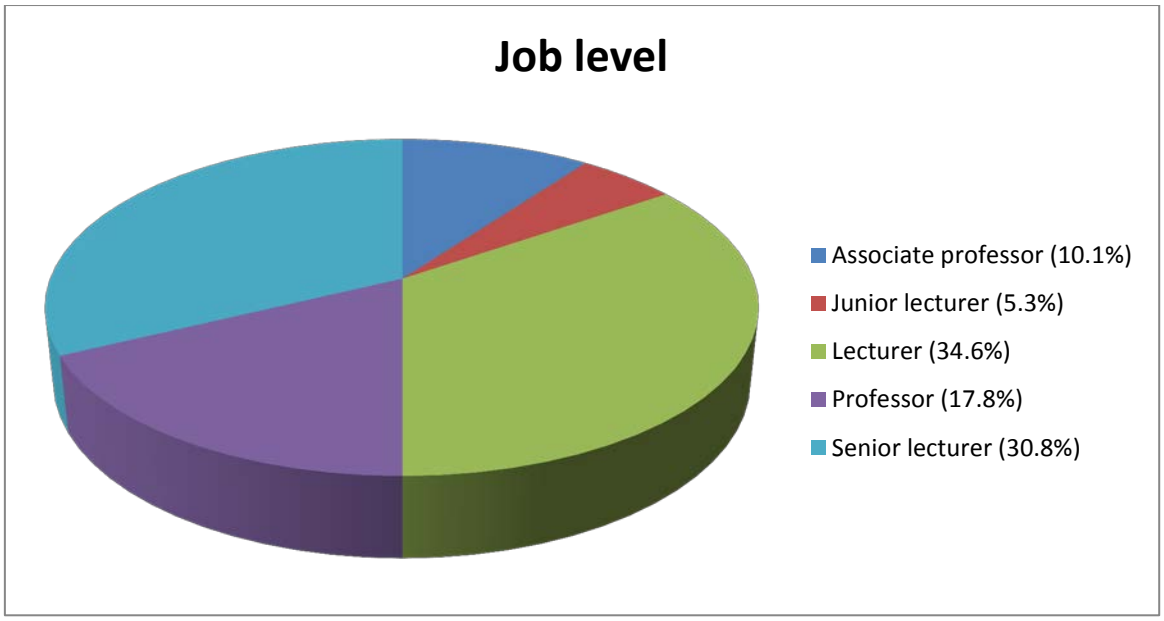

Figure 6.5 Sample distribution of job level (n = 208)

(f) *Composition of years of service of respondents*

Table 6.6 and Figure 6.6 indicate the distribution of the respondents in the sample by years of service. The distribution of the sample (*n*=208) shows that 66.4% of the respondents have 2 -11 years of service, 33.6% of the respondents have more than 11 years of service and 23.6% of the respondents have more than 15 years of service in an HEI.

Table 6.6

Years of service distribution of sample by (N = 208)

Years of service	*Frequency*	*Percentage*	*Valid percentage*	*Cumulative percentage*
0-2 years	49	23.6	23.6	23.6
12-14 years	21	10.1	10.1	33.7
3-5 years	51	24.5	24.5	58.2
6-8 years	28	13.5	13.5	71.6
9-11 years	10	4.8	4.8	76.4
More than 15 years	49	23.6	23.6	100.0
Total	208	100.0	100.0	

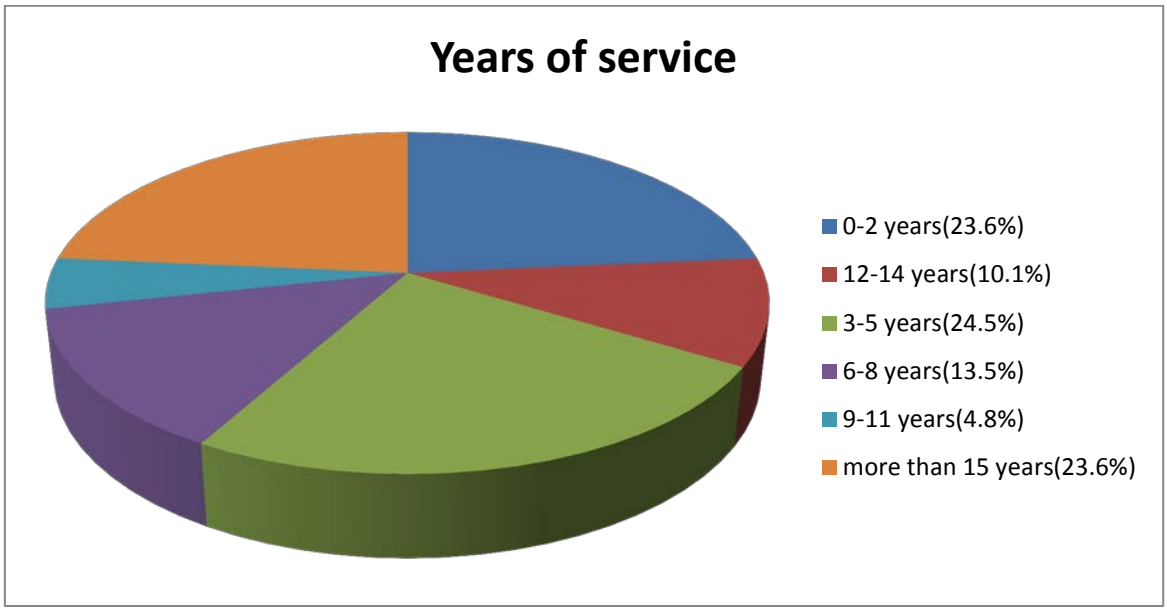

Figure 6.6 Sample distribution of years of service (n = 208)

Interpretation

The sample's biographical profile can be described as follows: the majority of the respondents were female (64%), between the ages of 41 and 55 years (39%), married (65%), at the lecturer (35%) and senior lecturer level (31%) and held a doctorate degree (43%).

Although the academics at the ODL university comprise 57% female and 43% male persons, the majority of respondents in this research were female (63.5%). No specific conclusion can be formulated on respondents with regard to years of

service although it is interesting to note that respondents with fewer years of service seemed more willing to participate in this research and that the majority of respondents were at the maintenance career stage. One possible explanation may be that the workload of academics increases with years of service as their involvement and responsibilities increase.

6.1.2 Item descriptives

This section reports on the item-descriptive statistics on each of the three measuring instruments in terms of their subscales (RTC scale), dimensions (UWES) and subconstructs (PCQ-24).

6.1.2.1 RTC scale items

The descriptive information of the RTC scale items is shown in Table 6.7. The descriptive information consists of means, standard deviations, skewness and kurtosis for each item.

Table 6.7

Item-descriptive statistics: RTC scale items (n = 208)

Item		Mean	SD	Skewness	Kurtosis
1.	I generally consider change to be a negative thing.	2.21	1.090	1.271	1.666
2.	I'll take a routine day over a day full of unexpected events any time.	3.29	1.453	.009	-1.085
3.	I like to do the same old things rather than try new and different ones.	2.45	1.128	.773	.292
4.	Whenever my life forms a stable routine, I look for ways to change it. (RS)	3.54	1.265	.080	-.607
5.	I'd rather be bored than surprised.	2.30	.996	.877	.989
6.	If I were to be informed that there's going to be a significant change regarding the way things are done at work, I would probably feel stressed.	3.17	1.318	.034	-.986
7.	When I am informed of a change of plans, I tense up a bit.	3.31	1.209	-.141	-.970
8.	When things don't go according to plan, it stresses me out.	3.83	1.231	-.293	-.564
9.	If one of my supervisors changed the grading criteria, it would probably make me feel uncomfortable even if I thought I'd do just as well without having to do extra work.	3.35	1.328	.167	-.950
10.	Changing plans seems like a real hassle to me.	3.00	1.099	.132	-.719
11.	Often, I feel a bit uncomfortable even about changes that may potentially improve my life.	2.57	1.029	.516	-.326
12.	When someone pressures me to change something, I tend to resist even if I think the change may ultimately benefit me.	2.54	1.162	.912	.310
13.	I sometimes find myself avoiding changes that I know will be good for me.	2.48	1.049	.938	.950
14.	I often change my mind. (RS)	3.21	1.349	.264	-.822
15.	I don’t change my mind easily.	3.18	1.357	.215	-.926
16.	Once I’ve come to a conclusion, I’m not likely to change my mind.	3.38	1.291	.089	-.813
17.	My views are very consistent over time.	3.93	1.179	-.519	-.017

**RS = Reverse scored*

Item 17 showed the highest mean score, indicating agreement regarding consistent views on change over time. Item 1 and item 5 showed the lowest and second lowest mean scores indicating that the academics disagreed with these statements. This means that they do not always consider change as something negative and that they would rather be surprised than bored. The overall score of RTC does not seem to be very high, indicating that these academics do not completely resist the changes in the work environment.

6.1.2.2 UWES items

The descriptive information of the UWES items is given in Table 6.8. The descriptive information consists of means, standard deviations, skewness and kurtosis for each item.

Table 6.8

Item-descriptive statistics of scale items: UWES (n = 208)

	Item	Mean	Standard deviation	Skewness	Kurtosis
1.	At my work, I feel bursting with energy.	3.15	1.084	-.272	.467
2.	I find the work that I do full of meaning and purpose.	4.01	1.161	-.440	.436
3.	Time flies when I am working.	4.39	1.103	-.285	-.178
4.	At my job, I feel strong and vigorous.	3.74	1.255	-.401	.137
5.	I am enthusiastic about my job.	4.19	1.203	-.686	1.016
6.	When I am working, I forget everything else around me.	3.92	1.305	-.659	.567
7.	My job inspires me.	4.10	1.247	-.591	.704
8.	When I get up in the morning, I feel like going to work.	3.88	1.320	-.505	.445
9.	I feel happy when I am working intensely.	4.51	1.125	-.499	.217
10.	I am proud of the work that I do.	4.82	1.064	-.780	.582
11.	I am immersed in my work.	4.44	1.166	-.652	.644
12.	I can continue working for very long periods at a time.	4.40	1.196	-.549	.130
13.	To me, my job is challenging.	4.17	1.211	-.567	.924
14.	I get carried away when I am working.	4.08	1.273	-.438	-.092
15.	At my job, I am very resilient, mentally.	4.13	1.117	-.500	.518
16.	It is difficult to detach myself from my job.	3.67	1.475	-.270	-.459
17.	At my work, I always persevere, even when things do not go well.	4.52	1.094	-.464	.487

Item 10 showed the highest mean score, indicating agreement regarding academics' pride in the work that they do. Item 1 had the lowest mean score, indicating that the target group of academics disagreed with the statement, meaning that they do not feel bursting with energy. This may be an indication of the changing work environment which is not able to energise the academics. The overall score of WE seems to be fairly high among this group of academics.

6.1.2.3 PCQ-24 scale items

The descriptive information for the PCQ-24 scale items is given in Table 6.9. The descriptive information consists of means, standard deviations, skewness and kurtosis for each item. The items for the PCQ-24 scale are not indicated because of copyright restrictions.

Table 6.9

Item-descriptive statistics for scale items: PCQ-24 scale (n = 208)

Item	Mean	Standard deviation	Skewness	Kurtosis
1.	4.64	.957	.405	-1.245
2.	4.51	1.063	.029	-.752
3.	4.14	1.166	-.212	.057
4. *RS	4.47	1.006	-.085	.202
5.	4.51	1.175	-.345	.034
6.	4.62	1.000	.182	-1.187
7.	4.39	.961	.198	-.191
8.	4.40	1.020	-.142	.117
9.	4.55	1.029	-.044	-.280
10.	4.43	.960	-.083	.147
11.	4.42	.913	.143	-.246
12.	4.23	1.000	-.364	.799
13.	3.19	1.168	.334	.129
14.* RS	4.41	.816	.146	1.703
15.	4.84	1.055	-.389	-.423
16.	4.05	1.089	-.346	.464
17.	4.54	.962	-.052	.182
18.	4.35	1.047	-.380	.898
19.	3.82	1.188	-.241	-.134

Item	Mean	Standard deviation	Skewness	Kurtosis
20.	2.98	1.204	.256	-.129
21.	4.34	1.032	-.197	.332
22.	4.28	1.242	-.431	-.029
23.	3.03	1.215	.237	-.241
24.	4.08	1.096	-.288	.431

** RS= reverse scored*

Item 15 showed the highest mean score, indicating agreement regarding the ability of this target group of academics to work independently. Item 20 had the lowest score, indicating that the academics are optimistic about their work environment despite the rapidly changing ODL HE environment. The overall score of PsyCap seems to be fairly high among this group of academics.

Interpretation

The item data obtained in this research indicate that these academics, despite the changing HE ODL environment, manage to maintain consistent interpretations and understanding of change although they do experience stress when they have to deal with unexpected change. This may explain the higher score on ER or the affective component, indicating the amount of stress as a result of the change. The academics do not, however, regard change as negative and indicated that they see change as a challenge, hence the lower score on ER or the affective component. This indicates the rather positive relationship of these ODL academics with RTC and may correlate positively with the finding in the literature, namely, according to Dent and Goldberg (1999), that academics resist negative consequences rather than the change itself.

The data indicate that this group of academics are proud of the work they do and that they seldom give up despite challenges and change in the work environment. This may explain the higher score on the De dimension of WE, indicating a strong psychological identification with their work. As WE is acknowledged as the business initiative associated with organisational success (Lockwood, 2007), this group of academics appears to have a positive relation with work success. Since

the lower score on Vi and Ab as dimensions of WE indicated that this group of academics do feel that they are bursting with energy and find difficulty in detaching themselves from work, this could be an indication that these academics are positively linked to positive organisational outcomes (Bakker & Bal, 2010; Halbesleben & Wheeler, 2008).

Furthermore, the data indicate that it is clear that the respondents show positive psychological capacities which can be related to performance as they are able to be on their own and work on their own, in addition to indicating confidence in analysing long-term problems or challenges in finding solutions. This suggests high levels of resilience, as a subconstruct of PsyCap, and indicates that these academics can bounce back and even beyond when they experience difficulties and challenges. The respondents also showed personal resources such as optimism despite the rapidly changing ODL HE environment. This correlates positively with the literature, indicating that to encourage WE in organisations today, personal resources such as hope, optimism, resilience and efficacy facilitate WE (Bakker & Demerouti, 2008).

In conclusion, the following positive organisational psychological profile of the sample was compiled from the biographical and item data:

This group of academics, the majority of whom were female lecturers or senior lecturers, holding a doctorate, between the ages of 41 and 55 and married, indicated fairly high levels of positive work and organisational psychological functioning despite experiencing stress and becoming tense when change takes place.

Pavot and Diener (2013) report that subjective well-being increases slightly with age, specifically between the ages of 40 and 65 but tends to decrease towards the end of life (Mroczek & Spiro, 2005). Furthermore, Pavot and Diener (2013) indicate that women experience positive as well as negative emotions with regard to well-being more frequently than men and that married people, in general, experience higher levels of psychological well-being than people who are not

married. Educational level indicates a small positive relationship with psychological well-being (Argyle, 2001). However, spending time on improving your education to secure a satisfying career is important because work has been associated with psychological well-being (Wissing et al., 2014).

On the basis of the positive psychological models of flourishing and Psycap, representing a general conceptualisation of psychological well-being and engagement among the academics, the fairly high levels of ER, De and resilience may explain the positive psychological functioning within the sample of academics. It is, however, also important to note that it is widely recognised that women's career development is significantly affected by family responsibilities, and it follows that women academics, who made up the majority in this research, experience career stages uniquely as a result of work/family conflict (Levinson & Levinson, 1996).

6.2 VALIDITY

The validity of the three measuring instruments, namely the RTC scale, the UWES and the PCQ-24, is reported on. Exploratory and confirmatory factor analysis on the three measuring instruments, are reported on.

6.2.1 Exploratory and confirmatory factor analysis

Exploratory factor analysis was used to determine the underlying factor structure of the data in this study. Confirmatory factor analysis was conducted to test the assumption that a relationship exists between the observed variables and their underlying latent construct(s).

6.2.1.1 RTC scale

The results of the exploratory factor analysis and the confirmatory factor analysis of the RTC scale will follow:

(a) Exploratory factor analysis of the RTC scale

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.861) which was above the recommended threshold of 0.5 and the Bartlett's Test of Sphericity which was significant (p=0.000), both indicate that a factor analysis was appropriate for this research. The analysis identified four factors, based on the Kaiser's eigenvalue criterion of eigenvalues greater than one, which explained 62.1% of the variance. The percentage variation explained was 36.4%, 10.9%, 7.7% and 7.1% for the four factors, respectively.

The results below indicated and confirmed the four-structure solution as proposed in the literature. The factor loadings are shown in Table 6.10.

Table 6.10

Factor loadings for the RTC scale

Item	Factors			
	Emotional reaction(ER)	Cognitive rigidity(CR)	Short-term focus(SF)	Routine seeking(RS)
1. I generally consider change to be a negative thing.				.305
2. I'll take a routine day over a day full of unexpected events any time.				.528
3. I like to do the same old things rather than try new and different ones.				.565
4. Whenever my life forms a stable routine, I look for ways to change it.(RS)				.499
5. I'd rather be bored than surprised.				.565
6. If I were to be informed that there's going to be a significant change regarding the way things are done at work, I would probably feel stressed.	.635			
7. When I am informed of a change of plans, I tense up a bit.	.909			
8. When things don't go according to plan, it stresses me out.	.599			
9. If one of my supervisors changed the grading criteria, it would probably make me feel uncomfortable even if I thought I'd do just as well without having to do extra work.	.396			
10. Changing plans seems like a real hassle to me.			.526	
11. Often, I feel a bit uncomfortable even about changes that may potentially improve my life.			.870	
12. When someone pressures me to change something, I tend to resist even if I think the change may ultimately benefit me.			.700	
13. I sometimes find myself avoiding changes that I know will be good for me.			.569	
14. I often change my mind. (RS)		.404		
15. I don’t change my mind easily.		.719		
16. Once I’ve come to a conclusion, I’m not likely to change my mind.		.679		
17. My views are very consistent over time.		.692		

*RS = reverse score

By graphing the eigenvalues, the relative importance of each of the four factors namely ER, CR SF and RS become apparent (Field, 2005). The cut-off point for selecting factors should be at the point of inflexion of this curve, according to Cattell (1977) and inspecting Cattell's scree test revealed that the graph levelled off (reached the point of inflexion) at the fourth factor in this research as indicated in figure 6.7.

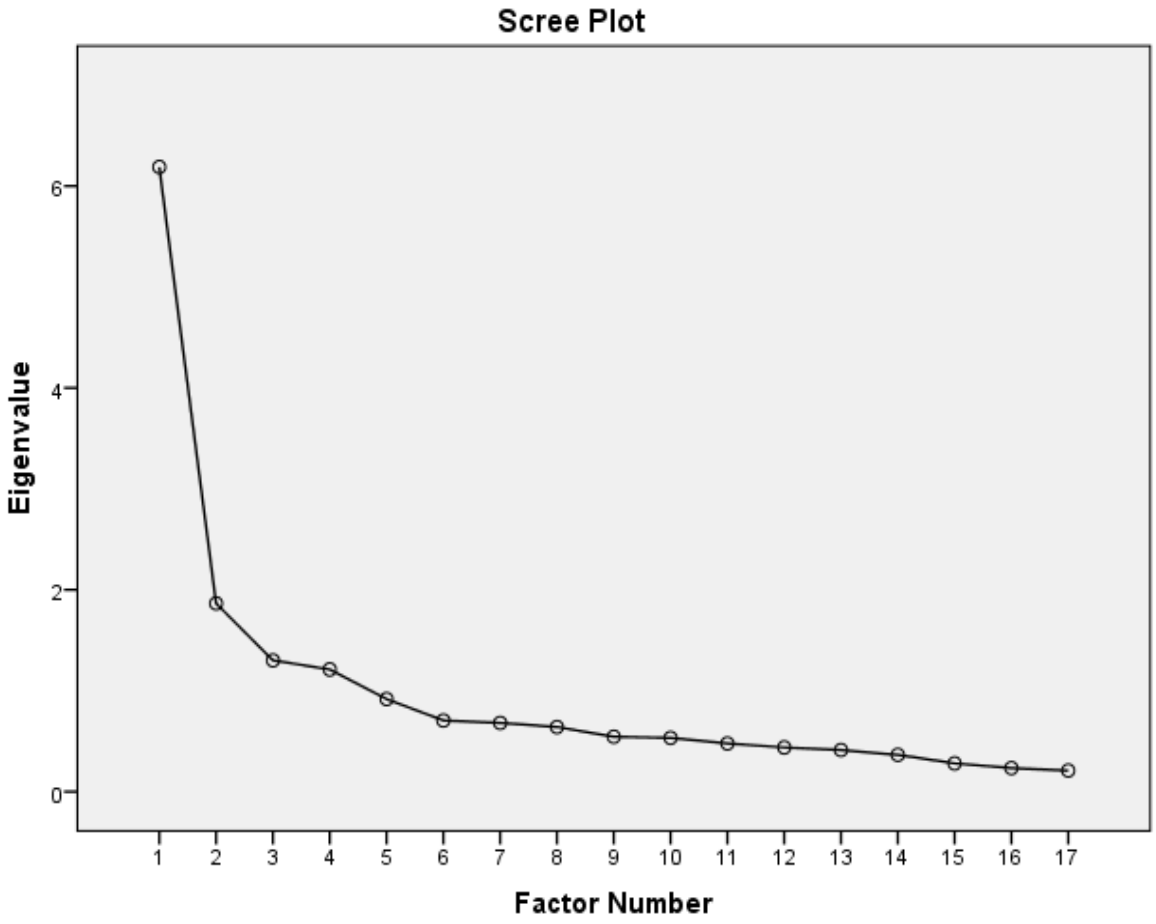

Figure 6.7 Scree plot for the overall RTC scale

The four factors agree with the factor structures found by Oreg (2003) and Stewart, May, McCarthy and Puffer (2009).

(b) Confirmatory factor analysis of the RTC scale

Construct validity was determined by conducting a confirmatory factor analysis on all 17 items and the associated four constructs (ER, CR, SF and RS) by using AMOS v22 software. The results indicated a measurement model with the four correlated factors, as illustrated in Figure 6.8.

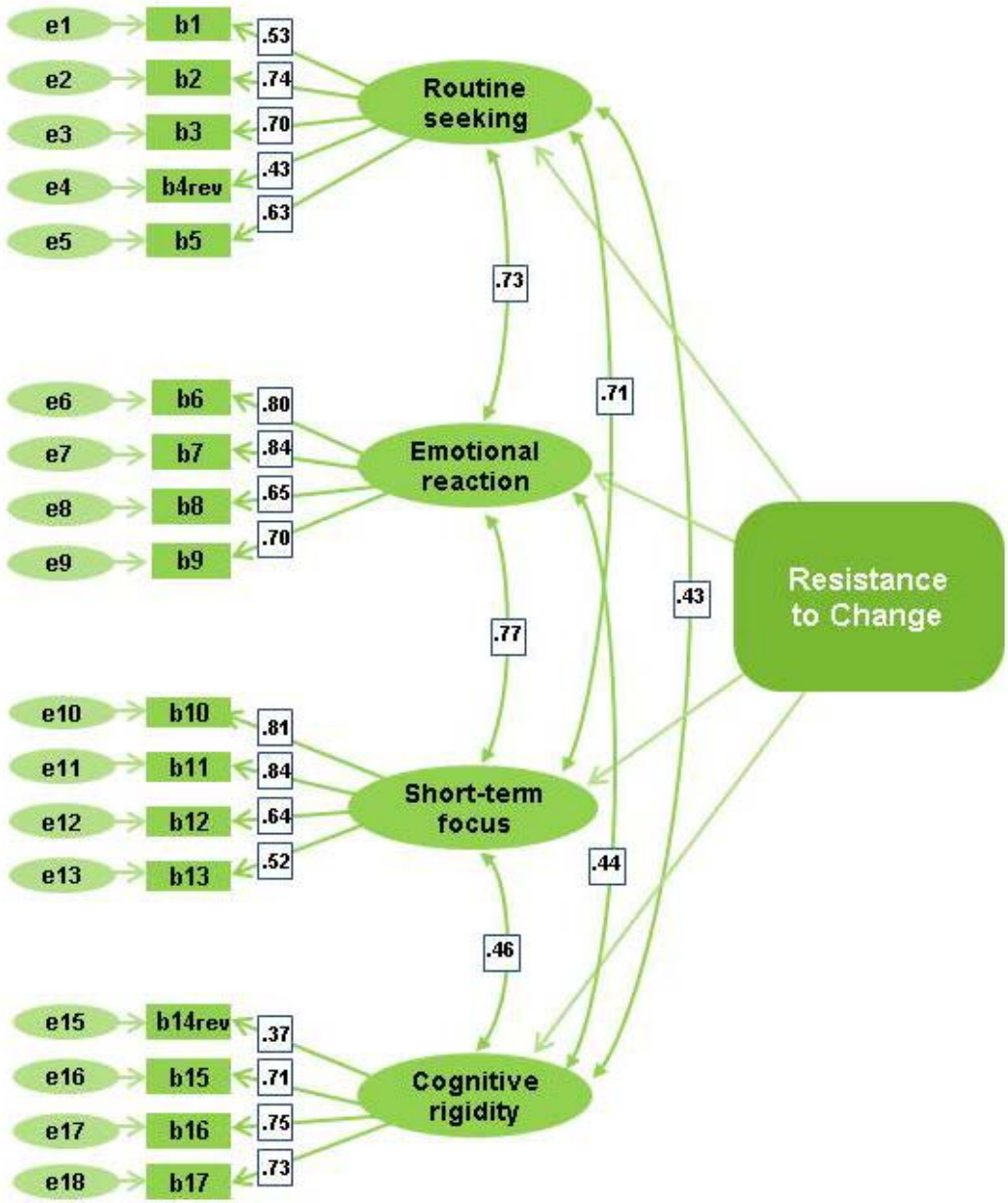

Figure 6.8 Measurement model (RTC)

The standardised regression weights for the CFA model of RTC are reported in Table 6.11.

Table 6.11

Standardised regression weights for CFA model of RTC

Item		Construct	Estimate
b1	<---	Routine seeking(RS)	.526
b2	<---	Routine seeking(RS)	.744
b3	<---	Routine seeking(RS)	.700
b4rev	<---	Routine seeking(RS)	.430
b5	<---	Routine seeking(RS)	.634
b6	<---	Emotional reaction(ER)	.804
b7	<---	Emotional reaction(ER)	.836
b8	<---	Emotional reaction(ER)	.655
b9	<---	Emotional reaction(ER)	.698
b10	<---	Short-term focus(SF)	.811
b11	<---	Short-term focus(SF)	.842
b12	<---	Short-term focus(SF)	.643
b13	<---	Short-term focus(SF)	.522
b14rev	<---	Cognitive rigidity(CR)	.372
b15	<---	Cognitive rigidity(CR)	.707
b16	<---	Cognitive rigidity(CR)	.754
b17	<---	Cognitive rigidity(CR)	.734

Interpretation

The results indicated a reasonably acceptable fit on all 17 items and the associated four subscales, with values of 0.87 and 0.89 for TLI and CFI (marginal and very close to the threshold value of 0.9) and an RMSEA of 0.08. The model chi-square (χ^2: 266,972, df: 133) was significant (p< 0.001), as stated in Bentler and Bonnet (1980) and Hair, Black, Babin, Anderson & Tatham (2006). However, the latter is not a good indication of an acceptable model fit and the conclusion is that this may be due to the sensitivity of a relatively small sample size (Hair et al., 2006).

The evidence as reported supports the decision that the RTC scale is considered a valid measuring instrument and was consequently used to determine levels of RTC of ODL academics at this HEI.

6.2.1.2 UWES

The results of the exploratory factor analysis and the confirmatory factor analysis of the UWES will follow.

(a) Exploratory factor analysis of the UWES

Principal Component analysis with varimax as the rotation method as well as exploratory factor analysis utilising maximum likelihood as the extraction method and direct oblimin as the rotation method have been reported on to explain the underlying factor structure of this instrument.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.933>0.5) and the Bartlett's Test of Sphericity which was significant (p=0.000) both indicate that a factor analysis is appropriate. The analysis identified only two factors, based on the Kaiser eigenvalue criterion of eigenvalues greater than one, which explained 62.3% of the variance. The percentage variation explained was 52.9% and 9.4% for the two factors respectively. The final factor loadings are shown in Table 6.12.

Table 6.12

Factor loadings for the UWES

Item		Factors	
		Vigour/Dedication (Vi/De)	Absorption (Ab)
1.	At my work, I feel bursting with energy.	.774	
2.	I find the work that I do full of meaning and purpose.	.868	
3.	Time flies when I am working.	.453	.365
4.	At my job, I feel strong and vigorous.	.824	
5.	I am enthusiastic about my job.	.868	
6.	When I am working, I forget everything else around me.		.603
7.	My job inspires me.	.860	
8.	When I get up in the morning, I feel like going to work.	.808	
9.	I feel happy when I am working intensely.	.320	.486

Item		Factors	
		Vigour/Dedication (Vi/De)	Absorption (Ab)
10.	I am proud of the work that I do.	.462	
11.	I am immersed in my work.		.784
12.	I can continue working for very long periods at a time.		.705
13.	To me, my job is challenging.	.343	.396
14.	I get carried away when I am working.		.731
15.	At my job, I am very resilient, mentally.		.625
16.	It is difficult to detach myself from my job.		.701
17.	At my work, I always persevere, even when things do not go well.		.429

Three items (items 3, 9 and 13) had double loadings on Vi/De and Ab. After inspecting the closeness of the loadings as well as the fit of the items to the factors, it was decided to delete items 3 and 13 but retain item 9 with the second factor absorption where the item fits and is loaded far more strongly than on factor 1, as indicated in figure 6.9.

An inspection of Cattell's scree test revealed that the graph levelled off (reached the point of inflexion) at the second factor as indicated in Figure 6.9.

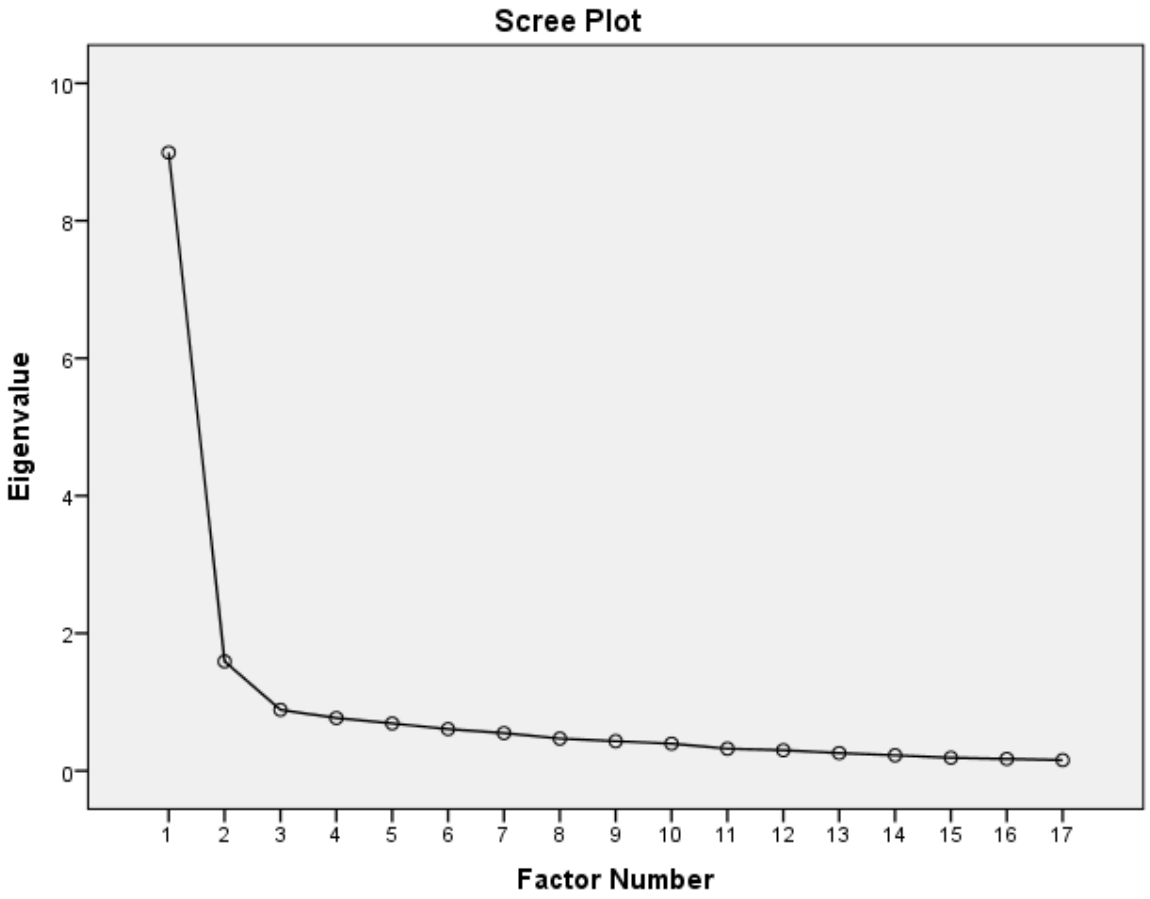

Figure 6.9 Scree plot for the overall UWES

Although Schaufeli, Martinez et al. (2002) confirmed a three-dimensional construct in previous studies, the three-factor structure is not considered self-evident in this sample of academics. Similarly, the two-factor structure in this study, does not support the three-factor structures found by De Bruin, Hill, Henn and Muller (2013) or the three-factor structures found in Spain, among teachers and hotel employees, and in the Netherlands, among professional groups such as physicians (Schaufeli, Martinez et al., 2002). However, Schaufeli, Salanova et al. (2002) note that the three-factor model of the UWES was not a good fit to the data in a study on university students in the Netherlands. After removing three items that showed non-significance or relatively poor factor loadings, the fit of the resulting items improved. Sonnentag (2003) did not find a clear three-factor structure in a study on different public service organisations and decided to use the total score as a measure for WE. Storm and Rothmann (2003) report a one-

factor model with four items deleted (3, 11, 15 and 16) in a study in the South African police service.

Similarly, Naude and Rothmann (2003) confirm a two-factor model of WE in a study on emergency workers in South Africa. Cronbach's alpha coefficients were found to be acceptable for the Vi/De dimension (0.87) but not for Ab (0.61). The results, according to Naude and Rothmann (2003), suggest that the formulation of some of the items of the UWES is less than optimal because of the use of metaphors. Because item 3 makes use of a metaphor this is a good reason to delete it. According to Van de Vijver and Leung (1997), metaphors should be avoided in questionnaires. Schaufeli (2004) is of the opinion that WE is primarily characterised by Vi and De and therefore it is possible that Ab plays a less important role in WE.

(a) Confirmatory factor analysis for the UWES

Construct validity is reported on as determined by conducting a confirmatory factor analysis on all 17 items and the associated three constructs by using AMOS software.

The findings for this study do not indicate a good fit, with values of 0.831 and 0.856 for TLI and CFI and a RMSEA of 0.120, which indicates a value far from the upper threshold value of 0.08. The model chi-square (χ^2: 459,338, df: 116) was significant ($p<0.001$). However, Schaufeli et al. (2002) suggest with regard to confirmatory factor analysis in a study on university students that a three-factor structure of the UWES is superior to the one-factor model.

The indices mentioned in this study do not reflect that the overall measurement model is a good fit, as indicated in Figure 6.10.

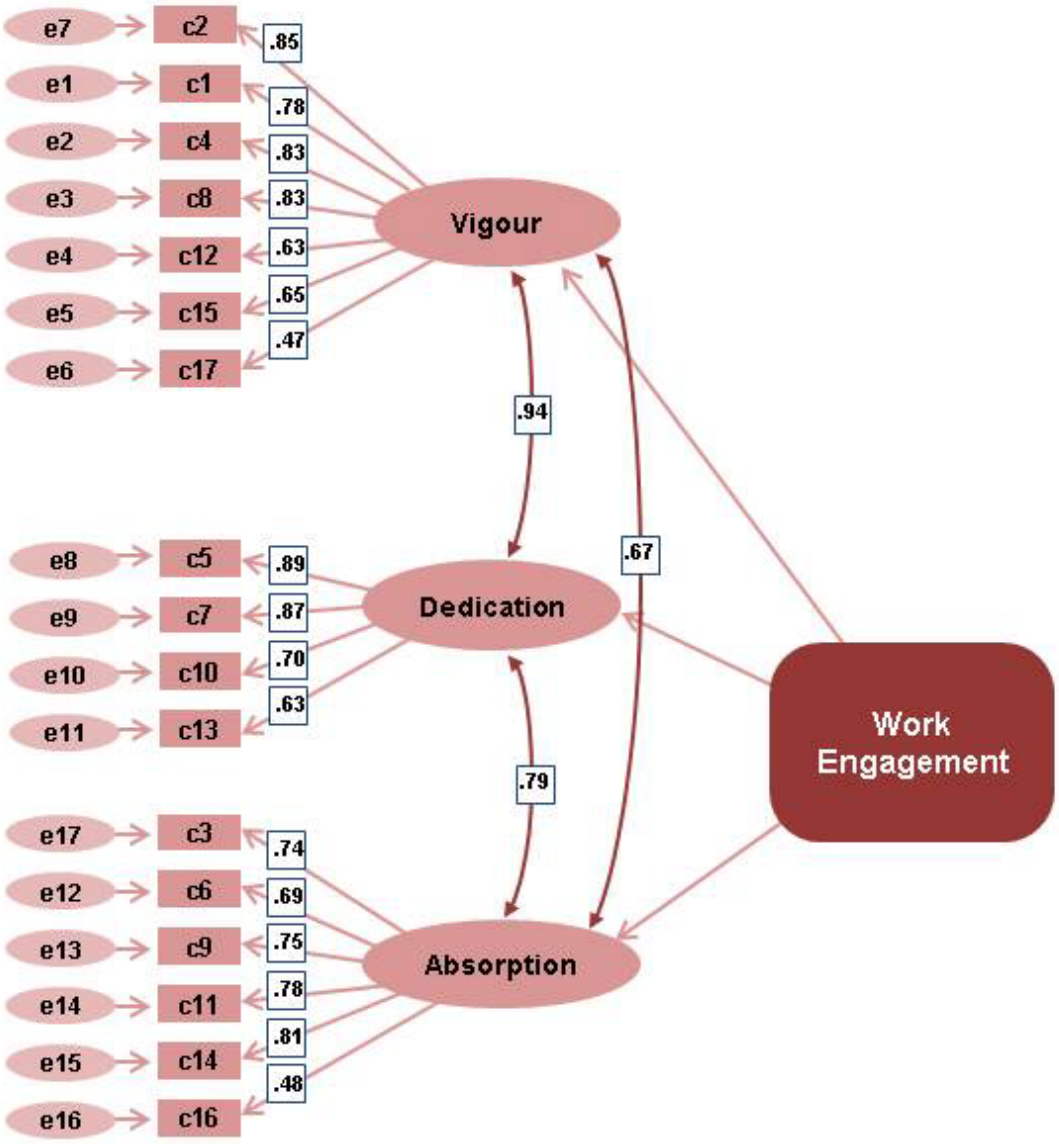

Figure 6.10 Measurement model (UWES)

The standardised regression weights for the CFA model of the UWES are indicated in Table 6.13.

Table 6.13

Standardised regression weights for CFA model of UWES

Item		Construct	Estimate
c1	<---	Vigour(Vi)	.778
c4	<---	Vigour(Vi)	.826
c8	<---	Vigour(Vi)	.825
c2	<---	Dedication(De)	.854
c5	<---	Dedication(De)	.891
c7	<---	Dedication(De)	.869
c10	<---	Dedication(De)	.702
c13	<---	Dedication(De)	.628
c6	<---	Absorption(Ab)	.688
c9	<---	Absorption(Ab)	.746
c11	<---	Absorption(Ab)	.779
c14	<---	Absorption(Ab)	.806
c16	<---	Absorption(Ab)	.481
c12	<---	Vigour(Vi)	.635
c15	<---	Vigour(Vi)	.652
c17	<---	Vigour(Vi)	.473
c3	<---	Absorption(Ab)	.744

Interpretation

The two-factor structure in this research, namely Vi/De and Ab correlates with previous research (Naudé & Rothmann, 2004; Nerstad et al., 2010; Schaufeli et al., 2002; Storm & Rothmann, 2003), indicating that the three-factor model of the UWES was not a good fit to the data. Naudé and Rothmann (2004) also reported a two-factor model in which the two factors that emerged were Vi/De and Ab. The evidence as reported supports the decision that the UWES is considered a valid measuring instrument and was consequently used to determine WE levels of ODL academics at this HEI.

6.2.1.3 PCQ-24

The results of the exploratory factor analysis and the confirmatory factor analysis of the PCQ-24 scale will follow:

(a) Exploratory factor analysis of the PCQ-24

Principal Component analysis with varimax as the rotation method as well as exploratory factor analysis utilising maximum likelihood as the extraction method and direct oblimin as the rotation method are reported to explain the underlying factor structure for this instrument.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.904) and the Bartlett's Test of Sphericity were significant (p=0.000). Both indicate that a factor analysis is appropriate. The exploratory factor analysis identified five factors, based on the Kaiser eigen value criterion of eigen values greater than one, which explained 63.4% of the variance. This is in contrast to the four-factor structures in previous findings (Avey et al., 2006; Luthans, Avolio et al., 2007, Pillay, Buitendach & Kanengoni, 2014). Utilising principal component analysis, the resulting component structure revealed five components (factors) with the three reversed items loading, once again, on one factor. The results, in both analyses, indicated a five-factor solution, with the three reverse-scored items forming a construct on their own. Although the remaining items load, in general, on the constructs as identified in the Luthans, Avolio et al. (2007) study, the hope-adapted construct did not emerge clearly.

It was decided in this study to exclude the three reverse scored items from further analysis. An exploratory factor analysis was conducted on the remaining 21 items, using maximum likelihood as the extraction method and direct oblimin as the rotation method. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.920) and the Bartlett’s Test of Sphericity, which were significant (p=0.000), both indicated that a factor analysis was appropriate.

The overall percentage variation explained was 63%, with 41.9%, 9%, 6.9% and 5.2% for the four factors respectively. The final factor loadings are shown in Table 6.14.

Table 6.14

Factor loadings for the PCQ-24

		Factors			
Item		**Efficacy**	**Hope**	**Resilience**	**Optimism**
1.		.490			
2.		.846			
3.		.768			
4.	*Reverse scored	.862			
5.		.594			
6.		.737			
7.		.375		.375	
8.			-.363		
9.		.351		.331	
10.			-.765		
11.			-.657		
12.			-.796		
13.				.402	
14.	*Reverse scored			.539	
15.				.594	
16.				.571	
17.				.373	
18.					.602
19.					.712
20.					.605
21.					.499

* *RS=reverse scored*

An inspection of Cattell's scree test revealed that the graph levelled off (reached the point of inflexion) at the fourth factor as indicated in Figure 6.11.

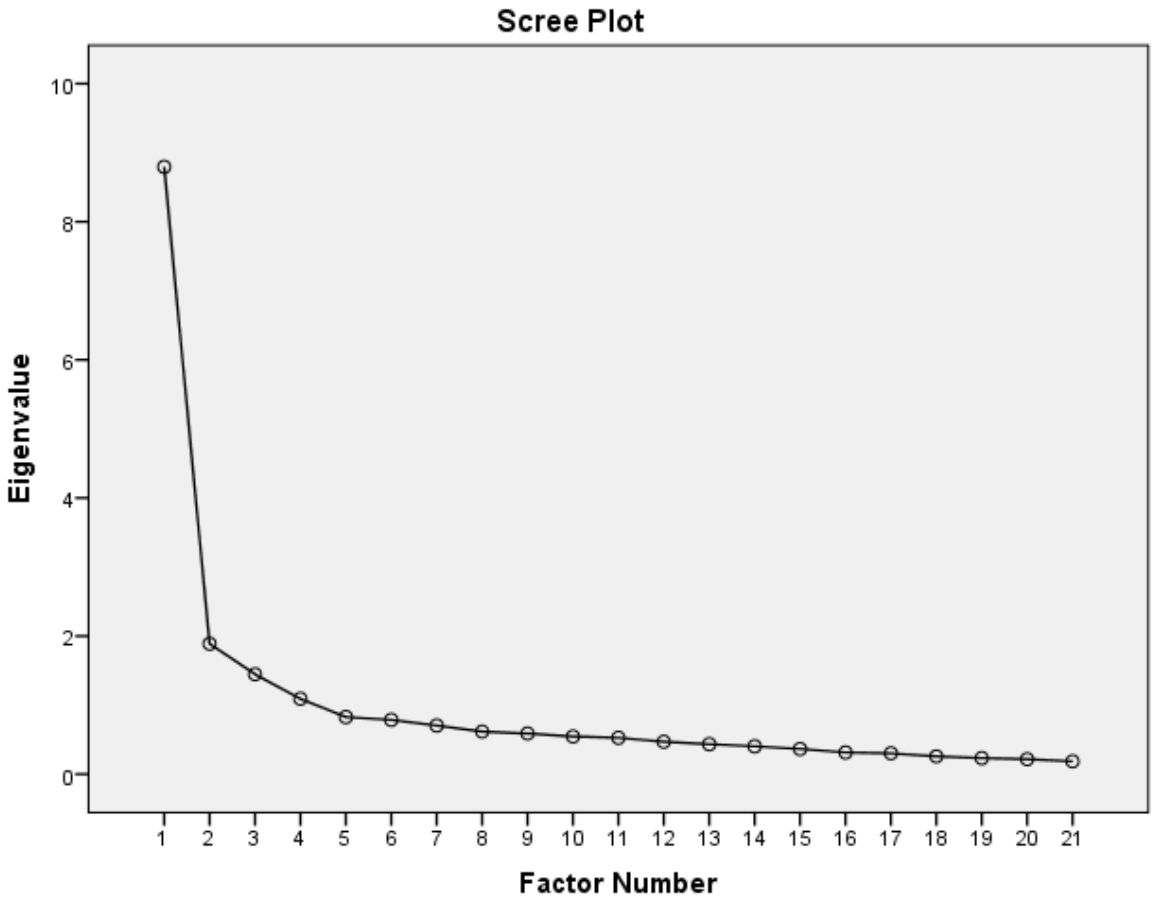

Figure 6.11 Scree plot for the overall PCQ

Three of the four factors agree with the factor structures found by Du Plessis and Barkhuizen (2012) in a study on human resource practitioners in South Africa. With regard to the hope scale, items 7 and 9 did not load on this construct, but double- loaded very closely on efficacy and optimism. It was therefore decided to delete these two items from further analysis. Although some of the questionnaire items continued to show multiple loadings on factors, this result should be considered a synergetic effect of the constructs, where all have a reciprocal effect on one another. Luthans, Youssef et al. (2007) refer to the synergetic effect and propose that the whole (PsyCap) is greater than the sum of its descriptive parts. In this study, the synergetic effect may have been more prominent because of the sample size.

According to Lemke and Wiersma (1976), construct validity is confirmed when the factors obtained have a useful meaning. For the purposes of this study, it can now

be confirmed that the PsyCap factors have a useful meaning and are usable for further investigation.

(b) Confirmatory factor analysis of the PCQ-24

Construct validity was determined firstly by conducting a confirmatory factor analysis on all 24 items and the associated four constructs. The results indicated a fit that was close to acceptable with values of 0.819 and 0.839 for TLI and CFI (close to the threshold VALUE OF 0.9) and a RMSEA of 0.087 (fairly close to the upper threshold of 0.08).

From the descriptive information and the initial exploratory factor analysis, it was clear that the three reverse items do not load on the constructs (loadings less than 0.3). The three items were deleted and a CFA was conducted again. To summarise, the indices mentioned reflect the overall measurement model as an almost good fit, as indicated in Figure 6.12.

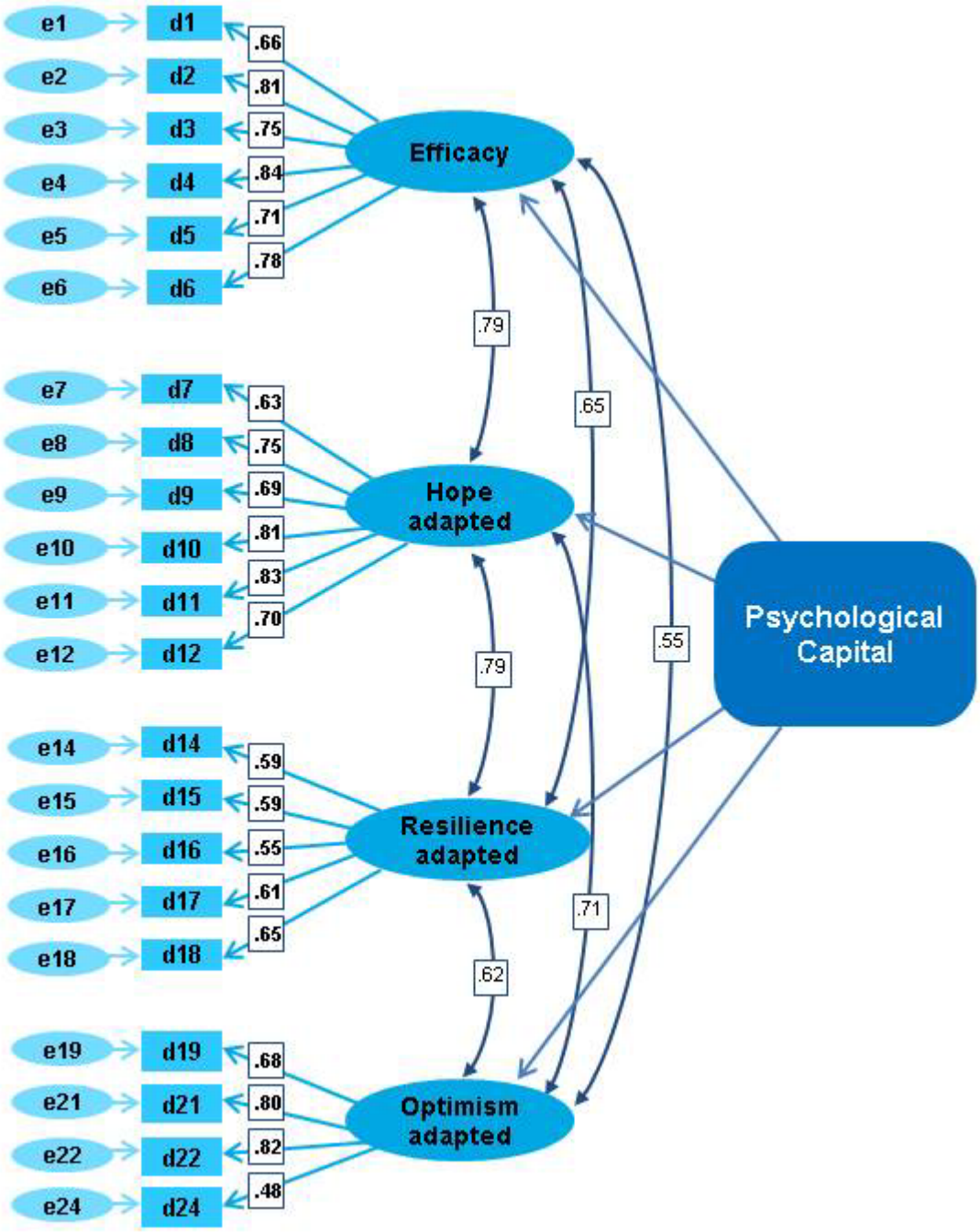

Figure 6.12 Measurement model (PCQ)

The standardised regression weights for the CFA model of the PCQ are indicated in Table 6.15.

Table 6.15

Standardised regression weights for CFA model of PCQ-24

Item		Construct	Estimate
d1	<---	Efficacy	.660
d2	<---	Efficacy	.814
d3	<---	Efficacy	.752
d4	<---	Efficacy	.843
d5	<---	Efficacy	.710
d6	<---	Efficacy	.779
d7	<---	Hope adapted	.630
d8	<---	Hope adapted	.754
d9	<---	Hope adapted	.692
d10	<---	Hope adapted	.811
d11	<---	Hope adapted	.832
d12	<---	Hope adapted	.699
d14	<---	Resilience adapted	.585
d15	<---	Resilience adapted	.589
d16	<---	Resilience adapted	.552
d17	<---	Resilience adapted	.613
d18	<---	Resilience adapted	.651
d19	<---	Optimism adapted	.680
d21	<---	Optimism adapted	.795
d22	<---	Optimism adapted	.815
d24	<---	Optimism adapted	.482

Interpretation

The results indicated a reasonably acceptable fit, with values of 0.872 and 0.889 for TLI and CFI (approximately equal to the threshold VALUE OF 0.09 and an RMSEA of 0.080 (equal to the upper threshold of 0.08). The model chi-square (χ^2: 428,417, df: 183) was significant (p< 0.001).

The evidence as reported supports the decision that the PCQ-24 is considered a valid measuring instrument and was consequently used to determine PsyCap levels of ODL academics at this HEI.

6.3 Reliability: Cronbach's Alpha coefficient

Estimates of the internal consistency for the subscales of the three measurement instruments, namely the RTC scale, the UWES and the PCQ-24, were obtained using the Cronbach's Alpha coefficient and are reported.

6.3.1 Reliability analysis: RTC scale

Table 6.16 indicates the Cronbach's Alpha coefficient values for each of the four subscales of the RTC. A Cronbach's Alpha coefficient of .7 or more is considered to indicate a reliable scale (Nunnally & Bernstein, 1994; Pallant, 2010).

Table 6.16

Cronbach's Alpha coefficient subscales RTC (n=208)

Subscale	Cronbach's Alpha coefficient
Routine seeking(RS)	.72
Emotional reaction(ER)	.83
Short term focus(SF)	.80
Cognitive rigidity(CR)	.73

As indicated, the subscales showed sufficiently high reliabilities. The ER subscale scored an alpha coefficient of .83 and the RS subscale an alpha coefficient of .72. Overall, for the purposes of this research, the psychometric properties of the RTC scale were regarded as acceptable.

Because the alpha coefficients for the overall and four subscales were deemed to be adequate in this study, no item-reliability analyses were conducted (Terre Blanche & Durrheim, 2002).

6.3.2 Reliability analysis: UWES

Table 6.17 indicates the Cronbach's Alpha coefficient values for each of the two dimensions obtained in this study for the UWES.

Table 6.17

Cronbach's Alpha coefficient dimensions UWES (n=208)

Dimension	Cronbach's Alpha coefficient
Vigour/Dedication(Vi/De)	.93
Absorption(Ab)	.87

The internal consistency coefficients for the two factors are .93 (Vi/De) and .87 (Ab) for the total sample (n = 208) which can be considered adequate for the purposes of this study on ODL academics.

6.3.3 Reliability analysis: PCQ-24

Table 6.18 indicates the Cronbach's Alpha coefficient values for each of the four sub-constructs of the PCQ-24.

Table 6.18

Cronbach's Alpha coefficient subconstructs PCQ-24 (n=208)

Subconstruct	Cronbach's Alpha coefficient
Hope	.87
Efficacy	.89
Resilience	.74
Optimism	.78

The internal consistency coefficients for the four subconstructs ranged from .87 (hope), .89 (efficacy), .74 (resiliency without item 13) and .78 (optimism without items 20 and 23) for the total sample (n = 208) which can be considered adequate for the purposes of the current study.

Interpretation

In this research, the Cronbach's Alpha coefficient of .70 (Tredoux & Durrheim, 2002) is regarded as adequate for research instruments and, given the reported results, was used in the data analysis to determine the acceptable reliability coefficient of the RTC scale, the UWES and the PCQ as measuring instruments.

In terms of the manifestation of RTC in the sample group of academics, the values for the subscales were .72 (RS), .83 (ER), .80 (SF) and .73 (CR). These scores imply a fairly high score on the total RTC as well as on the subscales. This group of academics indicated a high score on the affective component of RTC and stated that they experience a certain amount of stress and uneasiness when confronted with change in the work environment and that they are sometimes distracted by the inconveniences associated with change. In comparison with the scores of a sample of employees of a government organisation in the USA (Beal III et al., 2013) for RS, .78; ER, .94; SF, .93; and CR, .65, were relatively lower with the exception of CR, which was relatively higher. Oreg (2003) reports results in this regard in the defence industry with values for RS of .89, for ER of .86, SF of .71 and for CR of .68 respectively, which indicates a far lower score on SF.

Considering the reliability of the RTC scale, sufficient evidence was found to consider it a reliable measuring instrument and consequently it was used to determine RTC levels of ODL academics at this HEI.

In terms of the manifestation of WE in the sample group of academics, the values for the two dimensions were .93 (Vi/De) and .87 (Ab). These scores imply a fairly high score on the total UWES as well as on the two dimensions. This group of academics indicated a high score on the Vi/De dimension and a fairly high score on the Ab dimension which implies that in general this group of academics are very energetic, mentally resilient, determined despite challenges, enthusiastic, engrossed in their work and show a strong psychological identification with work. However, the fact that the academics are engaged in their work does not mean that they do not feel stressed when faced with change and challenges in the ODL work environment.

When compared to the scores for a sample of emergency medical technicians in South Africa (Naudé & Rothmann, 2004), for Vi/De, namely .97 and Ab, namely .92, the scores indicated in this research were fairly similar.

Regarding the reliability of the UWES, sufficient evidence was found to regard it as a reliable measuring instrument and consequently it was used to determine WE levels of ODL academics at this HEI.

In terms of the manifestation of PsyCap in the sample group of academics, the value for the subconstructs were .87 (hope), .89 (efficacy), .74 (resilience) and .78 (optimism). These scores imply a fairly high score on total PsyCap as well as on the subconstructs of hope and efficacy. This group of academics is generally inclined to persevere towards goals; they are able to reconsider and redirect goals when faced with challenges and they show confidence when extra effort is necessary to succeed in the changing work environment.

Luthans, Avolio et al. (2007) reported scores ranging from .72 to .80 for hope, .75 to .85 for efficacy, .66 to .72 for resilience and .69 to .79 for optimism as manifested in samples of management students, insurance service employees and manufacturing engineers. Similarly, Beal III et al. (2013) reported scores of a sample of employees at a government organisation in the USA of .86 (hope); .88 (efficacy); .80 (resilience) and .72 (optimism). The scores in this research compared fairly well with those obtained in previous research.

Considering the reliability of the PCQ-24, sufficient evidence was found to consider it a reliable measuring instrument and it was consequently used to determine PsyCap levels of ODL academics at this HEI.

6.4 Construct descriptives

This section reports on the construct-descriptive information on each of the three measuring instruments in terms of their subscales (RTC scale), dimensions (UWES) and subconstructs (PCQ-24).

6.4.1 Descriptive statistics: RTC scale

Table 6.19 provides the descriptive information for the four RTC subscales. The descriptive information consists of the mean, the standard deviation, skewness and kurtosis of each subscale.

Table 6.19

Descriptive statistics of subscale scores: RTC scale (n = 208)

	Mean	SD	Skewness	Kurtosis
Emotional reaction(ER)	3.41	1.04	-.09	-.46
Short-term focus(SF)	2.65	.86	.35	.02
Routine seeking(RS)	2.74	.84	.23	-.40
Cognitive rigidity(CR)	3.57	.97	.00	.03

The mean scores ranged from 2.65 to 3.57. The group of academics obtained the highest scores on the CR subscale (*M* = 3.57; *SD* = .97), and the lowest scores on the SF subscale (*M* = 2.65; *SD* = .85). The standard deviations of the subscales ranged from -.84 to 1.04.

The skewness values for the RTC scale ranged from -0.09 to .35, thereby falling within the -1 and +1 normality range recommended for these coefficients (Cohen et al., 2011). The kurtosis values ranged from -.46 to .03, indicating that the distribution of the subscales can be considered normal for values between -1 and +1 as recommended for these coefficients (Tredoux & Durrheim 2013).

The mean scores on RTC in this research correlate with the findings of researchers (Bagozzi, 1978; Breckler, 1984; Piderit, 2000) that a response to a change in the academics' work environment reflects the behavioural, affective and cognitive dimensions of RTC although individuals experience change in different ways. This correlation implies that the fairly high score on the CR subscale, representing the cognitive component, indicates the ease with which academics are able to adjust to changing circumstances such as increased internationalisation of the HE sector, extensive workloads, increased use of information and communication technology and the teaching quality demands from

underprepared students. In this research RTC among this group of academics could reflect as a form of stubbornness and an unwillingness to consider alternative ideas and perspectives in the changing environment. The typical academic in this research may use psychological defences against change and it is clear, as reported, that this group of academics view RTC from a cognitive perspective.

The fairly high ER score in this research may reflect the level of stress and uneasiness that this group of academics experience as they are confronted with constant changes and demands in their work environment. They may even experience change as complex. The extent to which the academics involved in change at the HEI are distracted by the SF inconveniences, could result in their refraining from making rational long-term decisions regarding change and challenges. However, academics with a positive attitude towards change will support its implementation.

The lower RS and SF scores therefore imply that the emotions expressed by the academics as indicators of RTC depend on the characteristics of the changes as proposed by the HEI, but also the context-specific rules of emotional regulation within the HEI. The lower scores may therefore predict the academics' reactions to change in a variety of contexts in this changing ODL environment. In the literature study, it was established that individual factors such as a high need for control, economic loss such as loss of a job, or inconvenience such as more work for the same remuneration and threats such as increased insecurity, also contribute to RTC. It is also important to note that academics may find the loss of control in the dynamic changing global work environment to be the primary cause of RTC.

Since RTC reduces optimism and hope, as a primary reason for lack of change, it is noteworthy that by enhancing the PsyCap of the academic, the academics with high levels of PsyCap are able to present more favourable behaviours towards change. According to Schaufeli, Bakker and Salanova (2006), engaged academics may view themselves as capable of handling job demands such as changes and challenges successfully.

6.4.2 Descriptive statistics: UWES

Table 6.20 provides descriptive information on the UWES dimensions. The descriptive information consists of the mean, the standard deviation, skewness and kurtosis of each dimension.

Table 6.20

Descriptive statistics of dimension scores: UWES (n=208)

	Mean	SD	Skewness	Kurtosis
Vigour/Dedication(Vi/De)	4.03	1.01	-.52	.50
Absorption(Ab)	4.25	.96	-.51	.97

The mean scores were fairly high and varied from 4.03 to 4.25. The group of academics obtained the highest score on the Ab dimension (*M* = 4.25; *SD* = .96), and the lowest score on the Vi/De dimension (*M* = 4.03; *SD* = 1.01). The standard deviations of the dimensions ranged from .96 to 1.0.

The skewness values ranged from -.51 to -.52, thereby falling within the -1 and +1 normality range recommended for these coefficients (Cohen et al., 2011). The kurtosis values ranged from .50 to .97, indicating that the distribution of the subscales can be considered normal for values between -1 and +1 as recommended for these coefficients (Tredoux & Durrheim, 2013).

As reported in this study, the relatively high score obtained for the cognitive dimension of WE, namely Ab, suggests that academics at this ODL HEI are completely immersed in their work so that time appears to pass so rapidly that they forget everything else around them and they often find it difficult to disengage or detach themselves from their work. This fairly high score on the cognitive dimension of WE also correlates with the fairly high score on the cognitive component of RTC. An explanation for this phenomenon may be that the target population in this research are all academics and are expected to function normally on a cognitive level.

However, it is interesting to note that previous research suggests that Ab should be considered a consequence of WE rather than one of its dimensions (Csikszentmihalyi, 1990; Salanova, Llorens, Cifre, Martinez, & Schaufeli, 2003) and that Vi and De are considered the core dimensions of WE. Therefore, the manifestation of the Vi/De dimension and the fairly high score obtained is noteworthy. In this research, the physical dimension of WE, namely Vi, may indicate the academics' increased readiness to exert effort at work in the face of difficulty, change and challenges. De, or the emotional dimension of WE, is often typical of the academic's mental resilience and of the fact that they are strongly involved in their everyday work. De also indicates a psychological involvement in their work.

For the purposes of this research WE is characterised by Vi, De as well as Ab (Naudé & Rothmann, 2004; Schaufeli, Salanova, González- Romá & Bakker, 2002; Salanova & Schaufeli, 2008; Storm & Rothmann, 2003). This correlates with previous relevant research which indicated that WE helps individuals derive benefits from stressful work like a changing environment (Britt, Adler & Bartone, 2001). The high levels of the De dimension in this research could also mean that academics may respond with increased eagerness to work demands. This is supported by the findings of Stander and Rothmann (2010) which confirm that the experience of meaningful work contributes to the WE of individuals. This allows academics to adapt to changes and challenges in the work environment. WE stresses the notion of positive attachment and optimal performance in terms of well-being and is therefore a positive, work-related state of well-being for ODL academics (Hallberg & Schaufeli, 2006).

6.4.3 Descriptive statistics: PCQ-24

Table 6.21 provides the descriptive information on the PCQ-24 subconstructs. The descriptive information consists of the mean, the standard deviation, skewness and kurtosis of each subconstruct.

Table 6.21

Descriptive statistics of subconstruct scores: PCQ-24 (n=208)

	Mean	SD	Skewness	Kurtosis
Hope	4.40	.77	.27	-.42
Efficacy	4.48	.85	.34	-.64
Resilience	4.44	.70	.24	-.02
Optimism	4.13	.89	-.24	.90

The mean scores were all high and ranged from 4.13 to 4.48. The sample of participants obtained the highest scores on the efficacy subconstruct (*M* = 4.48; *SD* = .85), and the lowest scores on the optimism subconstruct (*M* = 4.13; *SD* = .89). The standard deviations of the sub-scales ranged from .70 to .89.

The skewness values ranged from -.24 to .34, thereby falling within the -1 and +1 normality range recommended for these coefficients (Cohen et al., 2011). The kurtosis values ranged from -.64 to .90, indicating that the distribution of the subscales can be considered normal for values between -1 and +1 as recommended for these coefficients (Tredoux & Durrheim, 2013).

The fairly high mean scores for the subconstructs of PsyCap reported in this research, imply that the group of academics can function efficiently and productively and that thay are able to implement organisational change successfully. Relevant previous research on each of the individual components of PsyCap, indicated its importance and popularity (Lopez & Snyder, 2003; Stajkovic & Luthans, 1998a).

Since PsyCap is a state-like, rather than a trait-like order or construct, this means that it was indeed measurable in the academics at different levels and that it has the potential to be developed even further in this ODL HEI (Luthans et al., 2010). This is of importance in the changing work environment as having efficacy implies that these academics thrive on challenges and persevere when faced with obstacles. Since this research was conducted from the paradigm of positive work and organisational psychology, having resiliency can drive ODL academics to reach their capacity, demonstrate a positive psychological view towards the

changing workplace and pay attention to personal psychological well-being. The high levels of hope imply a cognitive state, correlating with RTC as well as WE, in which the academics can set realistic but challenging goals and expectations and reach out to achieve those goals through self-directed determination and energy (Snyder et al., 1991). The academics' high levels of optimism may imply that this group takes credit for the positive happenstances in the work environment although they may also blame themselves for the negative aspects.

For this group of academics, PsyCap can be viewed as an important personal resource. Personal resources help to attain goals, and as Sweetman and Luthans (2010) argue, PsyCap represents the positive agentic resources academics possess, which enable them to move towards success. Furthermore, positive psychological resources, such as efficacy and optimism, counteract the distress caused by the demands in the changing, dynamic work environment of the ODL academic and as Avey, Luthans, Smith and Palmer (2010) note, the components of PsyCap enhance a positive relationship with psychological well-being.

In conclusion, it is reported that these academics are challenged by a changing work environment and they reflect a form of inflexibility and some unwillingness to consider alternative perspectives in the changing environment. This results in stress and uneasiness, which may lead to RTC. From the literature, it is evident that a proactive positive work and organisational psychological approach is necessary for this ODL HEI to survive. Given the phenomenon that ODL academics do resist change, and that flourishing ODL academics are a crucial component of a positive HEI, the fairly high levels of Vi/De, Ab, hope, efficacy, resilience and optimism reported here are all indications of fairly high levels of emotional well-being.

It is noteworthy that although PsyCap is often associated with personal resources and WE with work-related phenomena, for this research on ODL academics, Vi/De and Ab predict PsyCap.

6.5 INFERENTIAL STATISTICAL ANALYSIS

In this section, inferential statistics are reported on. This section consists of three phases, namely reporting firstly on correlational analysis, secondly on SEM and thirdly on tests for significant mean differences. This section refers to phase 3 in Figure 5.1.

6.5.1 Correlational analysis

This section reports on the correlational analysis and specifically the Pearson product moment correlation coefficients. Since the data were non-parametric in this research, the inter-relationships between the variables were computed using Pearson product moment correlations.

a) Pearson product moment correlation coefficients on the constructs of (RTC, WE (Vi/De, Ab) and PsyCap)

The Pearson product moment correlation coefficients on the total constructs of RTC, WE (Vi/De, Ab) and PsyCap are reported in Table 6.22.

Table 6.22

Pearson product moment correlation coefficients on the total constructs of RTC, WE (Vi/De, Ab) and PsyCap (n=208)

Correlations					
		PsyCap	RTC	Vigour/Ded(Vi/De)	Absorption(Ab)
PsyCap	Pearson Correlation	1	-.339**	.564**	.532**
	Sig. (2-tailed)		.000	.000	.000
	N	208	208	208	208
RTC	Pearson Correlation		1	-.283**	-.190**
	Sig. (2-tailed)			.000	.006
	N		208	208	208
Vigour/Ded (Vi/De)	Pearson Correlation			1	.704**

Correlations					
		PsyCap	RTC	Vigour/Ded(Vi/De)	Absorption(Ab)
Absorption (Ab)	Sig. (2-tailed)				.000
	N			208	208
	Pearson Correlation				1
	Sig. (2-tailed)				
	N				208

** Correlation is significant at the 0.01 level (2-tailed)

A significant positive relationship exist between:

- PsyCap (r=.564; medium effect; $p \leq .05$) and the dimension Vi/De.
- PsyCap (r=.532; medium effect; $p \leq .05$) and the dimension Ab.
- the dimension Vi/De (r=.704; large effect; $p \leq .05$) and the dimension Ab.

A significant negative relationship exist between:

- PsyCap (r=-.339; small effect; $p \leq .05$) and RTC.
- RTC (r=-.283; small effect; $p \leq .05$) and the dimension Vi/De.
- RTC (r=-.190; small effect; $p \leq .05$) and the dimension Ab.

Interpretation

Based on the evidence in Table 6.22, the following interpretation is presented:

A *positive significant relationship* has been reported between PsyCap and Vi/De as well as PsyCap and Ab among ODL academics. This was confirmed in previous studies (Avey et al., 2008; Hobfoll, 2002; Luthans et al., 2005). This suggests that PsyCap, as a second-order core factor comprising hope, optimism, efficacy and resilience, is significantly and strongly related to positive attitudes and psychological well-being of academics at work (Larson & Luthans, 2006). It is evident from the literature that high scores on Vi and De are indicative of WE. This implies that WE can facilitate the mobilisation of job and personal resources of academics and WE is a strong predictor of hope, optimism and self-efficacy

(Bakker & Demerouti, 2007). Although PsyCap is associated with personal resources, and WE with work-related phenomena, WE predicts PsyCap and facilitates the building of PsyCap. Therefore PsyCap as a personal resource in academics could be implemented to enhance attitudinal outcomes such as WE. The result is that WE could have a positive relationship with academics' attitudes and behaviour in the ODL work environment.

The *positive significant relationships* between Vi/De and Ab suggest that academics, despite the changing work environment and increasing job demands which create concerns for HE and often have a devastating impact on the health and wellbeing of academics, are still able to experience high levels of WE. These academics are willing to invest high levels of energy into work, show enthusiasm and mental resilience, display a strong psychological identification with work but experience difficulty with detaching themselves from work, which often impacts negatively on psychological well-being (Schaufeli et al., 2002). However, positive work and organisational psychology emphasises that academics with high levels of WE have strengths and potential that could contribute to individual and social well-being (Wissing et al., 2014).

The *negative relationship* found between PsyCap and RTC suggests that academics with high RTC tend to be more negative towards organisational change. This is consistent with the work of Beal lll et al. (2013), who found that employees who reported high RTC, reported low levels of PsyCap. The reliability for the subscales was deemed to be adequate in this study and affective, intentional as well as cognitive forms of resistance were found among academics. Avey et al. (2008) were convinced that positive PsyCap can combat negative attitudes, negatively associated with organisational change and affect the adaptation to new working conditions. Therefore, the high levels of PsyCap may contribute to the adaptation of academics to change in the HE environment. High PsyCap is also positively associated with desired attitudes (emotional engagement) and behaviours. These behaviours could assist academics to accept organisational change. Therefore, high levels of positive PsyCap among academics may strongly and positively support organisational and HE

environmental change efforts as high levels of PsyCap imply thought processes (Chuang, 2007).

The *negative relationship* observed between RTC and Vi/De and between RTC and Ab suggests that academics with high levels of RS, ER and SF may reflect a form of insecurity. This could imply that they are less resilient, less involved in their work, less enthusiastic, proud, inspired and are not happily engrossed in their work. Academics' reactions to change can be explained and predicted by the nature of the change as well as by the context in which the change occurs (Oreg, 2006). Academics who enjoy routine, who react emotionally to change, and who tend to focus on the short-term difficulties that change creates, resist change because it often leads to discomfort and stress. Schaufeli et al. (2006) are of the opinion that engaged employees view themselves as capable of handling job demands such as changes and challenges.

The meaning of RTC as an individual-level construct extends across cultures; however culture as a biographical variable was not regarded as being relevant to this study. Social influence yielded a significant relationship with affective resistance and academics who are surrounded by colleagues who oppose change in the ODL work environment may tend to express more negative emotions towards change (Berkman & Syme, 1979. The fact that other academics resist change may influence how one behaves or how one feels about a change, but in itself it provides no substantive information on which to form a negative cognitive evaluation of the change. This is noteworthy and could relate to the "autonomy" of the academic which refers to the intrinsic rewards variable in Oreg's model or to the influence of organisational change on the motivation of academics (Oreg, 2006). It also suggests, that the well-being of academics' is often dependent on their ability to satisfy the need for autonomy and self-determination.

b) Pearson product moment correlation coefficients on the subscales, dimensions and subconstructs of RTC, WE (Vi/De and Ab) and PsyCap

The Pearson product moment correlation coefficients on the subscales, dimensions and subconstructs of RTC, WE (Vi/De and Ab) and PsyCap are reported in Table 6.23.

Table 6.23

Pearson product moment correlations coefficients on the subscales, dimensions and subconstructs of RTC, WE (Vi/De and Ab) and PsyCap (n=208)

Correlations

		Emotional Reaction (ER)	Shortterm Thinking (SF)	Routine Seeking (RS)	Cognitive Rigidity (CR)	Efficacy	Hope adapted	Resillience adapted	Optimism adapted	Vigour/ Dedication (Vi/De)	Absorp-tion (Ab)
Emotional	PeCor	1									
reaction	Sig.										
(ER)	N	208									
Shortterm	PeCor	.627**	1								
thinking	Sig.	.000									
(SF)	N	208	208								
Routine	PeCor	.582**	.570**	1							
seeking	Sig.	.000	.000								
(RS)	N	208	208	208							
Cognitive	PeCor	.367**	.322**	.327**	1						
rigidity	Sig.	.000	.000	.000							
(CR)	N	208	208	208	208						
Efficacy	PeCor	-.217**	-.319**	-.462**	-.075	1					
	Sig.	.002	.000	.000	.281						
	N	208	208	208	208	208					
Hope	PeCor	-.221**	-.253**	-.382**	-.102	.715**	1				

		Emotional Reaction (ER)	Shortterm Thinking (SF)	Routine Seeking (RS)	Cognitive Rigidity (CR)	Efficacy	Hope adapted	Resillience adapted	Optimism adapted	Vigour/ Dedication (Vi/De)	Absorp-tion (Ab)
adapted	Sig.	.001	.000	.000	.143	.000					
	N	208	208	208	208	208	208				
Resilience	PeCor	-.161**	-.110	-.310**	.004	.530**	.637**	1			
adapted	Sig.	.020	.115	.000	.959	.000	.000				
	N	208	208	208	208	208	208	208			
Optimism	PeCor	-.261**	-.241**	-.272**	-.107	.454**	.601**	.489**	1		
adapted	Sig.	.000	.000	.000	.124	.000	.000	.000			
	N	208	208	208	208	208	208	208	208		
Vigour/De	PeCor	-.227**	-.279**	-.338**	-.057	.372**	.576**	.344**	.550**	1	
Vi/De	Sig.	.001	.000	.000	.416	.000	.000	.000	.000		
	N	208	208	208	208	208	208	208	208	208	
Absorption	PeCor	-.079	-.194**	-.282**	-.062	.445**	.556**	.420**	.343**	.704**	1
(Ab)	Sig.	.254	.005	.000	.375	.000	.000	.000	.000	.000	
	N	208	208	208	208	208	208	208	208	208	208

A significant positive relationship exist between:

- the subscale SF (r=.627; large effect; $p \leq .05$) and the subscale ER.
- the subscale RS (r=.582; medium effect; $p \leq .05$) and the subscale ER.
- the subscale CR (r=.367; medium effect; $p \leq .05$) and the subscale ER.
- the subscale SF(r=.627; large effect; $p \leq .05$) and the subscale ER.
- the subscale RS (r=.570; medium effect; $p \leq .05$) and the subscale SF.
- the subscale CR (r=.322; medium effect; $p \leq .05$) and the subscale SF.
- the subscale CR (r=.327; medium effect; $p \leq .05$) and the subscale RS.
- the subconstruct hope (r=.715; large effect; $p \leq .05$) and the subconstruct efficacy.
- the subconstruct resilience (r=.530; medium effect; $p \leq .05$) and the subconstruct efficacy.
- the subconstruct optimism (r=.454; medium effect; $p \leq .05$) and the subconstruct efficacy.
- the dimension Vi/De (r=.372; medium effect; $p \leq .05$) and the subconstruct efficacy.
- the dimension Ab (r=.445; medium effect; $p \leq .05$) and the subconstruct efficacy.
- the subconstruct resilience (r=.637; large effect; $p \leq .05$) and the subconstruct hope.
- the sub construct optimism (r=.601; large effect; $p \leq .05$) and the sub construct hope.
- the dimension Vi/De (r=.576; medium effect; $p \leq .05$) and the subconstruct hope.
- the dimension Ab (r=.556; medium effect; $p \leq .05$) and the subconstruct hope.
- the subconstruct optimism (r=.489; medium effect; $p \leq .05$) and the subconstruct resilience.
- the dimension Vi/De (r=.344; medium effect; $p \leq .05$) and the subconstruct resilience.
- the dimension Ab (r=.420; medium effect; $p \leq .05$) and the subconstruct resilience.

- the dimension Vi/De (r=.550; medium effect; $p \leq .05$) and the subconstruct optimism.
- the dimension Ab (r=.343; medium effect; $p \leq .05$) and the subconstruct optimism.
- the dimension Ab (r=.704; large effect; $p \leq .05$) and the dimension Vi/De.

A significant negative relationship exists between:

- the subconstruct efficacy (r=-.217; small effect; $p \leq .05$) and the subscale ER.
- the subconstruct hope (r=-.221; small effect; $p \leq .05$) and the subscale ER.
- the subconstruct resilience (r=-.161; small effect; $p \leq .05$) and the subscale ER.
- the subconstruct optimism (r=-.261; small effect; $p \leq .05$) and the subscale ER.
- the dimension Vi/De (r=-.227; small effect; $p \leq .05$) and the subscale ER.
- the subconstruct efficacy (r=-.319; small effect; $p \leq .05$) and the subscale SF.
- the subconstruct hope (r=-.221; small effect; $p \leq .05$) and the subscale SF.
- the subconstruct optimism (r=-.241; small effect; $p \leq .05$) and the subscale SF.
- the dimension Vi/De (r=-.279; small effect; $p \leq .05$) and the subscale SF.
- the dimension Ab (r=-.194; small effect; $p \leq .05$) and the subscale SF.
- the subconstruct efficacy (r=-.462; small effect; $p \leq .05$) and the subscale RS.
- the subconstruct hope (r=-.382; small effect; $p \leq .05$) and the subscale RS.
- the subconstruct resilience (r=-.310; small effect; $p \leq .05$) and the subscale RS.
- the subconstruct optimism (r=-.272; small effect; $p \leq .05$) and the subscale RS.
- the dimension Vi/De (r=-.338; small effect; $p \leq .05$) and the subscale RS.
- the dimension Ab (r=-.282; small effect; $p \leq .05$) and the subscale RS.

Interpretation

Based on the evidence in Table 6.23, the following interpretation is presented:

A *positive relationship* was found between the ER, RS and CR subscales of RTC. Academics who present with a high SF become distracted by the short-term inconvenience involved in change, preventing them from recognising the long-term benefits, The result is intentional resistance in the form of complaints and the avoidance of change suggestions which may occur in the ODL environment. High levels of ER imply that the academics are experiencing stress and uneasiness as a result of change and challenges. The academics may also be experiencing an emotional component of resistance, for example aggression and frustration, which may lead to undesirable behaviour (Kets de Vries, 2002; Kotter & Schlesinger, 1979). The higher the levels of these negative feelings, the higher the affective resistance of the academics might be.

The academic who presents with a high SF as well as a high CR cannot recognise the long-term benefits of change, and often refuses, denies or rejects the change (Booysen & Beaty, 1997). Academics who refuse to adopt routines or embrace the actions or intention to act in response to a change in the ODL environment will demonstrate behavioural resistance. However, low performance is not always an indicator of RTC (Ashforth & Mael, 1998; Watson, 1982). Similarly, the academic may perceive or understand the changes as a threat or as a challenge. This could manifest as rational resistance or irrational resistance (Hultman, 1995; Kreitner, 1992) and when the change initiative is not clear to the academic, it is regarded as unreliable and the academic may expect no positive results from the change.

A *positive relationship* was observed between both RS and ER and RS and CR. Academics who present with a high RS may be inclined to adopt routines or act or intend to act in a certain way in response to a change in the environment. The high level of ER indicates the academics' feelings in response to an attitude, object or change in the environment and the more negative these feelings are, the higher the affective resistance will be. The result may be that the loss of control in a

change situation as well as the information that is provided about change could cause RTC (Piderit, 2000). The academic with a high CR component of RTC may change their minds often and readily and understand and accept the reasons for the changes taking place in the ODL environment (Kotter & Schlesinger, 1979). Information is significantly related to cognitive resistance (Oreg, 2006).

A *positive relationship* was found between CR and ER. Academics who present with a high CR may show a high intentional dimension which reflects their evaluations of an experience based on past behaviour and indicating future intentions to act in respons to the demands of the change, given an understanding of the changes expected to take place. The academic who presents with high ER may be experiencing more negative feelings as the demands of the changing ODL environment often have an impact on well-being (Saruhan, 2013) and this could result in an even higher affective resistance (Piderit, 2000).

A *positive relationship* was observed between the PsyCap subconstruct hope and the subconstructs efficacy, resilience and optimism. Academics who present high levels of hope, resilience and optimism, as positive psychological dimensions, have been linked to overall positive workplace attitudes and performance (Sweetman & Luthans, 2010). High levels of hope in academics are based on successful, goal-directed determination and pathways or planning to achieve the set goals. This may result in academics demonstrating a sense of efficacy in working towards goals and pathways, or the development of plans or ways to achieve goals in the changing ODL environment. High levels of hope could be indicative of academics who tend to be more energised and motivated to persist in the pursuit of their particular goals and who should be readily able to find alternative routes to attain their work-related goals should they experience challenges. Hope is therefore not an emotion but rather a dynamic cognitive motivational system in the world of work (Snyder et al., 1991). As Bandura (1997) explains, hope is very general and more oriented towards an uncertain future in the work environment whereas efficacy is related to a particular task, context and domain. Hope is closely related to constructs like efficacy, optimism, resilience,

and generalised well-being, which are important to the ODL academic in this research.

The *positive relationship* between the hope and resilience subconstructs suggests that academics can work towards goals, could have the ability to manipulate the ODL work environment successfully and protect themselves from the negative consequences of adverse demands. These employees, as noted by Luthans (2002b), will possibly be able to bounce back from adversity.

Optimism plays a vital role in the positive psychological functioning of the academic in the ODL work environment. The academic who presents with high levels of optimism believes that good rather than bad things will happen despite change and challenges in the work environment. One way by which optimism can influence the psychological and physical well-being of academics is by permitting them to reinterpret problems in the best possible light, searching for the benefits of changes and focusing on the importance of a changing environment even when it seems difficult (Avey et al., 2008; Seligman & Csikszentmihalyi, 2000). High levels of hope imply a sense of personal responsibility on the part of the academic for goal attainment, as well as expectations by academics that good things will happen in the work environment.

Efficacious academics may choose challenging tasks and endeavours, constantly set goals, strive for them, are able to swim upstream if necessary, perform tasks successfully, ultimately reach their set goals and persevere in the difficult and changing ODL work environment (Stajkovic & Luthans, 1998a). These academics behave in ways that make them successful; they are highly self-motivated and are capable of organising and performing actions even in a demanding ODL work environment. Avey et al. (2008) note that efficacy and hope lead to the experiencing of positive affective states and well-being.

The *positive relationship* observed between efficacy and resilience and between efficacy and optimism suggests that academics who present high levels of efficacy can move on in life after a stressful experience or event such as personal

adversity, conflict or failure. These academics possess the strength and coping resources required to successfully resolve or manage testing situations by searching for the benefits of change and focusing on the importance of a changing environment

A *positive relationship* was found between the dimensions Vi/De and Ab (WE) and the subconstructs of PsyCap, namely hope, efficacy, resilience and optimism. It is important to note that previous research indicated that individuals who present high levels of PsyCap are associated with higher levels of WE and PsyCap as a personal resource can be implemented to enhance attitudinal outcomes such as WE. This finding was supported by Halbesleben (2009) who found in a meta-analysis that PsyCap is strongly related to WE. PsyCap is therefore positively related to academics' positive emotions, which are, in turn, related to their attitudes of WE and the experience of positive emotions in the work environment could drive academics towards optimal individual and organisational functioning. Psychological strength in academics may create tendencies that are favourable to their WE. The findings of this study further indicate that the PsyCap subconstructs and WE dimensions are positively related. This finding corresponds to those of Simons and Buitendach (2013). The sub constructs of PsyCap as well as the dimensions of WE contribute significantly to the well-being of ODL academics.

The *positive relationship* found between optimism and resilience suggests that academics with an optimistic outlook may see setbacks as challenges and opportunities, be able to persevere and may eventually be successful in the changing work environment. Higher levels of optimism are more closely associated with positive psychology than the other constructs of PsyCap (Luthans et al., 2005). The resilient academic may possess the strength and coping resources to manipulate challenges and change in the complex ODL work environment into successful solutions.

The *positive relationship* between Vi/De and Ab suggests that rather than relating to a momentary and specific state, WE as a whole refers to a pervasive affective-cognitive state that is not focused on any particular event, individual, or behaviour (Sonnentag et al., 2010). High levels of Vi could be indicative of an academic with

high levels of energy and mental resilience, high levels of Ab relate to being enthusiastic about work and high levels of Ab are indicative of a person who will invest time and effort in work and often sacrifice private time to do the work (Bakker et al., 2008).

The *negative relationship* found between the subconstructs of hope, efficacy, resilience and optimism and ER suggests that academics with a high ER may experience high levels of stress and even emotional components of resistance such as aggression when confronted with change in the work environment. Just as high levels of PsyCap influence positive organisational change (Luthans et al., 2004; Saruhan, 2013), high levels of ER may indicate low levels of PsyCap in academics, which could lead to undesirable behaviour. This correlates with previous research that examined the importance of positive individuals for positive organisational change (Avey et al., 2008).

The *negative relationship* observed between hope, efficacy, resilience and optimism and RS suggests that academics with a high RS could demonstrate the negative behaviour described as behavioural resistance in response to changes in the work environment and could indicate low levels of PsyCap (King & Anderson, 1995). This negative behaviour could manifest through observable behaviour, such as pessimism, as well as objective performance measures such as quality. These academics may be unwilling to adopt routines in response to coping with change in their work environment.

The *negative relationship* found between the subconstructs of hope, efficacy, optimism and SF suggests that academics with a high SF may be less likely to focus on the long-term benefits of changes in the ODL environment and are therefore more concerned with short-term inconveniences such as workload and new technology. Low levels of the subconstructs of hope, efficacy and optimism can not necessarily counteract the intention of academics to avoid change.

The *negative relationship* found between Vi/De and ER suggests that academics with a high ER express their emotions and experience stress and discomfort

related to change in their work environment. Contrary to that, academics with high levels of Vi/De have a sense of energetic and effective connection with their work activities and may be able to deal with the demands of the changing work environment.

The *negative relationship* found between Vi/De and Ab and SF suggests that academics with high levels of WE may be less likely to avoid an undesirable demand and to focus instead on the long-term benefits of changes in the ODL environment.

The *negative relationship* found between Vi/De and Ab and RS suggests that academics with high levels of WE may be inclined to adapt their behaviour and behave positively in response to a change or challenge in the work environment. It is important to note that Schaufeli et al. (2002) are convinced that high levels of WE imply a positive, fulfilling, work-related state of mind.

6.5.2 Structural Equation Modelling (SEM)

The conceptual model, as postulated in Figure 5.2, was tested through the utilisation of SEM. For this research, the three psychological constructs were firstly validated by conducting CFA (refer to section 6.2.1). Secondly, the model adequacy was evaluated by means of goodness-of-fit measures for the overall structural model. Maximum likelihood estimation was used for the model estimation and structural path coefficients between the psychological constructs of RTC (represented by RS, ER, SF and CR), WE (represented by Vi, De and Ab) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa are reported.

The model adequacy was evaluated utilising the three fit indices CFI, TLI and RMSEA with values of 0.792, 0.782 and 0.071 respectively. Both the CFI and TLI values are below the acknowledged threshold of 0.90 but the RMSEA is considered acceptable as it was below 0.08.

An additional measure of the goodness of fit, the Chi Square value (2476.4) with 1217 degrees of freedom was significant (p=0.000) and indicated that the model was not adequate. However, it is known that the Chi Square is not a good fit index as it is affected by sample size. In the case of larger samples the Chi Square is statistically significant as larger samples produce larger Chi Squares that are more likely to be significant (Type I error). Sample sizes of over 200 almost always produce a statistically significant result even when other indices have indicated an adequate fit. No covariances indicated by the modification indices were added to the model to improve the model fit as those indicated could not be justified theoretically.

The graphical representation of the model estimated for this research is reported in Figure 6.13.

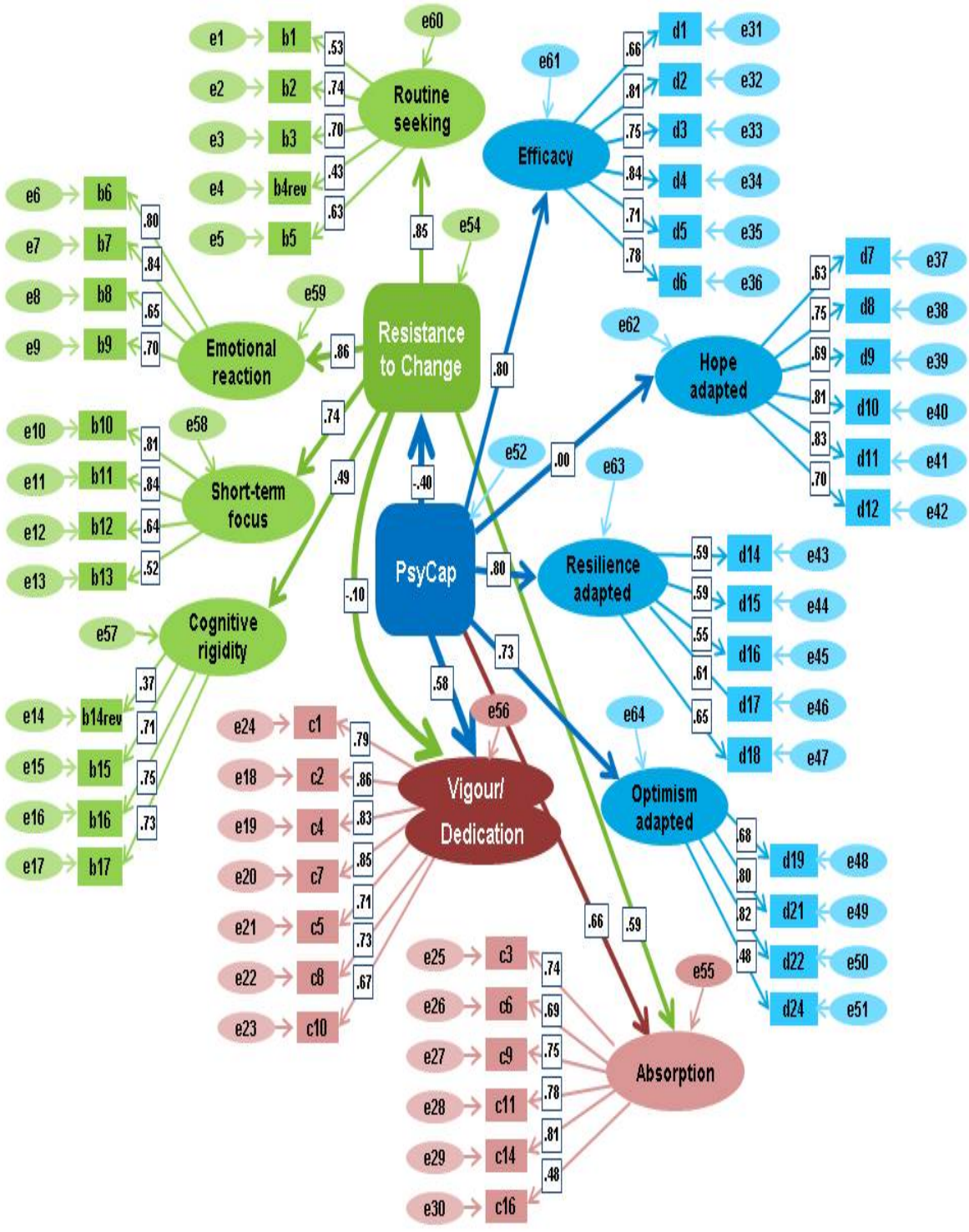

Figure 6.13 Final SEM

Although two of the fit indices did not indicate adequate fit, the noncentrality index, RMSEA, did indicate an adequate fit. The size and direction of the structural paths were therefore still considered to obtain an insight into the directional relationship between the subscales, dimensions and subconstructs as postulated in the estimated model.

The unstandardised regression coefficients describe the relationship between an endogenous and an exogenous variable in terms of the original units of measurement of those variables. The unstandardised regression weights for the estimated model are reported in Table 6.24.

Table 6.24

Unstandardised regression weights

Subconstruct			Estimate	S E	C R	P	Label
RTC	<---	PsyCap	-.454	.092	-4.951	***	
Routine seeking(RS)	<---	RTC	.491	.061	8.086	***	
Emotional reaction(ER)	<---	RTC	.706	.080	8.849	***	
Short-term focus(SF)	<---	RTC	.431	.062	6.934	***	
Cognitive rigidity(CR)	<---	RTC	.393	.070	5.643	***	
Efficacy	<---	PsyCap	.498	.057	8.667	***	
Hope adapt	<---	PsyCap	.570	.062	9.174	***	
Resilience	<---	PsyCap	.391	.053	7.420	***	
Optimism	<---	PsyCap	.595	.073	8.196	***	
Vigour/Dedication (Vi/De)	<---	RTC	-.037	.045	-.823	.410	
Absorption (Ab)	<---	RTC	.066	.062	1.059	.290	
Vigour/Dedication (Vi/De)	<---	PsyCap	.456	.063	7.215	***	
Absorption (Ab)	<---	PsyCap	.666	.085	7.842	***	

The results indicated that all the structural paths (relationships) were statistically significant except for the relationship between RTC and the two UWES

dimensions (as determined through the results of the EFA and CFA), indicating that an improved model might be considered in future without these two structural paths.

In addition, only the relationship between RTC and PsyCap was negative, indicating that an increased level of PsyCap in ODL academics will be related to a decreasing level of RTC. All other statistical relationships were positive, indicating that increases in the level of one psychological construct will be related to an increased level of positive psychological functioning in the related construct.

The standardised regression weights provide comparability of the coefficients as they represent the regression weight in standard deviation units. The standardised regression weights for this research are reported in Table 6.25.

Table 6.25

Standardised regression weights

Subconstruct			Estimate
RTC	<---	PsyCap	-.414
Routine seeking(RS)	<---	RTC	.858
Emotional reaction(ER)	<---	RTC	.858
Short-term focus(SF)	<---	RTC	.862
Cognitive rigidity(CR)	<---	RTC	.500
Efficacy	<---	PsyCap	.792
Hope adapted	<---	PsyCap	.970
Resilience	<---	PsyCap	.794
Optimism	<---	PsyCap	.741
Vigour/Dedication (Vi/De)	<---	RTC	-.059
Absorption(Ab)	<---	RTC	.078
Absorption(Ab)	<---	PsyCap	.718
Vigour/Dedication (Vi/De)	<---	PsyCap	.651

Interpretation

Figure 6.13, Table 6.24 and Table 6.25 report on the unstandardised as well as standardised path coefficients estimated by AMOS v23 for the theoretical-based SEM model. Assessing the structural coefficients of the final structural model as indicated in Figure 6.13, there were a total of 5 paths, of which 3 were statistically significant.

The structural path coefficient from PsyCap to RTC (-.41), was statistically significant and indicated a negative relationship. Higher levels of PsyCap are therefore related to lower levels of RTC. These results provide support for H_a1B. This correlates with previous research indicating that change in the work environment can possibly lead to high levels of stress and emotional components of resistance such as aggression or pessimism. From a preventive point of view, it is important to consider previous research indicating that academics demonstrating high levels of efficacy to adapt to organisational change, as well as high levels of resilience to bounce back from setbacks because of challenges during the change process, may reveal positive behaviour that may lead to effective and positive change processes (Luthans, Avolio et al., 2007. As argued by Porras and Robertson (1992), organisational change require changes in individual's work related behaviour, and this will imply that the HEI needs to consider behaviour modification and individual motivation to enhance levels of PsyCap. The academic may be regarded as a valuable source of information regarding the implementation of change.

The path coefficient from PsyCap to Vi/De (.65) and PsyCap to Ab (.72), was statistically significant and indicated a strong positive relationship. These results provide support for H_a1C: There is a positive statistical relationship between PsyCap and WE. The present research supports research that has shown that PsyCap, with each of its psychological resource capacities, demonstrates a positive intentional striving towards WE, flourishing and success, no matter what changes and challenges arise in the work environment. A review of the literature suggests that optimism has a positive relationship with a positive, fulfilling work-

related state of mind and that the experience of WE and PsyCap has been found to be related to positive workplace outcomes. It is therefore important to note that psychological strengths such as WE and PsyCap can create tendencies that are favourable to academics and can possibly contribute significantly to the well-being of ODL academics who are facing the challenge of change in their work environment.

The path coefficients from RTC to Vi/De (-.06) and RTC to Ab (.08), were not statistically significant. These results provide support for $H_0$1A: There is no statistical relationship between RTC and WE.

The squared multiple correlations (SMC) for the three endogenous variables are reported and were also assessed in order to estimate the reliability of the variables. They are reported as: RTC (0.171), Vi/De (0.459), and Ab (0.476).

It is explained in the literature that the SMC coefficients “indicate the amount of variance explained, predicted, or accounted for in the dependent variable by the set of independent predictor variables” (Schumacker & Lomax, 2010, p. 127). Accordingly, for this research, the predictors of RTC explain only 17.1% of its variance, while the predictors of Vi/De explain 45.9% of its variance; and the predictors of Ab explain 47.6% of its variance. These findings lend empirical support for the model’s adequacy.

The predictiveness of the model was also assessed in terms of the substantial strength of the structural paths or loadings, as opposed to simply achieving statistical significance as reported by Chin (1998). For this study, looking at the predictive structural paths, it was observed that only two of the five standardised regression weights were > 0.60, with three paths < 0.60, meaning that each of these measures did not actually account for at least 50% variance of the underlying latent variable. In addition, two of the standardised paths had estimates below the absolute value of 0.20. According to Chin (1998), the recommended standardised path is at least 0.20, or above 0.30, for variables to be considered for interpretation.

6.5.3 Tests for significant mean differences

The One-way Analysis of Variance (ANOVA) reports on significant differences between subgroups of academics as defined by biographical variables (age, gender, marital status, job level and years of employment) with regard to RTC, WE and PsyCap.

The results of Tukey's Standardised Range t-tests as post-hoc multiple comparison tests report on the statistical significance of differences between each possible combination of two groups of academics when the ANOVAs indicate statistical significance. Similarly, the results of the Kruskal-Wallis tests, used to determine whether two or more of the groups of academics differed significantly in their mean values obtained on the subscales, dimensions or subconstructs of RTC, WE and PsyCap when the group sample sizes were too small to conduct the parametric ANOVA, are reported.

6.5.3.1 Reporting and interpretation of differences in mean values for age groups (RTC, Vi/De, Ab and PsyCap).

A One way Analysis of Variance (ANOVA) was used to determine whether statistically significant differences exist between groups of academics as defined by age (26-40, 41-55, 56 and older) with regard to each of the subscales, dimensions or subconstructs of the RTC scale, the UWES and the PCQ scale.

The results of the differences in mean values investigating whether differences exist between the different age groups of academics with regard to each of the subscales, dimensions or subconstructs of RTC, De/Vi, Ab and PCQ scale are reported in Table 6.26.

Table 6.26

Descriptive statistics: Mean values for age groups (n=199)

		N	Mean	Standard deviation
Emotional reaction (ER)	20-40	74	3.5338	1.04630
	41-55	80	3.3750	1.07031
	56+-	45	3.2833	1.00792
	Total	199	3.4133	1.04704
Short-term focus (SF)	20-40	74	2.7838	.75435
	41-55	80	2.4938	.88855
	56+	45	2.6000	.87158
	Total	199	2.6256	.84270
Routine seeking (RS)	20-40	74	2.9602	.78726
	41-55	80	2.5575	.82290
	56+	45	2.6889	.85552
	Total	199	2.7369	.83276
Cognitive rigidity (CR)	20-40	74	3.6250	.97332
	41-55	80	3.4281	.99221
	56+	45	3.6722	.91674
	Total	199	3.5565	.96968
Efficacy	20-40	74	4.2860	.78490
	41-55	80	4.5852	.90321
	56+	45	4.6481	.86546
	Total	199	4.4882	.86254
Hope adapted	20-40	74	4.2590	.65465
	41-55	80	4.5321	.82365
	56+	45	4.4185	.85178
	Total	199	4.4049	.77746
Resilience adapted	20-40	74	4.2486	.69819
	41-55	80	4.5654	.65189
	56+	45	4.5289	.75095
	Total	199	4.4394	.70458
Optimism adapted	20-40	74	4.1385	.78420
	41-55	80	4.2204	.82298
	56+	45	3.9889	1.11925
	Total	199	4.1376	.88495
Vigour/Dedication (Vi/De)	20-40	74	3.9247	.94640
	41-55	80	4.1821	.95412
	56+	45	3.9159	1.12251
	Total	199	4.0262	.99493
Absorption (Ab)	20-40	74	3.9752	1.01236
	41-55	80	4.4812	.86297
	56+	45	4.3074	.95144
	Total	199	4.2538	.96266

The results of the differences in ANOVAs investigating whether differences exist between the different age groups of academics with regard to each of the subscales, dimensions or subconstructs of RTC, De/Vi, Ab and PCQ scale are reported in Table 6.27.

Table 6.27

ANOVA values for age groups (n=199)

		Sum of squares	df	Mean square	F	Sig.
Emotional reaction (ER)	Between groups	1.952	2	.976	.889	.413
	Within groups	215.116	196	1.098		
	Total	217.067	198			
Short term focus (SF)	Between groups	3.272	2	1.636	2.335	.100
	Within groups	137.337	196	.701		
	Total	140.609	198			
Routine seeking (RS)	Between groups	6.367	2	3.184	4.765	.010
	Within groups	130.944	196	.668		
	Total	137.311	198			
Cognitive rigidity (CR)	Between groups	2.268	2	1.134	1.209	.301
	Within groups	183.908	196	.938		
	Total	186.177	198			
Efficacy	Between groups	4.929	2	2.464	3.392	.036
	Within groups	142.377	196	.726		
	Total	147.306	198			
Hope adapted	Between groups	2.878	2	1.439	2.415	.092
	Within groups	116.803	196	.596		
	Total	119.681	198			
Resilience adapted	Between groups	4.324	2	2.162	4.509	.012
	Within groups	93.969	196	.479		
	Total	98.293	198			
Optimism adapted	Between groups	1.543	2	.772	.985	.375
	Within groups	153.519	196	.783		
	Total	155.062	198			
Vigour/Dedication (Vi/De)	Between groups	3.255	2	1.627	1.655	.194
	Within groups	192.743	196	.983		
	Total	195.998	198			
Absorption (Ab)	Between groups	10.011	2	5.005	5.655	.004
	Within groups	173.480	196	.885		
	Total	183.490	198			

Interpretation

After exploring the manifestation of RTC, WE and PsyCap and their relevant subscales, dimensions and subconstructs, the biographical profile obtained from the sample of ODL academics, revealed a number of factors. The results indicated that statistically significant differences exist at the 5% level of significance between the different groups of academics as defined by age with regard to RS (p=0.10), efficacy (p=.036), resilience adapted (p=.012) and Ab (p=.004). Subsequently Tukey HSD multiple comparison test results indicated that statistically significant differences exist between the age groups 20-40 years of age and 41-55 years of age for RS (p=.007), efficacy (p=.078) and resilience adapted (p=.014) and Ab (p=.003). Furthermore, statistically significant differences exist between the age groups 20-40 years of age and the age group 56 and older for efficacy (p=.066) and resilience adapted (p=.084).

The higher levels of RS, as a subscale of RTC, found by this research among the younger academics, could possibly be an indication of behaviour that could hinder the goals of change in the ODL work environment. These academics tend to aim for routine and a stable environment. Kunze, Boehm and Bruch (2013) also found younger employees to be more resistant to change than their older colleagues. Similarly, lower levels of efficacy, resilience adapted and Ab found to exist among the younger academics at this ODL HEI could imply that these academics do not have the necessary levels of confidence, find difficulty in getting into their tasks and do not always succeed in accomplishing goals when meeting obstacles or setbacks. Furthermore, the higher levels of RS and the lower levels of efficacy and resilience adapted among the academics at the exploration stage (under the age of 25) and establishment stage (26-40 years of age) of their careers may possibly lead to these younger academics not being as fully concentrated on, and happily engrossed in, their work as the academics who are already at the maintenance (41-55 years of age) and late career (55 and older) stages.

In the literature review it was established that older employees in particular in contrast to younger employees react to changes in the work environment with

disapproval or rejection (Boerlijst & Van der Heijden, 2003; Furnham, 2004). This research, however, revealed a significant level of RS among younger academics. Kunze et al. (2013) also challenge the stereotype that presumes that older employees are less able to cope with change and challenges in the work environment. This is of importance as the average age of academics appears to be 55 years of age, in which is the late career stage, implying that they may become more inwardly focused and invest their efforts in the quality of their work and emotional connectedness.

Although Bezuidenhout (2008) found, in a study on female academics, that there was a positive relationship between the age of the academic and her scores on Vi and Ab, Schaufeli (2004) reports a weak positive relationship between WE and age, which is consistent with the findings in this study. The hypothesis was formulated as follows:

Hypothesis:

$H_0$2A: There are no statistically significant differences between groups of academics as defined by age with regard to RTC, WE and PsyCap.

H_a2A: There are statistically significant differences between groups of academics as defined by age with regard to RTC, WE and PsyCap.

Given the results as indicated in Table 6.27, the null hypothesis is rejected.

6.5.3.2 Reporting and interpretation of differences in mean values for gender groups (RTC, Vi/De, Ab and PsyCap).

A t-test was used to determine whether statistically significant differences exist between male and female academics with regard to each of the subscales, dimensions or subconstructs of the RTC scale, the UWES and the PCQ scale.

The results of the differences in mean values investigating whether differences exist between male and female academics with regard to each of the subscales, dimensions or subconstructs of RTC, Vi/De, Ab and PsyCap are reported in Table 6.28.

Table 6.28

Descriptive statistics: Mean values per gender group (N=208)

	Gender	N	Mean	Standard deviation
Emotional reaction	Male	76	3.2500	1.02713
(ER)	Female	132	3.5095	1.03258
Short-term focus	Male	76	2.6086	.88349
(SF)	Female	132	2.6686	.84002
Routine seeking	Male	76	2.6888	.84090
(RS)	Female	132	2.7735	.83436
Cognitive rigidity	Male	76	3.5526	1.12199
(CR)	Female	132	3.5777	.86610
Efficacy	Male	76	4.5875	.89091
	Female	132	4.4242	.82871
Hope adapted	Male	76	4.3978	.87173
	Female	132	4.4040	.70112
Resilience adapted	Male	76	4.4610	.74188
	Female	132	4.4212	.67281
Optimism adapted	Male	76	4.0510	1.04167
	Female	132	4.1742	.78569
Vigour/Dedication	Male	76	4.0555	1.15173
(Vi/De)	Female	132	4.0227	.91456
Absorption	Male	76	4.2412	.99978
(Ab)	Female	132	4.2538	.93410

The results of the differences in the t-tests investigating whether differences exist between male and female academics with regard to each of the subscales, dimensions or subconstructs of RTC, Vi/De, Ab and PsyCap are reported in Table 6.29.

Table 6.29

Independent T-test results for gender (N=208)

		Levine's Test for Equality of Variances				
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Cognitive rigidity (CR)	Equal variances assumed	4.065	.045	-.180	206	.858
	Equal variances not assumed			-.168	126.749	.867
Hope adapted	Equal variances assumed	4.537	.034	-.056	206	.955
	Equal variances not assumed			-.053	130.876	.958
Optimism adapted	Equal variances assumed	5.317	.022	-.964	206	.336
	Equal variances not assumed			-.895	124.530	.373
Vigour/Dedication (Vi/De)	Equal variances assumed	2.752	.099	.226	206	.822
	Equal variances not assumed			.212	129.566	.832

Interpretation

The results indicated that no statistically significant differences exist between male and female academics at the 5% level of significance with regard to RTC, WE and PsyCap. However, the mean values for ER, SF, RS and CR report a slightly, but not significantly higher score for the female academics. For the efficacy and resilience adapted subconstructs of the PCQ scale, the male academics reported a slightly higher mean score. Furthermore, the male academics reported a slightly higher mean score for the Vi/De dimension.

Similarly to the results of this research, Michaelis, Stegmaier and Sonntag (2009) reported no significant gender differences with regard to RTC. However, this finding is inconsistent with studies on RTC done by Waseela (2005) as well as Hofstede et al. (2010), who argue that the mental processes of males and females

are very different and that males and females react differently to change. Male employees are more resistant to change if change takes more time and energy and if they can not see any long-term benefits. Since this research indicated slightly higher scores on the subscales of RTC for female academics, it is noteworthy that they possibly do not regard the changes in the ODL work environment as time and energy consuming and they probably regard the changes as long-term investments in their own development as well as being for the benefit of the organisation.

The slightly higher mean score for efficacy and resilience adapted that was reported for male academics in this research may indicate a slightly higher reactive capacity when faced with change or challenges and slightly higher levels of positive psychological functioning because of the strong relationship between efficacy and work-related performance. Since it was established that females believe that one works in order to live whereas males believe that one lives in order to work and female academics often have family responsibilities and less access to resources that could help them to overcome barriers in order to maintain wellness, the slightly higher score for efficacy and resilience adapted can be explained.

Snyder and Lopez (2002) indicated no significant difference in hope between males and females in over 40 studies which is consistent with the findings in this study.

These results on Vi/De and Ab support the findings of Schaufeli et al. (2006) in Canada, Australia, and France, namely that there were no gender differences in the level of WE. Schaufeli and Bakker (2003) found, however, that men score significantly higher on the dimensions De and Ab of WE than women do, whereas no gender differences in levels of Vi seem to exist. Therefore, the notion of WE remains largely gender-neutral with men and women experiencing and demonstrating WE equally, as was also found in this study. The hypothesis was formulated as follows:

Hypothesis:

$H_0$2B: There are no statistically significant differences between groups of academics as defined by gender with regard to RTC, WE and PsyCap.

H_a2B: There are statistically significant differences between groups of academics as defined by gender with regard to RTC, WE and PsyCap.

Given the results as indicated in Table 6.29, the null hypothesis is accepted.

6.5.3.3 Reporting and interpretation of differences in mean values for marital status (RTC, Vi/De, Ab and PsyCap)

A Kruskal-Wallis test was conducted in order to determine whether the groups of academics as defined by marital status (single, married/permanent relationship, divorced/widowed) differed significantly in their mean values obtained on the psychological constructs of RTC, Vi/De and Ab and PsyCap.

The results of the Kruskal-Wallis test are shown in Table 6.30.

Table 6.30

Kruskal-Wallis test on marital status: RTC, Vi/De, Ab and PsyCap (n = 206)

	Emotional reaction(ER)	Short-term focus (SF)	Routine Seeking(RS)	Cognitive Rigidity(CR)	Efficacy	Hope adapted	Resilience adapted	Optimism adapted	Vigour dedication(Vi/De)	Absorption (Ab)
Chi-Square	1.353	1.247	.240	.073	2.364	2.223	4.801	2.761	1.201	1.949
df	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	.508	.536	.887	.964	.307	.329	.091	.252	.549	.377

Interpretation

The results are reported and there is a statistically significant difference, at the 10 % level of significance, between the groups of academics as defined by marital status with regard to resilience adapted (p=0.091). Furthermore, the mean ranks indicate that both single and the divorced/widowed academics tend to have higher levels of resilience (mean rank =119.43 and 115.43 respectively) than academics who are married and/or in a permanent relationship (mean rank = 97.94).

It would seem that academic's who are single, divorced or widowed, when faced with changes and adversity, are able to overcome these obstacles and bounce back to attain their goals. Furthermore, single academics in this target group scored significantly lower on RTC than married or divorced/widowed academics, implying possible affective reactions to change as well as affective functioning in the work environment.

Single academics scored significantly higher on the Vi/De dimension and the divorced/widowed academics scored the lowest. This means high levels of energy, mental resilience, enthusiasm and pride in work are characteristics of this group of single academics. However, the divorced/widowed academics scored the highest on Ab and the married academics scored the lowest. These findings correlate with research by Bakker et al. (2011), which explained that although engaged academics are not workaholics, they may become so immersed in their work that they often take work home, which may be easier for single employees with fewer family responsibilities. The hypothesis was formulated as follows:

Hypothesis:

$H_0$2C: There are no statistically significant differences between groups of academics as defined by marital status with regard to RTC, WE and PsyCap.

H_a2C: There are statistically significant differences between groups of academics as defined by marital status with regard to RTC, WE and PsyCap.

Given the results as indicated in Table 6.30, there is no support for the null hypothesis.

6.5.3.4 Reporting and interpretation of differences in mean values for educational level (RTC, Vi/De, Ab and PsyCap)

A One way Analysis of Variance (ANOVA) was conducted to determine whether statistically significant differences exist between the different groups of academics as defined by educational level (honours, masters and doctoral level) with regard to each of the subconstructs of the RTC scale, the UWES and the PCQ scale.

The results of the differences in mean values investigating whether differences exist between the different educational levels of academics with regard to each of the subcales, dimensions and subconstructs of RTC, Vi/De, Ab and the PCQ scale are reported in Table 6.31.

Table 6.31

Descriptive statistics: Mean values for educational levels (n=204)

		Sum of squares	df	Mean square	F	Sig.
Emotional reaction (ER)	Between groups	3.218	2	1.609	1.540	.217
	Within groups	210.960	202	1.044		
	Total	214.178	204			
Short-term focus (SF)	Between groups	.257	2	.128	.177	.838
	Within groups	146.913	202	.727		
	Total	147.170	204			
Routine seeking (RS)	Between groups	.435	2	.217	.307	.736
	Within groups	142.905	202	.707		
	Total	143.340	204			
Cognitive rigidity (CR)	Between groups	1.379	2	.689	.739	.479
	Within groups	188.418	202	.933		
	Total	189.797	204			
Efficacy	Between groups	1.963	2	.981	1.354	.261
	Within groups	146.424	202	.725		
	Total	148.387	204			
Hope adapted	Between groups	1.919	2	.959	1.643	.196
	Within groups	117.938	202	.584		
	Total	119.856	204			
Resilience adapted	Between groups	.271	2	.135	.277	.759
	Within groups	98.856	202	.489		

		Sum of squares	df	Mean square	F	Sig.
	Total	99.127	204			
Optimism adapted	Between groups	.077	2	.039	.048	.953
	Within groups	162.595	202	.805		
	Total	162.673	204			
Vigour/Dedication	Between groups	.341	2	.170	.169	.844
(Vi/De)	Within groups	203.237	202	1.006		
	Total	203.577	204			
Absorption	Between groups	1.233	2	.617	.671	.512
(Ab)	Within groups	185.676	202	.919		
	Total	186.909	204			

The results of the differences in ANOVAs investigating whether differences exist between the different educational levels of academics with regard to each of the subscales, dimensions and subconstructs of RTC, Vi/De, Ab and the PCQ scale are reported in Table 6.32.

Table 6.32

ANOVA values for educational levels (n=204)

		Sum of squares	df	Mean square	F	Sig.
Emotional reaction (ER)	Between groups	3.218	2	1.609	1.540	.217
	Within groups	210.960	202	1.044		
	Total	214.178	204			
Short-term focus (SF)	Between groups	.257	2	.128	.177	.838
	Within groups	146.913	202	.727		
	Total	147.170	204			
Routine seeking (RS)	Between groups	.435	2	.217	.307	.736
	Within groups	142.905	202	.707		
	Total	143.340	204			
Cognitive rigidity (CR)	Between groups	1.379	2	.689	.739	.479
	Within groups	188.418	202	.933		
	Total	189.797	204			
Efficacy	Between groups	1.963	2	.981	1.354	.261
	Within groups	146.424	202	.725		
	Total	148.387	204			

		Sum of squares	df	Mean square	F	Sig.
Hope adapted	Between groups	1.919	2	.959	1.643	.196
	Within groups	117.938	202	.584		
	Total	119.856	204			
Resilience adapted	Between groups	.271	2	.135	.277	.759
	Within groups	98.856	202	.489		
	Total	99.127	204			
Optimism adapted	Between groups	.077	2	.039	.048	.953
	Within groups	162.595	202	.805		
	Total	162.673	204			
Vigour/Dedication (Vi/De)	Between groups	.341	2	.170	.169	.844
	Within groups	203.237	202	1.006		
	Total	203.577	204			
Absorption (Ab)	Between groups	1.233	2	.617	.671	.512
	Within groups	185.676	202	.919		
	Total	186.909	204			

Interpretation

In reporting the results, it is clear that no statistically significant difference exists between the groups of academics as defined by the different educational levels at the 5% level of significance. Evidently, no differences regarding any of the subscales, dimensions or subconstructs of RTC, WE and PsyCap were reported among this group of academics.

This is interesting because Iverson (1996), Kimberley and Evanisko (1981) and Wiersema and Bantel (1992) reported that the higher the levels of education of employees in a public hospital in Australia, the greater their receptivity to innovation and change. Similarly, Bezuidenhout (2008) found that academics with a doctorate scored significantly higher on Vi and Du Plessis and Barkhuizen (2011) reported higher levels of optimism among more educated individuals. This indicates the presence of high levels of energy and resilience and Lawrence (2009) is of the opinion that a higher level of education may relate positively to WE.

It is of importance for the purposes of this research to note that employees with higher levels of education, reflecting cognitive ability and skills, have many opportunities to apply their skills to accept new challenges in their work. Although there is little substantial evidence for this, it does appear that a higher level of education may relate positively to WE. A possible explanation for the fact that there is no statistically significant difference between the groups of academics with regard to educational levels may be that they are all in possession of postgraduate qualifications, function at a high cognitive level, are engaged, have the necessary ability and skills to adjust to their changing ODL work environment and therefore did not report any differences.

In terms of the manifestation of positive work and organisational psychological functioning in individuals with different levels of education, no South African research studies could be found. Similarly, no South African research studies on RTC, WE and PsyCap among academics could be found to compare to the findings of this study. Future research is required to investigate this phenomenon as well as the reasons for the differences between the South African and Australian results. The hypothesis was formulated as follows:

Hypothesis:

$H_0$2D: There are no statistically significant differences between groups of academics as defined by educational level with regard to RTC, WE and PsyCap.

H_a2D: There are statistically significant differences between groups of academics as defined by educational level with regard to RTC, WE and PsyCap.

Given the results as indicated in Table 6.32, the null hypothesis is accepted.

6.5.3.5 Reporting and interpretation of differences in mean values for different job levels (RTC, Vi/De, Ab and PsyCap)

A Kruskal-Wallis test was conducted in order to determine whether the groups of academics as defined by job level (junior lecturer, lecturer, senior lecturer,

associate professor, professor) differed significantly in their mean values obtained on the psychological constructs of RTC, Vi/de and Ab and PsyCap and the results are reported.

The results of the Kruskal-Wallis test are reported in Table 6.33.

Table 6.33

Kruskal-Wallis test on job level: RTC, Vi/De, Ab and PsyCap (n = 208)

	Emotional reaction(ER)	Short-term focus(SF)	Routine seeking(RS)	Cognitive rigidity(CR)	Efficacy	Hope adapted	Resillence adapted	Optimism adapted	Vigour Dedication(Vi/De)	Absorption(Ab)
Chi-Square	9.652	3.671	3.742	8.139	5.984	4.278	8.435	3.474	4.600	4.270
df	4	4	4	4	4	4	4	4	4	4
Asymp. Sig.	.047	.452	.442	.087	.200	.370	.077	.482	.331	.371

Interpretation

The results indicated that there is a statistically significant difference at both the 5% and the 10% level of significance between the groups of academics as defined by job level. Furthermore, the mean ranks indicated that professors showed a higher ER level (mean rank = 110.15) than the other groups of academics. Junior lecturers tend to have the lowest ER level (mean rank = 59.55). Associate professors as well as professors tend to show similarly higher levels of CR (mean rank = 121.74; 120.77) and higher levels of resilience (mean rank = 120.38; 120.82) than the other groups of academics. Junior lecturers indicated the lowest level of CR (mean rank = 78.77) as well as resilience (mean rank = 81.87).

When considering the results at different job levels, it is important to note the differences in ER, which indicate the affective component or the amount of stress that the academics experience. The professors scored higher on ER than the other groups of academics and junior lecturers scored the lowest. As it is clear

from the literature review that emotions are regarded as the most appropriate indicator of resistance, the lower score of the junior lecturers may imply that they are experiencing emotions such as insecurity, anxiety, aggression and frustration in change situations as opposed to older academics. It is also evident that older employees possess skills and may have more advanced capabilities for coping with change and challenges.

Furthermore, both associate professors and professors scored higher on CR than the other groups of academics and junior lecturers scored the lowest on CR. This may imply that professors understand or accept the reasons for the changes that take place and that because of their senior positions in the organisation, the extent of the change might not have such a significant impact on their position in the organisation or they may not perceive such a change as a threat to their job security. This is in accordance with some trends identified in the literature, namely that academics with higher levels of education, such as professors, have ample opportunities to utilise of their psychological strengths and should therefore adapt better to challenges in the work environment.

The junior lecturers may perceive the changes in the ODL work environment as either a threat or a challenge. If the change is experienced as very complex or a threat to their position, it will evoke emotions and feelings of loss and insecurity (Schafer, 2003; Oldham & Kleiner, 1990).

Associate professors and professors scored higher on resilience than the other groups of academics and junior lecturers scored the lowest on resilience. This could imply that the associate professors and professors may have the capacity to bounce back from adversity, failure, challenges or changes occurring in the work environment. In this study, it may indicate that associate professors and professors have the psychological resources to cope positively with and adapt to significant changes happening in the current ODL and HE world of work. Masten (2001; 2002) considers resilience to be a learnable capacity that any individual may develop and it would seem that the associate professors and professors may have developed more resilience than the junior lecturers because they had been exposed to work for a longer period of time. This means that, in positive

psychology, resilience is regarded as a process and not an outcome according to Luthans & Youssef (2007) and it is important to note that the resilient academic may develop even further after challenges and change. The hypothesis was formulated as follows:

Hypothesis:

$H_0$2E: There are no statistically significant differences between groups of academics as defined by job level with regard to RTC, WE and PsyCap.

H_a2E: There are statistically significant differences between groups of academics as defined by job level with regard to RTC, WE and PsyCap.

Given the results as indicated in Table 6.33, there is no support for the null hypothesis.

6.5.3.6 Reporting and interpretation of significant differences in mean values for years of service (RTC, De/Vi, Ab and PsyCap)

A Kruskal-Wallis test was conducted in order to determine whether the groups of academics, as defined by years of service (2 years or less, 3-5, 6-8, 9-11, 12-14, 15 years and more) differed significantly in their mean values obtained on the psychological constructs of RTC, Vi/De and Ab and PsyCap.

The results of the Kruskal-Wallis test are shown in Table 6.34.

Table 6.34

Kruskal-Wallis Test on years of service: RTC, Vi/De, Ab and PsyCap (n = 208)

	Emotional reaction(ER)	Short-term focus(SF)	Routine Seeking(RS)	Cognitive rigidity	Efficacy	Hope adapted	Resillience adapted	Optimism adapted	Vigour Dedication(Vi/De)	Absorption(Ab)
Chi-Square	5.433	3.328	14.304	5.438	10.45	14.633	3.950	9.262	17.684	18.722
df	5	5	5	5	5	5	5	5	5	5
Asymp. Sig.	.365	.650	.014	.365	.063	.012	.557	.099	.003	.002

Interpretation

The findings indicated that statistically significant differences, at both the 5% and 10 % level of significance, exist between the six groups representing years of service. The mean ranks indicated that the 3-5 year tenure group tend to show higher levels of RS (mean rank = 127.54) than the other groups of academics. The 6-8, 9-11 as well as 12-14 year tenure groups tend respectively to show higher levels of hope adapted (mean rank = 123.89, 133.60, 120.98) than the other tenure groups of academics. Furthermore, the mean ranks indicated that the 6-8 as well as the 9-11 year tenure groups tend to show higher levels of optimism (mean rank = 120.96, 125.30) than the other tenure groups of academics. It was also found that the 6-8 year tenure group tend to show higher levels of Vi/De (mean rank = 133.61) than the other groups of academics and the 12-14 year tenure group tend to show higher levels of Ab (mean rank = 141.21) than the other groups of academics.

In this research, academics with less than five years' service scored higher on RS than the other groups of academics. This may imply that they are more inclined to adopt routines within the work environment. Similarly, Iverson (1996) reported that individuals with shorter tenure indicated lower levels of RTC and Van Dam, Oreg and Schyns (2008) found a positive relationship between tenure and RTC. More tenured employees therefore exhibit a negative reaction to change and therefore it is expected that these academics would exhibit more RTC.

Academics in this HEI with more than six but less than fourteen years' service scored higher on hope adapted than the other tenure groups of academics in this study, implying perseverance, tenacity and determination to achieve goals and, when necessary, redirect goals in order to succeed. Furthermore, academics with more than six but less than fourteen years' service scored higher on optimism than the other tenure groups of academics, implying a positive attribution about success both now and in future. The 6-8 year tenure group scored higher on Vi/De than academics who had been employed for longer in the ODL HEI. Academics with long service are expected to have a better cognitive understanding of the demands of the work environment but it is interesting to note that in this study it was found that academics with fewer years of service revealed higher levels of energy and enthusiasm.

It is important to note that Oreg, et al. (2009) are of the opinion that biographical variables do not provide insight into differences in individuals' RTC, but that psychographic variables are much more meaningful.

No research studies could be found that deal with the manifestation of positive work and organisational psychological functioning with regard to RTC, WE and PsyCap in individuals with different years of service. Future research is required to investigate this phenomenon, especially in the South African context. The hypothesis was formulated as follows:

Hypothesis:

$H_0$2F: There are no statistically significant differences between groups of academics as defined by years of service with regard to RTC, WE and PsyCap.

H_a2F: There are statistically significant differences between groups of academics as defined by years of service with regard to RTC, WE and PsyCap.
Given the results as indicated in Table 6.34, there is no support for the null hypothesis.

6.6 INTEGRATION OF THE RESULTS

This section integrates the results of the empirical study with the literature study.

6.6.1 Biographical profile of the sample and frequencies

The biographical profile obtained from the sample in this research comprised predominantly married, female academics in the age group 41-55 (maintenance career stage), at the lecturer and senior lecturer level and holding a doctorate (43%). The respondents in this group were able to benefit from the results of this research as it was possible to make them more aware of the reduction in RTC as well as of the fact that their positive psychological functioning influences their optimal positive work and organisational psychological functioning and well-being.

The results in this research revealed that younger academics experienced higher levels of routine seeking than older academics. This could suggest that the younger academics in this ODL work environment prefer a more predictable and stable environment. It was clear from the literature that the average academic is older and is at the late career stage (HESA, 2012) and it is therefore significant that the older academics indicated higher levels of efficacy, resilience adapted and absorption than the younger academics. Research by Griffin and Hesketh (2005) suggests that employees with several positive psychological resources, are able to adapt easily to a changing work environment.

The academics in this research revealed no differences between the groups of academics as defined by different educational levels with regards to RTC, WE and PsyCap. Similarly the results revealed no difference between gender with regards to RTC. The results suggested however, that male academics possess slightly higher levels of confidence about putting in extra effort when confronted with challenges. According to research by Wagnild and Young (1993), these individuals could possibly bounce back to attain success when faced with challenges. The results also suggested that single academics have high levels of energy, mental resilience, a strong psychological identification with their work and are able to

concentrate on their work. The participants who are vigorous, enthusiastic, proud and absorbed tend to be engaged in their work role (Schaufeli et al., 2006). In line with research conducted by Keyes and Annas (2009) the results suggested that individuals can flourish, enjoy quality of life and function optimally in their work environment. However, different psychological processes could influence their development of WE (Devi, 2009).

The results revealed that the professors in this research possess higher levels of the emotional dimension of resistance, which may imply that professors understand or accept the reasons for the changes that are taking place. The participants may not perceive these changes as a threat to their job security although, according to Connor (1992), the loss of control in a changing environment can cause RTC. This in turn suggests that the junior lecturers in this research perceive the change and challenges as a threat, provoking feelings of insecurity. In line with research by Oreg et al. (2008), it may imply an unwillingness to change and to consider alternative ways of working.

The results suggested that participants with shorter years of service revealed that they could persevere towards goals and redirect paths to goals when they need to succeed. They may also tend to see the positive side of the changes and challenges. In line with research conducted by Luthans et al. (2005), the results suggest that optimism supports a positive relationship with work performance. Furthermore, the results suggest that participants with fewer years of service possess higher levels of willingness to invest time and effort into work, may reveal psychological identification with their work and they may be focused on their work. Engaged individuals could use resources such as optimism, efficacy and resilience to assist them when adapting to their changing work environment and to flourish (Bakker & Demerouti, 2009; Luthans, Norman, Avolio & Avey, 2008). Participants with longer years of services may perceive, in line with research conducted by Bakker and Demerouti (2006) that job demands such as change and challenges may create distress and counteract psychological health and well-being.

6.6.2 Research aim 1

Research aim 1 *was to empirically investigate the nature of the statistical interrelationships of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa.*

The results reveal a meaningful positive relationship between the positive psychological constructs of WE and PsyCap and a meaningful negative relationship between the psychological construct RTC, and the positive psychological constructs of WE and PsyCap in this profile of academics.

The results suggest that the academics may possibly experience emotional components of resistance such as frustration, stress and nervousness because of radical changes and challenges in the ODL work environment. According to Piderit (2000), the more complex the perception of these changes, and the more negative these feelings are, the higher the cognitive as well as the affective resistance of the academic. This is of particular significance to this research as it is clear from the literature that the ODL work environment is dynamic and vibrant and academics experience a multitude of challenges at every stage of their professional lives (Baijnath, 2012; Bokor, 2012; Paloff & Prat, 2011; Picciano, 2006). This may result in some ODL academics experiencing negative emotions and being more likely to react negatively to organisational changes, regardless of the particular nature of the change. As research conducted by Oreg et al. (2008) suggests, this could reflect some inflexibility or reluctance owing to uncertainty, stress and uneasiness when considering alternatives in the changing work environment.

The results revealed a strong support for the existence of a significant relationship between the subscales of RTC. As they are probably not able to recognise the long-term benefits of change, these academics will refuse, deny or reject the change and the more negative these feelings are, the stronger the emotional

reaction will be, impacting directly on well-being. According to Coch and French (1948), a highly emotional reaction might create frustration, leading to undesirable behaviour. The results also indicate high levels of routine seeking. Ashforth and Mael (1998) relate high levels of routine seeking to behaviour such as denial or rejection of the change and often refusal to take part in the change process. However, the results reveal that the academics possess a high level of intentional behaviour as well as high levels of understanding of the reasons for these changes. According to Heinrich (2004) this may assist the individual to perceive or understand the changes as a threat or as a challenge. The outcome predicted by Oreg, namely that the process of informing individuals about the changes is significantly related to cognitive resistance, is of importance. Therefore, in terms of the Classic Model of RTC (Coch & French, 1948) the results seem to suggest that the perceived quality of information regading the changes as well as the involvement of the academics in the decision processes, in this ODL work environment, may be seen as a problem in this sample of academics.

The results suggest that participants do consider the long-term benefits of change to be important and are willing to act in response to a change in the environment. Therefore, from a positive work and organisational psychological perspective, RTC or the reaction to change (Mabin et al., 2001) involves new ways of thinking and results in new behaviours. According to Ford and Ford (1994), change can be considered an important source of information for the organisation. This in turn suggests that the individuals' experience of change with regards to the perceived benefits of the change and challenges, can have a positive effect on their WE and flourishing (Fedor et al., 2006).

The results reveal that the academics possess a high level of WE, measured against the norms provided by Schaufeli and Bakker (2003) and the results suggest a two-factor model of WE (Vi/De and Ab), as in prior research studies (Naudé & Rothmann, 2004; Nerstad et al*.,* 2010; Schaufeli et al., 2002). The results of this research reveal that these ODL academics are energetic, see work as meaningful, stimulating and something that they want to concentrate on, despite the challenges in the ODL work environment. Compared to a group of

South African emergency workers (Storm & Rothmann, 2003), the scores in this study were fairly high, especially indicating high levels of absorption in the work. The results suggest that the academics may focus on long-term benefits of changes in the ODL environment. High levels of WE imply a positive, energetic, fulfilling work-related state of mind (Schaufeli, Salanova et al., 2002).

A CFA performed on the data in this research revealed a significant negative relationship between RTC and WE and no statistical relationship between RTC and WE. However, in terms of this research, both RTC and WE were revealed in this sample of ODL academics. The outcome predicted by Schaufeli et al. (2006) was that engaged individuals are capable of handling job demands such as changes and challenges successfully. The results suggest that the WE of the academics may be positively related to the contribution of their psychological connection with their work, and to whether they are willing and able to invest themselves fully in their roles and are proactive and committed to high performance standards. Previous research has indicated that job resources and personal resources in particular have a positive impact on WE, defined as mental resilience, even when job demands are high (Bakker & Demerouti, 2007). Engaged employees are able to create their own resources, which will create a positive psychological spiral over time (Bakker & Demerouti, 2008).

The negative relationship revealed between vigour/dedication and the emotional component of resistance could reflect the fact that the academics express their emotions and experience stress and discomfort related to change in their work environment. In line with research by Bean and Hamilton (2006), the results suggest that employees could make changes through a cognitive interpretation. This in turn suggests that academics reporting high levels of vigour/dedication could have a sense of energetic and effective connection with their professional activities, and the result is that they are able to deal more positively with the demands of the changing ODL work environment.

The results, which reveal fairly high levels of WE, hope, efficacy, reisilience and optimism, may possibly indicate high levels of emotional well-being. In line with

research conducted by Keyes (2002), the results therefore suggest that flourishing can include the presence of high levels of emotional, psychological and social well-being. Flourishing employees function optimally in their work environment and this manifest through multidimensional indicators such as flourishing, hope, efficacy, reisilience and optimism (Rothmann, 2013).

Strong support was revealed for a positive significant relationship between PsyCap and WE in this research. This was also revealed in the SEM. This is in line with research conducted by Halbesleben (2009), and Simons and Buitendach (2013) and Gable and Haidt (2005), which suggests that a positive relationship between PsyCap and WE could contribute significantly to employee well-being and flourishing. The outcome predicted by Avey et al. (2008) is that PsyCap is positively related to academics' positive emotions, which in turn are related to their attitudes of WE. These findings are consistent with research conducted by Avey et al. (2010) and include South African research conducted by De Waal (2011) and Herbert (2011). Engaged employees view themselves as capable of handling job demands such as changes and challenges and can therefore resist change (Schaufeli et al., 2006). In line with research conducted by Bakker et al. (2006) the results suggested that employees who use their resources optimally scored the highest on WE, and that optimism, efficacy and resilience contribute specifically to WE and flourishing.

The results reveal significant levels of hope in this sample of academics, which may contribute positively to PsyCap among these academics. Hope will predict the performance of employees beyond cognitive ability and efficacy (Peterson, Walumbwa, Byron & Myrowitz, 2009). Hope is intrinsically initiated and determined (Snyder, 2000) and this suggests that individuals with hope will adapt to change and challenges even in a stressful work environment. The results revealed that academics possess high levels of hope as well as WE. This in turn suggests that individuals tend to be more energised to persist in achieving their particular goals as hope is closely related to constructs like efficacy, optimism, resilience and generalised well-being and positive work and organisational psychology (Larson &

Luthans, 2006; Luthans, Avolio et al., 2007). Hope has a definite impact on performance and can be developed (Snyder & Lopez, 2002).

The results reveal that the academics possess fairly low levels of resiliency. According to Luthans and Youssef (2004), the resilient individual is able to recuperate after failure or overwhelming challenges. The results of this study are consistent with those of Luthans (2002a), who concludes that although resiliency has been recognised in the positive psychology movement (Masten, 2001), it goes beyond simple adaptation and is reactive rather than proactive. Since the level of resilience is still adequate, the implication is that the academics will in all probability be able to move on in the work environment despite having had stressful experiences.

The results reveal that the academics possess an adequate level of optimism indicating that the academics in this target group may have persistence and pervasiveness, two key dimensions of how they will explain changing events (Seligman, 2002). Luthans et al. (2004) report optimism to be more closely associated with positive psychology than the other constructs. In line with research conducted by Stajkovic and Luthans (1998b) the results suggested that individuals may sometimes find it difficult to persevere in the face of obstacles.

A negative relationship between PsyCap and the emotional dimension of RTC was revealed in this research. Similarly, a negative relationship between PsyCap and the behavioural dimension of resistance was revealed. Since the results do not reveal that the academics possess a particularly high level of routine seeking, this could imply that high levels of PsyCap may influence positive organisational change. In line with research conducted by Luthans et al. (2004), the results suggest that the development of PsyCap can increase efficiency and the successful implementation of change initiatives. The negative relationship revealed between the three subconstructs of hope, efficacy and optimism and the intentional dimension of resistance suggest that it does not indicate particularly negative behaviour.

In terms of structural equation model methods, implemented to test the measurement and structural models, the results revealed an acceptable fit with the data. The results revealed a significant negative relationship between PsyCap and RTC in this sample of ODL academics. It is important to note that a negative relationship was also found between PsyCap and RTC in the correlational analysis in this research. In line with research conducted by Beal lll et al. (2013) and Saruhan (2013), the results suggested that employees who reported high levels of RTC reported low levels of PsyCap.

In conclusion, the results reveal a strong support for the existence of a significant interrelationship between RTC, WE and PsyCap in academics at the ODL HEI. The empirical study revealed significant relationships between the subscales, dimensions and subdimensions of RTC, WE and PsyCap. PsyCap was the strongest predictor of WE while the relationship between RTC and Psycap was a moderate negative one.

6.6.3 Research aim 2

Research aim 2 *was to empirically investigate whether significant differences exist between groups of academics as defined by biographical variables (age, gender, marital status, educational level, job level and years of service) between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by Vigour, Dedication and Absorption) and PsyCap (represented by hope, efficacy, resilience and optimism).*

The results revealed no significant differences between male and female academics and no significant differences between the groups of academics with different educational levels with regards to RTC, WE and PsyCap.

The results reveal that the older academics experienced higher levels of efficacy and resilience adapted. The results also revealed that single academics possess higher levels of WE and resilience adapted. In line with research conducted by Bakker et al. (2011), the results suggest that engaged individuals are strongly

involved and immersed in their work. This in turn suggests that it may be easier for single academics to spend more time and longer hours on work responsibilities than married academics with family responsibilities.

The results reveal that the professors possess higher levels of emotional reaction than lecturers and junior lecturers. The results further suggest that individuals may experience aggression, leading to frustration and undesirable behaviour (Coch & French, 1948). The results further reveal that the professors possess higher levels of cognitive rigidity than lecturers and junior lecturers. This in turn suggests that the individual is able to assess the benefits and the necessity for the change (Piderit, 2000).

The results suggest that participants with fewer years of service reveal higher levels of optimism and higher levels of routine seeking. In line with research conducted by Scheier and Carver (1992), the results suggest that optimism leads to persistence in goal-directed striving and is a powerful predictor of behaviour.

In terms of positive work and organisational psychological functioning of this sample of academics, the results reveal higher levels of hope and optimism in academics who have been working for more than six but less than fourteen years. The results reveal that academics with shorter tenure, indicated higher levels of vigour/dedication. According to Diedericks and Rothmann (2013) and Swart and Rothmann (2012), flourishing individuals may show hope, optimism, be engaged in their work and experience meaning and purpose in their work.

This concludes the integration of the empirical results with the literature study.

6.7 CHAPTER SUMMARY

This chapter gave an overview of the statistical results that were relevant to this research and were interpreted to enable the researcher to integrate the results of the empirical research with the literature study. The results provided supportive evidence for the stated research hypotheses.

The following empirical research aims were achieved in this chapter:

Research aim 1: To empirically investigate the nature of the statistical interrelationships of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa.

Research aim 2: To empirically investigate whether significant differences exist between groups of academics as defined by biographical variables (age, gender, marital status, educational level, job level and years of service) between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism).

Chapter 7 addressed the final stage of the empirical study, namely the drawing of conclusions, discussion of the limitations and making of recommendations for the discipline of industrial and organisational psychology on the basis of the results of this research.

CHAPTER 7: CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

7.1 INTRODUCTION

The final step, namely step 8 of the methodology as described in the research process (section 1.8) concludes the research project. The conclusions follow and the limitations of the literature and empirical results are highlighted. The chapter concludes with a discussion of the recommendations for the practical application of the results and for future research studies.

7.2 CONCLUSIONS

Step 8 in the research process focuses on the conclusions, based on the literature and empirical studies in accordance with the aims of the research, as set out in Chapter 1.

7.2.1 Conclusions relating to the literature review

The general aim of this study was to investigate the interrelationship dynamics of the psychological constructs of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism), as experienced by academics in the changing environment in an ODL university in South Africa.

Conclusions were drawn on each of the specific aims.

Research aim 1:

The first aim, namely to conceptualise the context of the work environment of the ODL academic in the 21st century, was achieved in Chapter 2.

The following conclusions were drawn:

Academics working in an ODL work environment in the 21st century are experiencing unprecedented change and challenges (Paloff & Pratt, 2011). These challenges include the conversion of conventional teaching methods to on-line teaching by adjusting to the latest communication, digital and technological developments, adapting subject content to the rapid pace of social and economic change, as well as to significant demographic shifts in addition to the increasing challenges of globalisation (Bates 2014). ODL universities depend largely on academics as well as technology to bridge the geographical distance between academics and students and apply the concepts of open and flexible learning. Research should therefore focus on the experiences, attitudes and behaviour of academics in this demanding work environment (Belawati & Baggaley, 2009; Heydenrych & Prinsloo, 2010).

As explained in Chapter 2, South Africa and other African countries are faced with an increasing demand for skills and training and, according to Kokutsi (2011), HEIs on the African continent, are unable to address this high demand. As the demand is not only to increase affordable access, but also to increase access accompanied by success, extensive attention has been paid in the thesis to the importance of the changing role and competencies of academics as well as the barriers experienced by ODL academics (Bigatel et al., 2012). ODL, as a complex set of phenomena has drastically changed the numerous roles and required competencies of online academics and various researchers are defining the changing role of the academic in a virtual learning environment (Aydin, 2005; Bawane & Spector, 2009; Surikova & Baranova, 2009). In the light of the multidimensionality of these roles and the competencies expected of academics, it is concluded that the changing work environment is currently more challenging than ever before.

Academics regard the extensive workload, lack of time to develop ODL material, inadequately developed skills for the digital age and insufficient support from the organisation as some of the more important barriers to optimal functioning in the

rapidly developing world of work (Bates, 2014; Panda & Mishra, 2007; Naidu, 2014). Furthermore, cultural, technical, personal, attitudinal and organisational barriers are seen as having an aggregative effect on the optimal functioning of academics in their activities in the ODL environment (Berge & Mrozowski, 1999).

The global world of work is constantly changing and this ODL university, one of the mega-universities of the world, has not escaped the changes and challenges in the HE system. Academics are continuously required to adapt to these changes in order for the organisation to endure and stay competitive (Wilson et al., 2004). As employee RTC is a significant obstacle in thr way of effective organisational change, the importance of the psychological well-being of the academic was emphasised. As reported in the literature, the flourishing of academics in the sense of feeling good and functioning well, can contribute to a positive ODL university. This will ensure that academics minimise RTC, experience well-being through positive psychological functioning and WE, hope, efficacy, resilience and optimism, and adapt to the changing work environment.

Research aim 2:

The second aim, namely to conceptualise the psychological behavioural construct of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity) as experienced by ODL academics, was achieved in Chapter 3.

The following conclusions were drawn:

The term RTC has gone through a transformation in meaning from a systems concept to a psychological one. Weisbord (1987) identifies resistance as a valuable behaviour that can be channelled more constructively. The result is that the ODL academic's RTC can be positively influenced as employees may resist the unknown, when being dictated to, or resist management ideas that do not seem feasible to them. However, when the HEI attempts to make major changes, the academic may often understand the change and want to make it happen, but there may be obstacles and many factors that prevent change from happening.

The process of change in the current labour market, hich is characterised by flexibility, rapid innovation and continuous changes, was explored in Chapter 3. In the literature review, the four dimensions of RTC, namely the emotional, cognitive, behavioural and intentional dimensions, were reviewed. This correlates with emotional reaction to imposed change in the work environment, cognitive rigidity, which refers to the frequency with which academics change their minds, routine seeking or the inclination to adopt routines or to act to a specific change in the environment and lastly, short-term focus, which prevents academics from realising the long-term benefits of changes in the work environment, as predicted by Oreg (2003).

The aetiology of RTC was premeditated and the role of RTC in the change process was provided. People do question the need for change and resistance is an effective survival mechanism in the rapidly changing work environment. Conceptual models of RTC were studied, including the classic model as well as the individual difference measure model. Sources of resistance, derived from the individual's personality, were identified. A person with high levels of RTC is therefore more likely to be influenced by these sources and this may influence the psychological well-being of the individual. The relationship between RTC and specific demographic factors was indicated. Finally, interventions to counteract RTC and reduce RTC levels in individuals were presented. These included participation, education, facilitation and negotiation.

Research aim 3:

The third research aim, namely to conceptualise positive work and organisational psychology as explained by two theoretical models, flourishing as defined by WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as experienced by ODL academics, was achieved in Chapter 4.

The following conclusions were drawn:

Models of positive organisational psychological functioning were explored in Chapter 4. The first model to be described was flourishing as characterised by academics who are feeling good and functioning effectively. The dimensions of flourishing were provided. Flourishing was defined as the assessment of quality of life as articulated through multidimensional indicators. Flourishing academics, experiencing psychological well-being, are more likely to show hope, efficacy, resilience and optimism as well as being engaged in their work. Flourishing and engaged academics are well adapted and experience high levels of psychological well-being. Positive psychological functioning affects the flourishing of academics via WE and PsyCap, and WE makes an important contribution towards the psychological well-being of academics.

The reasons for focusing on WE within the flourishing model in this study were explained. WE represents willingness to dedicate resources to work and is characterised by three different but related dimensions, namely Vi, De and Ab. Vi is marked by high levels of energy, mental resilience, willingness to invest effort in work and perseverance even in the face of difficulties. De is characterised by experiencing meaningfulness, a feeling of being challenged, inspiration and enthusiasm towards work. Ab means being fully focused and experiencing a sense of harmony while time passes quickly when working. WE has evolved as a core construct in Industrial and Organisational Psychology as well as Positive Organisational Psychology and describes the mental state and well-being of the academic that forms the basis for high degrees of work motivation and performance outcomes.

The aetiology of WE was studied and conceptual models of WE, including the JD-R model and the Affective Shift model, were presented. Demographic factors relating to ODL academics were examined, followed by the positive effects that WE may have on the organisation and the individual, as well as on positive emotions, good health, the ability to mobilise resources, the crossover of

engagement and off-job time. Finally, a discussion followed on the negative effects of WE as well as interventions to promote WE.

Secondly, PsyCap was conceptualised as the positive psychological state of development characterised by hope, efficacy, resilience and optimism. PsyCap focuses on unique constructs and behaviour that may result in optimum performance in the work environment. Hope is characterised by perseverance towards goals, pathways and planning of ways to meet goals and a derived sense of success, initiated and determined through the self. Efficacy is the ability to mobilise resources and show motivation to achieve success or to execute courses of action required to deal with change or events. Resilience is the capability to cope successfully in the face of significant change and to bounce back from failure. Optimism is the tendency to look on the positive side of change or events; it is a quality that supports positive performance in the work environment.

The aetiology of PsyCap was studied and the dimensions of PsyCap presented. Demographic factors relating to PsyCap were examined, followed by interventions to encourage positive psychological functioning in the work environment. These included facilitating positive emotions, enhancing individual strengths and solution-focused coaching.

Furthermore, positive psychology, positive subjective experience and positive institutions are concerned with the effective functioning of the academic. The flourishing academic, functioning within a positive institution, will be more likely to regard the changing work environment as a challenge. Organisational psychology and positive organisational behaviour are directed towards the challenges associated with the psychological well-being of academics. PsyCap is directed at work motivation and as psychological well-being is concerned with the realisation of potential and perceived flourishing of the academic, its importance was emphasised. Positive work and organisational psychology was defined and the development of positive organisational psychology was studied.

Research aim 4:

The forth research aim, namely to conceptualise the theoretical interrelationship between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as experienced by ODL academics in a changing world of work, was achieved.

The following conclusions were drawn:

The interrelationship between the three constructs was studied from a national as well as an international research perspective. In the literature review, it is clear that because of the key drivers of organisational change and the institutional challenges in the ODL HE environment, it is of vital importance for the organisation to utilise employees' strengths. This requires change resilience but also that employees show more proactive behaviour and use their own strength to achieve psychological well-being (Luthar & Cicchetti, 2000).

This study was conducted from the perspective of positive work and organisational psychology, and it is therefore noteworthy that engaged and flourishing employees, because of their energy and effective connection with their work, view themselves as capable of handling job demands and challenges (Bakker et al., 2006). WE, which is defined by vigour, dedication and absorption, falls within the flourishing model and focuses on emotional and psychological well-being (Rothmann & Cooper, 2015). When predicting WE and when WE is developed, the development of PsyCap may be implied.

Institutions of HE are faced with the challenge of being positive institutions, contributing to the positive psychological well-being of academics in a changing global and national HE, ODL environment. Positive organisations benefit from the development of PsyCap (Luthans et al., 2005). The present study examines ways in which the academic environment contributes to RTC through increased internationalisation of the HE environment, new developments in technology,

changes in student profiles and lack of resources, to name but a few factors (Bokor, 2012; Naidu, 2014). The organisation therefore needs to manage its positive psychological resource capacities and as PsyCap is a predictive factor of WE, this has been supported by the JD-R model in which personal resources are believed to change demands into challenges (Bakker & Demerouti, 2008).

The conclusion of this section of the literature review was that a positive theoretical relationship exists between the WE and PsyCap constructs. A negative relationship was observed between RTC and both the WE and PsyCap constructs.

This finalises the conclusions in terms of the literature review.

7.2.2 Conclusions relating to the empirical results

The empirical aims of this study were to investigate the following:

Research aim 1:

The first research aim, namely to empirically investigate the nature of the statistical interrelationships of RTC (represented by routine seeking, emotional reaction, short- term focus and cognitive rigidity) WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) as manifested in a sample of respondents in an ODL HEI in South Africa, was achieved.

The empirical results provided supportive evidence for the research hypothesis H_a1.

The following conclusions were drawn:

- A significant and negative relationship found between RTC and WE suggests that academics with high levels of RTC may resist the changes and challenges in the ODL HE environment. They may be preoccupied with the

short-term inconvenience caused by the change and therefore fail to realise the long-term benefits. It could therefore imply that they will be less likely to incorporate changes voluntarily and when changes are imposed on them, they will be more likely to experience negative emotions, such as anxiety, fear and even aggression that may affect their psychological well-being negatively.

- The results revealed a significant and negative relationship between RTC and PsyCap. This negative relationship was also confirmed by the structural equation modelling analysis of this research. Individuals with high PsyCap will present more favourable behaviours towards organisational change. PsyCap is related to positive behaviour and attitudes and positive employees, within the changing environment, may have the confidence to adapt to change, the resilience to bounce back from difficulties, the motivation to find alternative pathways when obstacles are encountered and make optimistic attributions with a positive outlook for the future.

- The affective, intentional and cognitive forms of resistance indicate that positive PsyCap can contest negative attitudes which are often negatively associated with organisational change and affect the adoption of new ideas and changes in the ODL environment. Positive psychological resources may lead to emotional engagement and goal-directed energy, which in turn can have a positive influence on the employees' attitudes towards change.

- High levels of PsyCap explain desired attitudes (emotional engagement) and behaviours which assist academics to accept organisational change, as high levels of PsyCap imply cognitive thinking processes. PsyCap could broaden the options or choices the employees perceive in the changing environment, contributing to a positive approach to problem solving and enhancing the emotional energy necessary for adjusting behaviour to the changing work environment.

- The negative relationship between PsyCap and the emotional components of resistance could imply a negative attitude on the part of employees because of unfavourable consequences such as an increase in workload or even an overload (pace and amount of work). This suggests high levels of stress and anxiety and may even imply aggression when employees are confronted with changes in the work environment. This could also manifest in anger, complaints about the change and the intention to persuade others that the change is bad. However, individuals with high PsyCap display more favourable behaviour towards change.

- The negative relationship between PsyCap and behavioural resistance in response to changes can pose a threat to this population of academics. This could imply that they do not adapt to the changes in the work environment easily due to the extent of their preference for a stable and routine environment. However, individuals with high PsyCap present more favourable behaviour towards change.

- The positive relationship between PsyCap and WE suggests that these academics present fairly high levels of hope, efficacy, resilience and optimism as dimensions of flourishing. The significance of hope as a goal-directed cognitive process in initiating change, efficacy as the ability to mobilise cognitive resources, resilience as the capacity to bounce back after change has occurred and optimism as the ability to anticipate that future change will be positive in nature, became manifest in this group of academics.

- WE, developing from a positive work and organisational psychological perspective, within the flourishing model, focuses on psychological well-being, and there is sufficient evidence to indicate that WE is indeed present in the target group of academics studied. Therefore, despite the levels of RTC indicated in this group of academics, they are energetic, mentally resilient, proud of their work, strongly involved in and enthusiastic about work and happily engrossed in their work. This could further imply that they are

dedicated, confident of their effectiveness and that the quality of their work performance is of importance to them. They may invest their excess resources in their job performance, despite the challenging work environment.

- Feeling good and functioning well, the components of flourishing, are pathways towards the positive work and organisational psychological functioning of individuals. This could manifest in this group of academics as positive emotions, engagement in their everyday work, a sense of accomplishment and the enhancement of psychological well-being.

- PsyCap and WE manifested in this group of academics, even though there were definite signs of RTC which could have a negative effect on the well-being of the target group. This could include negative emotions, fear of losing one's job and anxiety about continuous demands and challenges. However, PsyCap as well as WE contribute significantly to employee well-being and flourishing and this could imply that the employees feel energetic, dedicated and absorbed in their work. It could further suggest that their emotional and psychological behaviour may be characterised by hope (motivation to attain success), efficacy (to successfully execute tasks within a specific context), resilience (to positively cope and adapt to changes) and optimism (expected success when faced with change).

Research aim 2:

The second research aim, namely to empirically investigate whether significant differences exist among groups of academics as defined by biographical variables (age, gender, marital status, educational level, job level, and years of employment) between RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism), was achieved.

The empirical results provided supportive evidence for the research hypothesis H_a2.

The following conclusions were drawn:

a) Age

- The results revealed higher levels of routine seeking in the younger group of academics, which could imply that they may obstruct the goals of change in the ODL work environment.

- The results revealed lower levels of efficacy, resilience adapted and absorption in the younger academics, which could suggest that these academics do not yet possess the necessary cognitive processing that determines resilience and efficacy and are therefore not as happily engrossed in their work as academics already at the maintenance and late career stages.

- A weak positive relationship between WE and age was found in this research and could possibly indicate that the older academics also experience RTC.

b) Gender

- The results suggest that there are no significant differences between male and female academics with regard to RTC, WE and PsyCap.

- The results indicated no gender differences in the level of WE in this research and are in accordance with the trends identified in the literature review.

c) Marital status

- The results indicated significantly higher levels of vigour/dedication in single academics and the lowest levels of vigour/dedication in divorced/widowed academics.

- The results indicated higher levels of absorption in divorced/widowed academics than in married academics.

- The results revealed that single, divorced or widowed academics in this target group scored significantly higher on resilience adapted than academics who are married and/or in a permanent relationship.

- The results revealed that single academics scored significantly lower on RTC than the married or divorced/widowed academics, implying possible positive adaptation in the context of their changing work environment.

d) Educational levels

- The results suggested no significant differences as defined by educational levels between RTC, WE and PsyCap of groups of academics in this research. Further investigation in the South African context is suggested.

e) Years of service

- The results revealed that academics with less than five years' service scored higher on routine seeking than the other groups of academics.

- The results indicated that academics who had worked in the ODL environment for more than six but less than fourteen years scored higher on hope adapted and optimism than the other tenure groups of

academics. This may imply that academics with shorter tenure tend to indicate higher levels of energy and enthusiasm.

Therefore, significant differences exist between groups of academics as defined by age, marital status, job level and years of employment with regard to RTC, WE and PsyCap.

This concludes the integration of the empirical results with the literature.

Research aim 3:

The third research aim, namely to formulate recommendations for ODL academics, the ODL HEI, Industrial and Organisational Psychology as well as for future research based on the findings of this research project, is discussed in section 7.4.

7.2.3 Conclusions relating to the central hypothesis

The central hypothesis (Chapter 1) states that the interrelationships between academics' RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) make for individuals with different levels of the psychological behaviour that informs optimal positive work and organisational psychological functioning in a changing work environment. This hypothesis further assumes that academics with a particular level of positive psychological behaviour will be able to adapt to changes and be more engaged, hopeful, efficacious, resilient and optimistic, which in turn will influence their work performance in a changing ODL work environment. Furthermore, significant differences exist between groups of academics as defined by age, gender, marital status, educational level, job level and years of service with regard to RTC, WE and PsyCap.

The empirical study has provided statistically significant support for the central hypothesis. The hypothesis is therefore accepted.

7.3 LIMITATIONS

Several limitations regarding the literature review and the empirical study have been identified, as indicated below.

7.3.1 Limitations of the literature review

The following limitations were evident in the literature review:

- Research on the manifestation of RTC, WE and PsyCap, specifically in an ODL environment, is limited.

- No research was found on the interrelationship between RTC, WE and PsyCap, specifically in an ODL environment.

- The fact that RTC originated as a psychodynamic construct and is seen as a defence mechanism made it difficult to reconceptualise the construct into the positive organisational psychology paradigm in this research on ODL academics.

- The study was limited to two paradigms, namely positive organisational psychology and the humanistic paradigm which focused on the discipline of Industrial and Organisational Psychology and its subfields, positive organisational psychology, personnel psychology and psychometrics.

- PsyCap, together with its measuring instrument, the PCQ-24, is a recently developed construct and it was challenging to find information and research results, especially within the South African context.

- As the sample population consisted of academics at an ODL institution, applicable previous research results for comparison are not readily available.

7.3.2 Limitations of the empirical study

The following are the limitations encountered in this research in respect of the empirical study:

- Because of the relatively small sample applied in this study, the results of this study cannot be generalised to the overall population of academics. A larger sample with more representatives in terms of gender and educational level would have been desirable since it would have made it possible to generalise the results.

- Another limitation of the study is the fact that in an effort to improve the response rate for the benefit of the statistical analysis, the academics were reminded a few times to participate, yet only 208 questionnaires were usable for the purposes of this research.

- No research results could be found on the interrelationships between RTC (measured by the RTC scale), WE (using the UWES to determine the levels of WE) and PsyCap (using the PCQ-24) for comparison.

- Three measuring instruments, namely the RTC scale (Oreg, 2006), the UWES (Schaufeli & Bakker, 2003) and the PCQ-24 (Luthans, Avolio et al., 2007) were used in this study. As only one instrument for each construct was used, different measuring instruments might have revealed different results.

- Another limitation pertaining to the study was the use of a cross-sectional design. This limits the inference and confirmation of causal relationships between RTC, WE and PsyCap. It is recommended that longitudinal research be conducted to undertake further investigation into the drivers of RTC, WE and PsyCap.

- As only academics in an ODL institution participated in this study, future studies on the interrelationships between RTC, WE and PsyCap should consider larger samples from more diverse organisations in order to increase the generalisability of the results.

Despite the above-mentioned limitations of the study, it may be concluded that the results of the study contributed valuable new knowledge on the South African ODL HE environment. Furthermore, these results afford future researchers opportunities in terms of the relationship between the variables that influence the changing work environment of employees. It is important to consider the significance of the optimisation of positive behaviours and emotions within the work environment which contribute to flourishing. It is noteworthy that younger employees may experience higher levels of RTC although there are no differences between males and females with regard to RTC, WE and PsyCap. The insights derived from the study have deepened our understanding of the positive work and organisational psychological functioning of ODL academics within a changing work environment.

7.4 RECOMMENDATIONS

To achieve the empirical aim stated in section 1.3.2.2, this section formulates recommendations for ODL academics and the ODL institution, Industrial and Organisational Psychology as well as for further research. The recommendations are made on the basis of the results, conclusions and limitations of this research project.

7.4.1 Recommendations for ODL academics and the ODL HEI

The results provided a valuable understanding in terms of the research aims and it is also important to determine specific interventions needed to address and develop positive organisations and employees who are psychologically connected to their work.

Academics often feel overwhelmed in the changing ODL work environment, are expected to perform complex tasks, need role clarity and often find themselves working in isolation. Major change programmes, such as globalisation and technological innovations, may not necessarily only be a source of problems to management and the organisation, but may create new opportunities to involve academics actively in the process of change to enhance and reinforce their positive work and organisational psychological functioning. It is therefore recommended that an action plan, focusing on opportunities for the academic as well as for the positive organisation and embodying the principles of fairness and the favourable aspects of change should be implemented. The plan should be geared to the younger academics, and have the potential to have a positive impact on commitment to change and challenges. It should be practised in the work environment.

Academics are expected to take responsibility for their own personal development and as job resources are positively related to WE, the organisation needs to implement action plans to ensure the availability of physical, cognitive and emotional resources. The organisation should create an organisational climate that is supportive and conducive to fair, trusting employee relationships and vibrant communication channels and that would contribute to greater WE and increased psychological well-being. Positive work and organisational psychological functioning interventions implemented at the ODL HEI will help to enhance employee well-being and the flourishing of employees. Such interventions generate broader ways of thinking and behaving, and counteract the negative impact of RTC.

Psychological well-being could be enhanced by decreasing the workload of academics, ensuring variety in their tasks, and providing different learning opportunities and autonomy in their jobs. It is recommended that the organisation ensure that job resources are increased and actively, through strategies, eliminate negative attitudes and behaviour as well as any other barriers, such as institutional barriers, that may prevent the optimal functioning and engagement of the ODL academic.

PsyCap will enable academics to put extra effort into difficult tasks undertaken, allow them to generate possible solutions when they encounter problems, motivate them when experiencing positive results, and allow them to experience positive emotions even in case of setbacks. Interventions to increase PsyCap, which is state-like, are assumed to produce synergy effects leading to higher efficiency. The PsyCap Intervention training model (PCI) (Luthans, et al., 2006), designed to increase levels of hope, efficacy, resilience, and optimism individually as well as the overall level of PsyCap for performance improvement, could be implemented at this ODL institution.

A continued professional development programme (CPD), aimed specifically at equipping ODL academics with the necessary competencies, skills and knowledge and also inculcating adequate positive psychological behaviour, so that they are able to function optimally in the changing ODL work environment and flourish, could be implemented at the HEI.

Lastly, it is recommended that the organisation constantly implements strategies to become and remain a positive organisation, creating a positive work environment that supports positive work and organisational psychological functioning.

7.4.2 Recommendations for Industrial and Organisational Psychology

The literature review provided a valuable foundation for the investigation of the interrelationships between RTC, WE and PsyCap in ODL academics. The empirical study confirmed the interrelationships between RTC, WE and PsyCap in academics in the changing world of work; the results could be used as a framework for Industrial and Organisational Psychology.

Because it is a psychodynamic construct, RTC causes individuals to assess any change in their work environment as beneficial or detrimental to their own interests and future career. The academics in this target population may experience insecurity, low levels of energy, be less resilient, less involved in their work, less enthusiastic, less inspired and may not be happily engrossed in their work. Industrial and organisational psychologists need to develop interventions to

involve individuals' cognitive interpretation of changes, aimed at creating a willingness to change by increasing WE and PsyCap and decreasing resistance.

The findings on WE and PsyCap could be included in the well-being construct as it relates to the positive work and organisational psychological functioning of academics. Industrial and organisational psychologists could engage in interventions to increase flourishing and well-being among academics in a changing work environment.

Industrial and organisational psychologists need to emphasise the importance of work-related well-being and, as increased utilisation of technology, globalisation, lack of resources, demands from students and lack of support from the organisation, in addition to the various complex roles and competencies expected from ODL academics, to name a few factors, affect individuals' well-being, industrial and organisational psychologists should promote the health and well-being of employees (Schiffrin & Nelson, 2010), through the necessary interventions based on the results of this study.

Positive psychology, because it is a relatively new subdiscipline in psychology, is exciting and is attracting the attention of industrial and organisational psychologists. They should use the results of this study to incorporate the dimensions of WE, namely vigour, dedication and absorption, as well as the dimensions of PsyCap, namely hope, efficacy, resilience and optimism, into a framework that could be used to enhance the emotional, psychological and social well-being of individuals.

The results of this study also suggest that industrial and organisational psychologists need to be aware that different biographical groups (age, gender, marital status, educational levels, job levels and years of service) have different needs affecting their RTC, WE and PsyCap. As this has an impact on the behaviour of academics at work, it is important to create an environment that addresses the needs of the different biographical groups.

7.4.3 Recommendations for future research

- Future research needs to continue to explore the nomological network of WE and PsyCap and other related positive constructs in the changing world of work.

- It is recommended that the structure of the UWES be reassessed in future studies to clarify the items that did not correspond to the three factors identified according to the factor analysis in this research.

- Future research should focus on the long-term interrelated effect and developmental opportunities for WE and PsyCap which have practical implications for the development of more positive work and organisational environments and more positive institutions.

- This study only focused on certain positive constructs and on RTC in the field of Industrial and Organisational Psychology. According to Peterson and Seligman (2004), the aim of the positive psychology movement is to correct the imbalance that occurred due to focusing only on the negative aspects. It is therefore recommended that future research studies should include other variables, such as job demands and burnout, to ensure a balance.

- Future research should better capture both positive and negative aspects of RTC, WE and PsyCap and it is recommended that the broader contextual organisational factors that impact on RTC, WE and PsyCap should be investigated.

- Future research should investigate the effect of WE and PsyCap on changes in the work environment by stratifying the context further as this study was investigating the level of WE and PsyCap as they relate to changes in the ODL work environment. WE and PsyCap were not associated with any specific change event that took place. This can move the research on WE and PsyCap from theory to practice.

- The manifestation of RTC, WE and PsyCap among academics at an ODL institution should be investigated in other HE institutions in a changing HE in South Africa as well as globally, to compare the results. A larger sample from other HE institutions could add value to the existing knowledge.

- RTC has been introduced as a variable without taking employee social or cultural interpretations of change into consideration and significant differences between the scores of white and black individuals on indexes of psychological well-being were found in previous research. No relevant South African research studies on PsyCap with regards to ethnicity could be found. This could be explored in future research.

- It is recommended that future studies focus on the influence of the dynamic, changing landscape of the HE environment on the academic, globally, as well as in South Africa. The impact of technology, the changing profile of the students, the changing skills demands from industry and the globalisation of the world of work, need to be explored in future research studies.

7.5 EVALUATION OF THE RESEARCH

The study investigated the interrelationship dynamics between the psychological constructs of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism), as experienced by academics in the changing environment in an ODL HEI in South Africa.

The research makes a contribution to the field of Industrial and Organisational Psychology on three levels, namely, on a theoretical, an empirical and a practical level.

7.5.1 Contribution on a theoretical level

On a theoretical level readers of the study will develop a better understanding of the positive psychological constructs of WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) and their influence on an individual's RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity). The significant relationships found raised awareness of the fact that academics possess different levels of RTC, as well as different levels of positive psychological functioning, such as WE and PsyCap, influencing their adaptation to changes in the world of work.

The literature review suggested that a positive relationship exists between WE and PsyCap and a negative relationship exists between RTC and WE and RTC and PsyCap. The dynamic, changing world of work of ODL academics, influencing the well-being and positive work and organisational psychological functioning of such academics, requires the HEI, as a positive institution, through the development of positive psychology, to enable academics to flourish by focusing on the optimal expression of the potential of the individual.

The relationships found between the variables may prove useful to future researchers in exploring possible interventions to enhance positive work and organisational psychological functioning and reduce resistance among ODL academics. Furthermore, the research results contribute to the body of knowledge concerned with positive psychological factors that may increase a person's psychological functioning, flourishing and well-being in a changing work environment.

7.5.2 Contribution on an empirical level

On an empirical or methodological level, the research provided useful insights into, firstly, the empirical interrelationships found between the psychological construct RTC and the positive psychological constructs of WE and PsyCap, secondly into the interrelationships found between RTC and WE and RTC and PsyCap as well as the relationship between WE and PsyCap, and thirdly the research

demonstrated that there are significant differences between groups of academics as defined by biographical variables, namely age, gender, marital status, educational level, job level, and years of service. The results are useful in informing industrial psychologists and ODL academics on the way in which positive psychological constructs and biographical variables play a role in the psychological functioning and well-being of the academic.

The empirical findings provided statistically significant support for the central hypothesis. The findings suggest that interrelationships do exist between an academic's RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism) andthat this produces individuals with different levels of psychological behaviour that informs optimal organisational functioning in a changing work environment. Furthermore, academics displaying a particular level of positive psychological behaviour will be able to adapt to changes and be more engaged, hopeful, efficacious, resilient and optimistic, which in turn will influence their work performance in a changing ODL work environment. In addition, significant differences exist between groups of academics as defined by age, gender, marital status, educational level, job level and years of service with regard to RTC, WE and PsyCap.

7.5.3 Contribution on a practical level

On a practical level, the study established that there are interrelationship dynamics between the psychological constructs of RTC (represented by routine seeking, emotional reaction, short-term focus and cognitive rigidity), WE (represented by vigour, dedication and absorption) and PsyCap (represented by hope, efficacy, resilience and optimism), as experienced by academics in the changing environment in an ODL university in South Africa.

Furthermore, groups of ODL academics as defined by age, gender, marital status, educational level, job level and years of service differ in terms of their RTC and

levels of positive psychological functioning, as defined by WE and PsyCap. Considering the current dramatic changes in HE in South Africa as well as globally, Industrial and Organisational Psychology and the HEI can develop interventions to enhance positive work and organisational psychological functioning as well as skills and behaviour of ODL academics which will enable them to adapt to changes in the dynamic, changing work environment.

This research, recognising the importance of positive employees, is the first empirical investigation of WE and PsyCap in the ODL environment in South Africa, that is founded in positive psychology and provides new information that may be used to increase positive psychological behaviour and reduce RTC. The intent of this study is therefore to identify and build on the positive aspects of human behaviour. Industrial and Organisational Psychology and the HEI can integrate these results in interventions and in doing so, they may reduce resistance and the amount of resources needed to influence the optimisation of potential of academics even in the event of a changing world of work.

In conclusion, it is trusted that the results of this study have provided insight into the interrelationships of RTC, WE and PsyCap of ODL academics in a changing work environment and that Industrial and Organisational Psychology and the HEI will be able to utilise the results effectively towards the reduction of RTC as well as the flourishing, positive work and organisational psychological functioning and well-being of academics. It is also trusted that these results can make organisations, functioning in the dynamic, rapidly changing world of work of the 21st century, aware of the impact of positive psychological behaviour in the positive organisation. Recommendations have been made to build onto this study for future research and this research project is making a positive contribution to the field of Industrial and Organisational Psychology in the South African ODL context.

7.6 CHAPTER SUMMARY

Chapter 7 achieved the following research aim, namely the formulation of research conclusions, to outline the limitations of this research and to make recommendations for the discipline of Industrial and Organisational Psychology, ODL academics and the HEI and future research.

The aim of this research was to determine whether there is an interrelationship between RTC, WE and PsyCap among academics at an ODL HEI in South Africa. It was concluded that there is indeed a significant positive relationship between WE and PsyCap and a significant negative relationship between RTC and WE and RTC and PsyCap.

This concludes the research project.

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APPENDIX A: LETTER OF INVITATION

Dear Colleagues

My name is Hanneli Diedericks and I am a Senior Lecturer in the Department of Human Resource Management (CEMS) at Unisa. The purpose of this survey is to gather data for my Doctoral research project. I am investigating constructs concerning academics within the ODL work environment, and full ethical clearance has been granted by the Unisa Senate Research and Innovation and Higher Degrees Committee (SRIHDC) to continue with the research. The benefit of the research to you as an academic is that it will provide you with an opportunity to give your opinion anonymously regarding the rapidly changing environment that we work in. The survey should take about 15 to 20 minutes of your time. It would be appreciated if you could complete the survey before **16h00 on 30 September 2014**.

To access the survey, please click on the link provided.

Please be assured of total anonymity, as a Lime Survey has been used to protect the identity of all participants. Should you encounter any problems when completing the survey, feel free to contact me. I will gladly provide the ethical clearance certificate or any other information required on request.

The success of the project depends on your participation. Your time and effort is greatly appreciated!

APPENDIX B: ETHICS CLEARANCE

UNISA

Ref #: 2014/CEMS/IOP/001

ETHICS REVIEW COMMITTEE: DEPARTMENT OF INDUSTRIAL AND ORGANISATIONAL PSYCHOLOGY

STUDENT: H DIEDERICKS

(Student number: 5808448)

SUPERVISOR: PROF F CILLIERS
Joint supervisor: N/A

This is to certify that the application for ethics clearance submitted by

H DIEDERICKS

(Student number: 5808448)

For the study

PSYCHOLOGICAL CAPITAL, RESISTANCE TO CHANGE AND WORK ENGAGEMENT OF ACADEMICS IN THE OPEN DISTANCE LEARNING ENVIRONMENT

Decision:
Application conditionally approved

The application for ethics clearance for the above mentioned research was reviewed by IOP *unit committee* on 08/04/2014 in compliance with the Unisa Policy on Research Ethics.

Ethical clearance has been Conditional Approved – institutional letter outstanding.

Please be advised that the research ethics review committee needs to be informed should any part of the research methodology as outlined in the Ethics Application (Ref. Nr.: 2014/CEMS/IOP/001), change in any way.

The Research Ethics Review Committee wishes you all the best with this research undertaking.

Kind regards,

Dr O M Ledimo
(On behalf of the IOP Department Ethics Committee)

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