

**WORK ENGAGEMENT, ORGANISATIONAL COMMITMENT, JOB RESOURCES
AND JOB DEMANDS OF TEACHERS WORKING WITHIN TWO FORMER
MODEL C HIGH SCHOOLS IN DURBAN NORTH, KWAZULU-NATAL.**

by

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Declaration

Short dissertation submitted in partial fulfilment of the requirements for the degree of Masters of Arts (Industrial Psychology) at the School of Psychology at the University of KwaZulu-Natal, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. I confirm that an external editor was not used. This dissertation is being submitted for the degree of Masters of Arts in the Faculty of Humanities, Development and Social Sciences, University of KwaZulu-Natal, South Africa. None of the present work has been previously submitted for any degree or for examination at any other university.

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“Perseverance is the hard work you do after you get tired of doing the hard work you already did.”

Newt Gingrich

I dedicate this work to my father, Gary Vaughn Field, who recently passed away. His constant love, support and encouragement throughout my entire university career has enabled me to get to where I am today. Without his support, in every sense of the word, this piece of work would never have been possible. I will be forever thankful and appreciative of the sacrifices he made in his life in order to make sure that I always had of the best; and I shall always be guided by the fine example he set in terms of the importance of having a strong work ethic and being successful in all you do.

Abstract

Orientation: Teachers have a vital role to play within any society. Of late, it can be seen that, generally, teachers within South African schools are becoming increasingly unhappy and dissatisfied with their work. This can be seen as a result of the various strikes and protests over the recent years. Since the South African education system is still very much fragmented and unequal, a legacy of the apartheid era, teachers working within former model C schools, in particular, can be seen as having numerous job demands placed on them in spite of low levels of job resources with which to cope. It is thus important to determine the impact that certain job resources and job demands have on the levels of work engagement and organisational commitment of teachers working within former model C schools in particular.

Research Purpose: The purpose of this research was three-fold. Firstly, to determine the relationship between work engagement, organisational commitment, job resources and job demands. Secondly, to determine whether a differentiated approach to job demands (challenge demands and hindrance demands) impacted on positive organisational outcomes, such as work engagement. Thirdly, to determine the mediating role of work engagement in the relationship between certain job resources and organisational commitment; and between challenge job demands and organisational commitment.

Motivation for the Study: This study was aimed at enabling an identification of the relationship between work engagement, organisational commitment, job resources and job demands. Further, the study was aimed at identifying the impacting role that specific job resources and job demands have on positive organisational outcomes, such as work engagement and organisational commitment.

Research Design, Approach and Method: A cross-sectional survey design was used. A sample (n= 117) was taken from teachers working at former model C high schools in Durban North, KwaZulu-Natal. A demographic questionnaire, Utrecht Work Engagement Scale (UWES), Organisational Commitment Questionnaire (OCQ) and Job Demands-Resources Scale (JDRS) were used to collect data from the sample.

Main Findings: The findings of the study suggest that job resources are positively related to work engagement. The differentiated classification of job demands within the study was tested in terms of its relationship with work engagement. Interestingly it was found that overload (a challenge job demand) was both statistically as well as practically significantly related to work engagement; while job insecurity (a hindrance job demand) was not. Further, it was found that the job resources of organisational support and growth opportunities held predictive value for work engagement. Lastly, findings suggested that work engagement mediated the relationship between job resources and the positive organisational outcome of organisational commitment. The hypothesised mediating role that work engagement could play in the relationship between overload (a challenge job demand) and organisational commitment could not be tested in the present study.

Practical/Managerial Implications: Job resources play a vital role in harnessing positive organisational outcomes such as work engagement and organisational commitment. Further, some job demands are positively related to work engagement. Therefore, managers and heads of schools need to look seriously at evaluating the state of the job demands and resources that are available to their teaching staff, and implement interventions that could increase various job resources and decrease major hindrance demands faced by teachers. These interventions could go a great way in developing more work-engaged as well as organisationally committed teachers.

Contribution/Value-Add: The present research study contributes greatly to the knowledge pertaining to teachers working within former model C high schools within South Africa. Further the present study can be seen to extend the existing literature with regards to the Job Demands-Resource Model by adopting a differentiated approach to job demands and thus consequently investigating the positive relationships that certain job demands may have in terms of organisational outcomes.

Key Words: positive psychology; work engagement; organisational commitment; job resources and demands; positive organisational outcomes.

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Chapter 1: Introduction

1.1 Introduction

The purpose of this dissertation is to investigate the relationship between work engagement, organisational commitment, job resources and job demands of teachers working within former model C high schools in Durban North, KwaZulu-Natal.

Within the present chapter, the problem statement, research objectives and the research method shall be discussed. Thereafter the chapter division of the dissertation shall be stated.

1.2 Problem Statement

During the last two decades the education system in South Africa has undergone enormous changes (Rothmann & Jordaan, 2006). During the mid-1990s, when South Africa was a newly formed democracy, one of the key issues that the new government was faced to deal with was the restructuring of the education system, which in the past was extremely divided and fragmented (Asmal & James, 2001).

Under the apartheid government, schools were classified into three types, model A schools which were fully private; model B schools which were fully public; and model C schools which were semi-public with some private funding in the form of school fees paid by parents (Asmal & James, 2001). The classification of the schooling system was also enforced along racial lines whereby whites mainly attended model A schools and blacks attended mainly model B schools (Asmal & James, 2001). Resources were unevenly distributed between the three school categories, with model A schools receiving many more resources than that of model B schools (Asmal & James, 2001). The deeply fragmented education system of the apartheid era still exists today (Makhubu, 2011). Former model C schools, in particular,

provide an interesting insight into the issues around school resources and the lack thereof, due to the fact that these schools currently can be seen to face the challenge of dealing with an influx of pupils from former model B schools, as the education system is in the process of reorganisation and reintegration (Makhubu, 2011).

In light of the above context, pressures on the South African education system have come from many spheres, including, legislative, global, as well as socio-political and economic spheres (Rothmann & Jordaan, 2006). These various pressures have resulted in heavy demands on the education system, demands for which adequate resources do not exist (Asmal & James, 2001; Rothmann & Jordaan, 2006). The South African education system can be seen to be balancing on a fine line with regards to being faced with copious demands, and at the same time very few resources with which to attend to, and deal with these demands.

The teachers' strike, which started in August 2010, compounded the already existing problems of the country's education system as many high schools were forced to shut down due to the teachers going on strike and refusing to work. Approximately 25, 000 state schools were affected by the strike (Cohen, 2010). The unstable state of the education system within South Africa is a cause of great concern especially at the high school level due to the fact that high school learners' education is being impacted on, which ultimately has knock-on effects on the quality of learners who then go on to enrol in tertiary education institutions, and subsequently enter into South African workplaces.

One of the greatest problems of the South African education system is the general unhappiness and dissatisfaction of high school teachers in particular, due to the fact that they have to meet various demands with minimal resources provided to them (Asmal & James, 2001; Makhaubu, 2011). As a result teacher's can be seen as having less attachment to their jobs, are increasingly disengaged with their work and uncommitted to their schools

(Makhubu, 2011). In light of this, there is an urgent need for engaged and committed high school teachers in South Africa, particularly within former model C schools, as these schools are the ones that have to deal with an influx of students as the education system restructures to become more integrated (Makhubu, 2011).

The rationale of this study is based on the fact that engaged and committed teachers are an important aspect of a fully functioning education system; this particular issue is of utmost importance within the South African context. Up until now, research both internationally and locally, has mainly been conducted on the effect of job resources on work engagement, and the effect of job demands on burnout of teachers, with hardly any research focusing on the possibly positive relationship that job demands may also have with positive organisational outcomes such as work engagement and organisational commitment. To the knowledge of the researcher, few studies have addressed the relationship between job demands, job resources, work engagement and organisational commitment of high school teachers. Furthermore, within the South African context, no research, to the knowledge of the researcher, has addressed the relationship between these variables within samples of teachers working in former model C high schools. In light of the existing gaps in the literature, the present study seeks to investigate the relationship between job demands, job resources, work engagement and organisational commitment of teachers within three former model C high schools within the Durban North area of KwaZulu-Natal.

The aim of the present study was to explore the relationship between job demands, job resources, work engagement and organisational commitment of teachers from two former model C high schools within the Durban North area of KwaZulu-Natal. *The Job Demands Resource Model* (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), and its extension into the *Dual Process Model* (Schaufeli & Bakker, 2004) was used as the theoretical framework

underlying the present study. In particular the recent classification of Crawford, LePine, & Rich (2010) was used in order to differentiate between challenge demands and hindrance demands within the study.

Insights gained from this study could provide relevant and important information for the formulation of interventions aimed to increase high school teachers' levels of engagement and commitment, as well as shed light on the extent to which job demands and job resources impact upon work engagement and organisational commitment of this group of individuals. Furthermore the findings from the present study also have the potential to inform future research.

1.3 Research Questions

The following research questions could consequently be identified for this investigation:

- How are work engagement, organisational commitment, job resources and job demands conceptualised within the research literature?
- What are the factor structures of the measuring instruments?
- What are the reliabilities of the measuring instruments?
- Are job resources positively related to work engagement?
- Are challenge job demands positively related to work engagement?
- Are hindrance job demands negatively related to work engagement?
- Are job resources predictive of work engagement?
- Does work engagement mediate the relationship between job resources and organisational commitment?
- Does work engagement mediate the relationship between challenge job demands and organisational commitment?

1.4 Objectives of the Research

The aim of the present study involves a general objective as well as specific research objectives.

1.4.1 The General Research Objective. The general objective of this study is to determine the relationship between work engagement, organisational commitment, job resources and job demands of teachers working within two former model C high schools in Durban North, KwaZulu-Natal.

1.4.2 The Specific Research Objectives. Specifically, the objectives of the study are:

- To determine how work engagement, organisational commitment, job resources and job demands conceptualised within the research literature.
- To determine the factor structures of the measuring instruments.
- To determine the reliabilities of the measuring instruments.
- To determine whether job resources are positively related to work engagement.
- To determine whether challenge job demands are positively related to work engagement.
- To determine whether hindrance job demands are negatively related to work engagement.
- To determine whether job resources are predictive of work engagement.
- To determine whether work engagement mediates the relationship between job resources and organisational commitment.
- To determine whether work engagement mediates the relationship between challenge job demands and organisational commitment.

1.5 Research Method

The research method consists of two phases, namely the literature study and an empirical investigation.

1.5.1 Phase 1: Literature Study. The focus of the literature study is to determine how work engagement, organisational commitment, job resources and job demands have been conceptualised within the existing literature. Further, the aim of the literature study is to determine the relationships between the variables under study.

1.5.2 Phase 2: Empirical Study. The empirical study entails that the specifically stated objectives are achieved, this was done as follows:

1.5.2.1 Step 1: Deciding on the research design. In order to reach the objectives of this research study, a quantitative research design was used. The specific design that was used was cross-sectional in nature, whereby a sample is drawn from the population at any one point in time (Shaughnessy & Zechmeister, 1997). A cross-sectional design is typically comprised of different individuals, who are examined in terms of one or more variables at approximately the same point in time (Huysamen, 1994). This research aimed to investigate interrelationships among variables from the sample, thus according to Shaughnessy and Zechmeister (1997) a cross-sectional design is appropriate for this study due to the fact that this type of design is ideally suited to descriptive and predictive functions.

1.5.2.2 Step 2: Selecting the study population. The research participants of the present study consisted of teachers employed at two former model C high schools in Durban North, KwaZulu-Natal. A 'teacher', in the case of this study, refers to any individual employed in order to teach students at either of the two former model C high schools

aforementioned. A total of approximately 159 teachers are employed at both of the former model C high schools in Durban North, KwaZulu-Natal. Out of a targeted possible 159 participants (N=159), a non-probability convenience sample of 117 participants (n=117) took part in the study and completed the questionnaire that was distributed. The response rate is acceptable as 74% of the population was accessed, which is an appropriate sample size for this population (Sekaran, 2000).

The sample was gathered using a non-probability convenience sampling method. This sampling method was used because it is the most convenient way of collecting data from the teachers due to the fact that, out of the population, it was unknown what particular teachers would be accessible on the data collection dates. Due to the fact that the targeted population is relatively small (N=159), the use of non-probability convenience sampling is acceptable as drawing a non-random sample will include a large proportion of the population nonetheless. This type of sampling method was also chosen for the advantages of being less complicated and less time consuming, in addition to being more economical (Huysamen, 1994).

1.5.2.3 Step 3: Deciding on the measuring instruments to be used.

- *Utrecht Work Engagement Scale (UWES)* (Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002) measures engagement along three dimensions: vigour, dedication and absorption in the form of a 17-item, self report questionnaire (UWES-17). The UWES is scored on a 7-point Likert scale ranging from 1 (never) to 7 (everyday). The three dimensions of engagement can be distinguished, namely vigour, dedication, and absorption. The UWES has been found to be reliable in various different samples as well as among South African samples. Acceptable reliability coefficients have been reported in South African samples for the three dimensions with alpha coefficients ranging from 0.77 to 0.86 (van den Berg, Manais & Burger, 2008); 0.76 to 0.86

(Rothmann & Jordaan, 2006) and 0.70 to 0.81 (Jackson, Rothmann & van de Vijver, 2006).

- *Organisational Commitment Questionnaire (OCQ)* (Allen & Meyer, 1990) measures an individual's attitude towards their organisation. The OCQ consists of 18-items, measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale measures organisational commitment along three dimensions: affective commitment, continuance commitment and normative commitment. The OCQ has been administered to various South African samples with reported alpha coefficients of 0.88 (Jackson et al., 2006).
- *Job Demands-Resource Scale (JDERS)* (Jackson & Rothmann, 2005) is comprised of 42-items; questions are rated on a 4-point Likert scale ranging from 1 (never) to 4 (always). Dimensions of the JDERS include: job insecurity, overload, support organisational support, growth opportunities and advancement. The JDERS has been used in various South African studies and has reported reliable alpha coefficients varying from 0.63 to 0.94 (Coetzer & Rothmann, 2009) and between 0.76 and 0.92 (Rothmann, Mostert & Strydom, 2006). The different dimensions of the JDERS were classified into job resources, challenge demands and hindrance demands using Crawford et al.'s (2010) classification of differentiated job demands.

1.5.2.4 Step 4: Statistical analysis. The Statistical Package for the Social Sciences program (version 19) was used to carry out statistical analysis (SPSS, 2003). This program was chosen due to the fact that it is a program widely used to analyse quantitative data within the Social Sciences, and was appropriate to use when taking into account the volume of data anticipated to be collected within the present study.

Firstly, exploratory factor analysis was undertaken in order to determine the factor structure of the UWES, OCQ as well as the JDRS.

Secondly, descriptive statistics were used to explore the data that was collected from the participants. Descriptive statistics consist of means, medians, standard deviations, skewness and kurtosis (Tabachnick & Fidell, 2001).

Thirdly, Cronbach alpha coefficients (α) were then used to assess the internal consistency of the measuring instruments (Gregory, 2007). The alpha coefficient conveys important information regarding the proportion of error variance contained in a scale, a test with high internal consistency will also tend to show stability of scores, and therefore is a useful measure of reliability (Gregory, 2007).

Fourthly, Pearson product-momentum correlation coefficients were used to specify the relationship between the variables in the present study. The level of statistical significance was set up as $p \leq .05$. It must be noted that criticism has been levelled against the sole use of statistical significance testing and thus it is recommended that effect sizes be established in order to determine the practical importance of a statistically significant relationship (Steyn, 2002). Therefore, effect sizes (Cohen, 1988) were used in addition to statistical significance testing in order to determine the significance of relationships. Effect sizes indicate whether obtained results are of practical importance (whereas statistical significance may often show results which are of little practical relevance). A cut-off point of 0.30, was set for the determination of practical significance. Generally, a medium effect size ranges between 0.30 to 0.49, whilst a large effect size ranges from 0.50 and above (Steyn, 2002).

Fifthly, multiple regression analysis was conducted in order to determine whether job resources held predictive value for work engagement. Multiple regression analysis was used to analyse whether two or more predictors (independent variables) would predict a criterion (dependent variable) (Howell, 1995).

Lastly, in order to test the hypothesised meditational relationships of the present study, a series of multiple regression analyses were carried out. The procedure for testing meditational relationships set by Baron and Kenny (1986) was followed.

1.5.2.5 Step 5: The research procedure. The school principals of each of the high schools in the study, the gate-keepers, were sent a letter explaining the research objectives. Once access into the school was permitted, one staff member of each school was made a direct contact for the researcher in order to facilitate the process of distributing and collecting the surveys from the teachers. The establishment of this primary relationship ensured that the data collection process was undertaken in a more effective and efficient manner and ensured less confusion for all participants involved. Each teacher within the chosen schools was then told about the focus of the study, and given a letter describing what was required of them, after which they were asked if they would be willing to participate. It was stressed that participation was voluntary and that participants would be free to withdraw from the study at any time and for whatever reason. If the individual chose to participate in the research study, they were then required to sign a letter of informed consent. Those who choose to participate were then asked to complete a self administered questionnaire consisting of a biographical data sheet, the UWES, OCQ and JDRS. The participants were then asked when would be appropriate and convenient for the researcher to return to the school and collect the completed questionnaires. The researcher then record the appropriate time and date to return, and did so.

1.6 Chapter Division

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Results

Chapter 5: Discussion

Chapter 6: Conclusion, Recommendations and Limitations

1.7 Summary

In the present chapter, the motivation for the present study and the steps in the research process were stated. The problem statement, research objective, research methods as well as the chapter divisions were also stated. In chapter two, the literature review is discussed.

Chapter 2: Literature Review

2.1 Introduction

This chapter begins by discussing the concept of *positive psychology* as well as its work related constituent, *positive organisational behaviour*, highlighting the need for a more positively oriented focus in research concerning high school teachers in South Africa. The chapter then goes on to define and discuss each of the constructs under study, and further, to discuss existing literature and research findings pertaining to these constructs. Firstly, the construct of work engagement shall be examined in terms of its various existing definitions. Secondly, organisational commitment shall be defined and discussed, with a specific focus on the three-component conceptualisation of Allen and Meyer (1990). Thirdly, the link between work engagement and organisational commitment shall be discussed in terms of current literature and research findings. Fourthly, job resources and job demands shall be defined and discussed. Finally, a discussion of the state of current literature and research findings in terms of the theoretical framework of this study, consisting of the *Job Demands-Resources Model* and its extension into the *Dual Process Mode* shall be undertaken. The chapter then concludes with the problem statement of the present study, as well as the research hypotheses.

2.2 Positive Psychology

Positive states have not traditionally captured the attention of psychology (Bakker, Schaufeli, Leiter, & Taris, 2008). An electronic search of psychology abstracts showed that mention of negative emotions outnumbered that of positive emotions by a ratio of 14 to 1 (Myers, 2000). The focus of psychology has traditionally been situated within a bio-medical model, resulting in the focus on negative, as opposed to positive states (Maddux, 2008; Seligman, 2008; Seligman & Csikszentmihalyi, 2000). Since the underlying conceptual ideology of

psychology informs the type of research as well as the applied or practical component of the field, it is unsurprising that most psychological research and practice is focused on negative, maladaptive states. However, what is becoming ever more prominent is a critique of the negative focus and illness-driven ideology (Maddux, 2008). More recently there can be seen as shift in the direction of a positively oriented psychology, where the prime focus is that of positive states of being and wellbeing (Maddux, 2008). Therefore a shift can be seen in psychological research going from only researching something that is negative, in order to correct it; to researching phenomena in order to enhance and better individuals who are already seen as being 'normal' (meaning not psychologically maladaptive) (Maddux, 2008; Segliman & Csikszentmihalyi, 2000). Concentrating upon positive psychological states and their effects comes from the so-called *positive psychology* (Segliman & Csikszentmihalyi, 2000).

The organisational variant of positive psychology is termed *positive organisational behaviour* (POB), which has been defined as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans, 2002, p. 59). The above POB definition not only emphasises the need for a positive approach towards human resources, however further emphasises the fact that theory building, research and practical solutions are needed (Luthans & Youssef, 2007). Bakker and Schaufeli (2008) in particular have noted the need for further focus and attention on “theory building, research and effective application of positive traits, states, and behaviours of employees in organisations” (Bakker & Schaufeli, 2008, p. 147). In the present study two POB-constructs, namely *work engagement* and *organisational commitment*, were investigated in terms of their relationship with each other, and further their relationships with job resources and job demands; thus providing for further theory building within POB research. Specifically, the

present study intends to investigate the mediating role of work engagement in the relationship between certain job resources and organisational commitment; as well as the mediating role of work engagement in the relationship between certain job demands and organisational commitment. Although research on POB has been somewhat widely conducted, many studies cannot be seen to incorporate the two relationships mentioned above within one research study, which is what the present study intends to do.

2.3 Work Engagement

2.3.1 Defining work engagement. Engagement at work was conceptualised by Kahn (1990) as the “harnessing of organisational members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (p. 649). Kahn (1990) further posits that it is the simultaneous employment and expression of a person’s preferred self that aids in the connections to work and others. Personal disengagement is seen to occur when an individual uncouples themselves from their work roles, it seems then that a high level of work engagement is characterised by an individual drawing heavily from themselves during role performances (Barkhuizen & Rothmann, 2006). Four conceptualisations of work engagement can be found within the existing literature: (a) Maslach and Leiter’s (1997) burnout-antithesis approach; (b) Schaufeli et al.’s (2002) conceptualisation of work engagement as being distinct from burnout; (c) Harter, Schmidt and Hayes’ (2002) satisfaction-engagement approach; and (d) Saks (2006) multidimensional approach.

2.3.1.1 Work engagement as the antithesis of burnout. A classical or more traditional view of work engagement conceptualises the construct as being the polar opposite of burnout (Maslach & Leiter, 1997). Work engagement in this sense has been defined as an energetic state of involvement with personally fulfilling activities that enhance ones sense of professional efficacy (Leiter & Maslach, 1998). Initially, burnout was studied as a psychological syndrome on its own that was characterised by three distinct components: exhaustion, cynicism and inefficacy (Maslach & Leiter, 2008). However, as burnout research grew, more attention has been given to the positive opposite of the construct, as well as the positive opposite of its three components, this view conceptualises work engagement and burnout as being two distinct ends along a continuum (Maslach & Leiter, 2008). According to Maslach and Leiter (1997) work engagement is characterised by energy, involvement, and efficacy, which are the direct opposites of the three burnout dimensions measured by the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1986). This view therefore considers work engagement to be the polar opposite, or the antipode of burnout. The concept of burnout has been researched for decades and as a result numerous studies have been conducted on the construct, therefore it is unsurprising that the newly emerging concept of work engagement developed as an extension of burnout literature. As this is a more traditional definition of work engagement, it is unsurprising that the conceptualisation was formed in relation to a negative state, burnout, as the point has been made earlier in this paper, traditional psychological research can be seen as focusing more on negative rather than positive states of being (Maddux, 2008).

More recently there can be seen a shift in the way in which work engagement is conceptualised, this conceptualisation can clearly be seen as being in line with the advent of a more positive psychology. “Although retaining the idea that engagement is a positive ‘opposite’ of burnout, this alternative approach has developed a separate measure, with three

different dimensions, rather than using the opposite scores of the MBI ” (Maslach & Leiter, 2008, p. 498). Within newly emerging literature, work engagement is seen as a construct in its own right, one that is independent of, and unrelated to burnout. It is on this conceptualisation that much of the current literature is based (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2002).

2.3.1.2 Work engagement as distinct from burnout. Of late, current literature has tended to conceptualise work engagement as an independent, distinct concept that is unrelated to burnout (Schaufeli et al., 2002). Consequently work engagement has been operationalised in its own right as “... a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption” (Schaufeli et al., 2002, p. 74). Here it can be seen that the three components of work engagement; vigour, dedication and absorption, are not conceptualised in terms of the opposite components of burnout, however they are three components that are related independently to the concept of work engagement.

The first component, *vigour*, is characterised by “high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties” (Bakker et al., 2008, p. 188). The second component, *dedication*, is characterised by “... being strongly involved in one’s work, and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge” (Bakker et al., 2008, p. 188). Finally, the third component, *absorption*, refers to “...being fully concentrated and happily engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work” (Bakker et al., 2008, p. 188). It must be noted, however, that within recent studies, the existence of absorption as a main component of work engagement has been questioned. In line with this current debate, some have argued that vigour and dedication constitute the core dimensions of work engagement (Llorens, Schaufeli, Bakker, &

Salanova, 2007; Storm & Rothmann, 2003). Others however still continue to support a three-factor model of work engagement and thus maintain that absorption is an important and necessary component of work engagement (Barkhuizen & Rothmann, 2006).

In line with the conceptualisation of work engagement as being a distinct and independent concept from burnout, May, Gilson and Harter (2004) have conceptualised engagement by emphasising the importance of people bringing their physical, emotional and cognitive resources to bear on role-related tasks when engaging themselves in work. May et al. (2004) argue that most jobs entail some form of physical, emotional as well as cognitive demands, and thus an engaged individual would necessarily exert effort within these three domains.

2.3.1.3 Satisfaction-engagement approach. The satisfaction-engagement approach can be seen as a third way in which work engagement has been conceptualised. This approach defines work engagement as an “individual’s involvement and satisfaction with, as well as enthusiasm for work” (Harter et al., 2002, p. 417). This conceptualisation of work engagement has been used to guide research concerning profitability, turnover, and safety at work as well as issues of managerial self-efficacy (Shuck, 2010). This approach can be seen to “...parallel the previous two approaches of work engagement, and reiterates that environmental, job resources and support are both important and necessary for an employee to complete their work” (Shuck, 2010, p. 31).

2.3.1.4 Multidimensional approach to work engagement. The fourth and final approach of employee engagement takes the form of a multidimensional orientation. Within this approach, work engagement has been defined as “a distinct and unique construct consisting of cognitive, emotional, and behavioural components ... associated with individual role performance” (Saks, 2006, p. 602). This approach functions to incorporate previous conceptualisations by including cognitive, behavioural as well as emotional elements of work engagement and thus from this conceptualisation stems a three-component model (cognitive-emotional-behavioural) (Shuck, 2010). The multidimensional approach can be seen as extending the approach of Schaufeli et al. (2002) by suggesting that “engagement could be experienced emotionally and cognitively and manifested behaviourally” (Shuck, 2010, p. 34).

2.3.1.5 The definition of work engagement adopted by the present study. In summary, the above four approaches to work engagement form the basis of what has been covered by current literature and research. According to research, no single approach dominates in the field, neither in methodology nor in definition (Shuck, 2010). What is important to note from an overview of these approaches is that, “while each approach proposes a different perspective, the varying approaches remain clear and unanimous in conclusion: the development of employee engagement inside organisations has the potential to significantly impact important organisational outcomes” (Shuck, 2010, p. 37).

In terms of the present study, the conceptualisation of work engagement defined by Schaufeli et al. (2002) was adopted. As the present study has its foundation in a more positively oriented psychology, the conceptualisation of work engagement as being independent and distinct from negative states, such as burnout, is appropriate. Further, the main objectives of the present study do not concern themselves with the construct of burnout and thus a conceptualisation of work engagement that aligns itself closely to burnout, such as that of

Maslach and Leiter's (1997) conceptualisation, would not be seen as appropriate for this study. Further, Schaufeli et al.'s (2002) conceptualisation has been chosen to guide the present research for the reason that his approach has been mainly applied in research which has used academics and teachers as the sample of the study (Hakanen, Bakker & Schaufeli, 2006), and in particular this approach has been validated and used widely within the South African context (Barkhuizen & Rothmann, 2006; Coetzee & Rothmann, 2005). Thus, for the above-mentioned reasons, work engagement in the present study refers to, "... a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74).

2.3.2 Empirical findings on work engagement. According to the above conceptualisations, work engagement fits appropriately into the realm of POB. Moreover this concept has a positive psychological focus due to the fact that it can be seen as a human resource strength that benefits not only the workplace, but the individual as well. It has been shown that engaged employees have a better in-role fit and extra-role performance (Bakker, Demerouti & Verbeke, 2004), which in turn results in better financial results for an organisation (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009). At an individual level, studies have also shown the benefits of work engagement. A study conducted by Demerouti, Bakker, De Jonge, Janssen and Schaufeli (2001) suggested that work engagement positively correlates with good health. Schaufeli and Bakker (2004), further found in their study among four Dutch service organisations, that engaged workers suffered less from self-reported headaches and psychosomatic complaints.

Bakker and Demerouti (2008) outline four main reasons why engaged workers perform better than non-engaged or disengaged workers. "Engaged employees often experience positive emotions, including happiness, joy, and enthusiasm; experience better health; create their

own job and personal resources; and transfer their engagement to others” (Bakker & Demerouti, 2008, p. 215). Various studies have focused on researching work engagement within corporate organisational settings using multi-sample studies; however, of late, both internationally as well as nationally, research concerning work engagement has expanded to other organisational settings, such as that of universities and schools. Nationally, Barkhuizen and Rothmann (2006) conducted a study which focused on work engagement of academic staff in South African Higher Education Institutions finding significant differences between work engagement of academics with different job levels and qualifications. Another South African study, conducted by Coetzee and Rothmann (2005), found that work engagement levels of staff employed at a higher academic institution in South Africa differed according to language groups, different years of service, as well as between academic and administrative employees.

There can be seen to be a gap in the literature, internationally and, even more so, nationally, with regards to work engagement studies conducted on teachers, and high school teachers in particular (Barkhuizen & Rothmann, 2006). This is seen to be the case because of the fact that in terms of wellbeing or wellness studies, most research has focused on negative states of teachers. Thus, what mostly dominates in this domain is studies conducted on the burnout and stress of high school teachers, as a result, a lot is known about the burnout levels of school teachers, with very little known about the levels of work engagement of teachers. One of the few studies that have focused on work engagement of teachers (although it includes burnout as one of its constructs) is the study conducted by Hakanen et al. (2006). This study was conducted on a sample of Finnish teachers, what the study found was that there existed important relationships between job resources, work engagement and organisational commitment. What was found was that work engagement mediated the relationship between job resources and organisational commitment (Hakanen, et al., 2006).

What can be noted from the preceding discussion is that there exists a vast gap in the literature pertaining to studies conducted around levels of work engagement with regards to teachers, and especially high school teacher. Most of the research that has been conducted on teachers well-being has been focused around negative states such as stress and burnout (Jackson & Rothmann, 2005a; 2005b). Within the South African context, particularly, it has been argued that there is a need for research focusing on positive psychological states as opposed to research on negative psychological states, which has dominated the literature (Rothmann, 2003). Although some South African work engagement researchers have conducted research at tertiary education institutions and higher education institutions (Barkhuizen & Rothmann, 2006; Coetzee & Rothmann, 2005), it is noted that research has been carried out *collectively* on educators in South Africa whereby a sample consists of various types of educators such as that conducted by Jackson et al. (2006). However, no study, to the knowledge of the researcher, has been conducted in South Africa pertaining to levels of work engagement of high school teachers *exclusively*, and no study at all has been conducted in terms of levels of work engagement with samples consisting of high school teachers at former model C high schools exclusively. The present study thus aims to address the current gap in the literature by conducting research around the POB constructs of work engagement and organisational commitment with regards to a specific focus teachers working within former model C high schools.

2.4 Organisational Commitment

2.4.1 Defining organisational commitment. Organisational commitment is the second POB construct that was investigated within the present study. A great deal of research has focused on the construct of organisational commitment, especially in the light of POB research, where it is often viewed as a positive organisational outcome which is beneficial for both the organisation as well as the individual employee (Liou, 2008; Lok & Crawford,

2001). With the above being said, organisational commitment still remains to be one of the most challenging concepts to study in the field of organisational behaviour (Cohen, 2007). According to Porters, Steers, Mowday and Boulin (1974), organisational commitment can be defined as involving the willingness of employees to exert higher efforts on behalf of the organisation, a strong desire to stay in the organisation, and accept major goals and values of the organisation. Robbins (1998) defines organisational commitment as a state in which an employee identifies with an organisation and its goals, is willing to exert effort on behalf of the organisation and wishes to maintain his or her relationship with that particular organisation. Organisational commitment has further been defined in the literature as "...the process by which people come to think about their relationship with the organisation" (Meyer & Allen, 1991, p. 62). Inherent in all of the above definitions of organisational commitment is the relationship between an employee and his or her organisation. For an employee to be committed to their organisation it is necessary that their particular goals and values are aligned to the organisation.

2.4.2 The three-component conceptualisation of organisational commitment.

Most of the existing literature around organisational commitment is based upon the well known model proposed by Allen and Meyer (1990), namely the three-component conceptualisation of organisational commitment. The three components proposed by Allen and Meyer (1990, 1991) are *affective commitment*, *continuous commitment* and *normative commitment*.

The first component, *affective commitment*, refers to the employee's identification with, involvement in, and attachment to the organisation (Allen & Meyer, 1990). The degree of the strength of an employee's level of affective organisational commitment is dependent on the strength of the positive feelings towards the organisation as well as the willingness to

increase one's emotional bond to that organisation (Mowday, Steers, & Porter, 1979). Affective commitment can result in various positive outcomes, "... affective commitment among employees improves the operational aspects of the organisation. Such improvements include greater job satisfaction and involvement, as well as an increase in job performance" (Liou, 2008, p. 118). The second component, *continuance commitment*, is based on the employee's evaluation of the costs of leaving or discontinuing a particular activity within the organisation; these employees will stay in the organisation either because there are perceived to be minimal alternatives, or high costs associated with leaving the organisation (Allen & Meyer, 1990). It has been found that employees with continuance commitment may perform only as is required to keep their job (Liou, 2008). In fact no relationship has been found with continuance commitment and performance of an employee (Meyer & Allen, 1997). The *normative* component of organisational commitment refers to the feeling of a sense of obligation to the organisation, in other words ones perceived responsibility and loyalty to the organisation, because it is the correct and moral thing to do (Allen & Meyer, 1990).

"Employees with strong affective commitment continue employment with the organisation because they want to do so. Employees whose primary link to the organisation is based on continuance commitment remain because they need to do so. Finally, normative commitment reflects a feeling of obligation to continue employment. Employees with a high level of normative commitment feel that they ought to remain with the organisation" (Meyer & Allen, 1991, p. 67). What is important to note is that the three dimensions of organisational commitment are not mutually exclusive or exhaustive, an employee can experience all three forms of commitment in varying degrees and at different times (Meyer & Allen, 1991). All three components are viewed as a psychological state that underlies an employee's relationship with the organisation and this psychological state has implications for the

decision to continue or discontinue membership within the organisation (Allen & Meyer, 1990).

Although Allen and Meyer's (1990) conceptualisation has been frequently used in studies, it is important to note that this conceptualisation is not without criticism. The main concerns of the model revolve around the structure of the concept's three components; *affective*, *normative* and *continuance* commitment. Cohen (2007) has criticised the three-component model due to the fact that it was found that the normative and affective components overlap greatly. Further, Cohen (2007) argues that there is an unclear dimensionality of the continuance component. Although the above critiques should be taken into consideration, much research has been conducted using Allen and Meyer's (1990) three-component conceptualisation of organisational commitment, and generally these validate the use of the three-factor model.

Related to the above criticism, although the three-factor model of organisational commitment has been validated in many studies, it is also important to note that research conducted by Stander and Rothmann (2010) found a two-factor model of organisational commitment to fit their data best. The two factors identified were attitudinal commitment (consisting of both the affective and normative components) and continuance commitment. Further, Cohen (2007) argues that the factors within the 3-factor model of organisational commitment frequently overlap, thus also confirming the findings of Stander and Rothmann (2010).

2.5 The Relationship between Work Engagement and Organisational Commitment.

Due to the fact that negative states have traditionally been the focus within psychology in general, as well as in organisational psychology specifically, the present research study aims to focus on the positive (through the concepts of work engagement and organisational

commitment) and in so doing aims to contribute to the balance between negative and positive organisational psychology research.

Much research and literature can be seen to explore the relationship between work engagement and organisational commitment, the two POB constructs of the present study. Current literature generally incorporates the concept of organisational commitment as a facet of work engagement and as a result views the two concepts as being positively correlated (Chalofsky & Krishna, 2009; Rothmann & Jordaan, 2006). In terms of the relationship between work engagement and organisational commitment, those that are highly engaged in their work also tend to be committed to the organisation with which they are affiliated. A study conducted by Jackson et al. (2006), for example, found a positive correlation between work engagement and organisational commitment among a sample of educators in South Africa. Further, current literature suggests that work engagement is not only positively related to organisational commitment, but is an antecedent of organisational commitment as well (Schaufeli et al., 2001).

What seems to be a current trend in the literature is that studies conducted around work engagement and organisational commitment are increasingly being linked with job resources, as well as to some extent, job demands (Hakenen et al., 2006; Jackson et al., 2006). Thus what is appearing in current literature is a model which incorporates and addresses the relationships between work engagement and organisational commitment (the two POB constructs of the present study) with job resources and job demands. After a brief definition of job resources and job demands, a detailed review of the *Job Demands Resources Model* will then be put forward as the theoretical framework of the present study.

2.6 Defining Job Resources and Job Demands

Job resources and job demands are seen to be inherent characteristics of any occupation, and their presence or absence has been found to be antecedent of many organisational outcomes, both positive and negative. In terms of positive organisational outcomes, their relationship with work engagement and organisational commitment has been found to be prominent (Bakker & Schaufeli, 2008). Regardless of occupation, the importance of noting what job demands and resources impact on the job is crucial. As shall be discussed in the next subsection of this chapter, the theoretical framework for this research is the Job Demands-Resources (JD-R) Model and its extension, the Dual Processes model; it is from the perspective of these models that a discussion of job resources and job demands shall now be undertaken.

2.6.1 Job resources. Job resources refer to those physical, social and organisational aspects of a job that may: firstly, reduce job demands and the associated physiological and psychological costs; secondly, be functional in achieving work goals; and finally, stimulate personal growth, learning and development (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004).

Major job resources are seen to include social support, job enhancement activities, increased control and autonomy, increased participation in decision-making (Rothmann & Joubert, 2007). The above suggests that job resources are not only important in terms of employees dealing with job demands, however are important in their own rights too (Hakenen et al., 2006).

With regards to what is known as the *motivational process* within the JD-R and Dual Process models, job resources have been found to be the strongest predictor of work engagement

(Schaufeli & Bakker, 2004). In a sample of employees working in a manufacturing organisation in South Africa, Coetzer and Rothmann (2009) found that job resources, such as organisational support and growth opportunities, were the best predictors of the vigour and dedication components of engagement. Hakanen, Bakker and Demerouti (2005) found that job resources were predictive of work engagement in a large sample of Finish dentists. Hakanen Schaufeli and Ahloa (2008) found longitudinal support for the predictive value of job resources for engagement. Following this body of research, the present study hypothesizes that job resources will have a positive relationship with engagement, and further that job resources predict engagement. In terms of the motivational process, much research has found that engagement also serves as a mediator in the relationship between job resources and certain positive organisational outcomes.

A research study conducted by Hakenen et al. (2008) found support for the existence of a dual process model, the results particularly supported the motivational process which found that job resources influenced future work engagement, which, in turn, predicted organisational commitment. The results of this study thus supported the proposition that work engagement acts as a mediator in the relationship between job resources and organisational commitment (Hakanen et al., 2008). The JD-R Model has also been applied to various samples of educators and teachers. In a study conducted with a sample of Finnish elementary, secondary, and vocational school teachers (n=2038), Hakanen et al. (2008) found support for the motivational process of the JD-R Model as findings indicated that job resources influenced work engagement, which, in turn predicted organisational commitment. Thus, work engagement was found to mediate the relationship between job resources and organisational commitment (Hakenen et al., 2008). It was found that the availability of job resources functioned as an antecedent of the motivational process which, via work engagement, resulted in greater levels of organisational commitment (Hakenen et al., 2006).

A study conducted within the South African context by Jackson et al. (2006) found work engagement (vigour and dedication) to mediate the relationship between job resources and organisational commitment in a sample of educators. Following this body of research, the current study hypothesises that work engagement mediates the relationship between job resources and organisational commitment.

Although the JD-R Model has been tested in a variety of countries, and using a variety of samples, within the South African context there seems to be a gap in the literature with regards to testing the JD-R Model of high school teachers in particular. Further, however, no studies utilising the JD-R/Dual Processes Model have yet been conducted for high school teachers at former model C schools in South Africa. Since the state of the education system in South Africa is seen to be somewhat lacking (Asmal & James, 2001), amplified by the fact that former model C high schools seem to be suffering the most in terms of being faced with various demands in spite of few resources (Makhubu, 2011), the present study intends to add to the existing body of knowledge on the JD-R Model, particularly in terms of teachers working with in former model C high schools.

2.6.2 Job demands. According to Demerouti, Schaufeli, Nachreiner et al. (2001), job demands refer to those physical, psychological, social, or organisational aspects of a job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs.

Major job demands are seen to include role ambiguity, work pressure (for example insufficient time given to complete a specific task/s) and work load (Lee & Ashford, 1996); “job demands may become stressors in situations which require high effort to sustain an expected performance level, consequently eliciting negative responses, including burnout”

(Hakanen et al., 2006, p. 497). In this sense job demands are seen to be positively related to stress and burnout Demerouti, Schaufeli, Nachreiner et al. (2001). However, what must be noted is that it has also been argued that job demands may measure challenging aspects of work rather than the stressful aspects of work (Steenland, Johnson, & Nowlin, 1997). According to Leiter (1993), job demands and job resources are seen to be related due to the fact that a work environment that is overly demanding usually is accompanied by insufficient resources.

With regards to the *energetic process* of the JD-R/Dual Processes Models it has widely been found that job demands are positively related to burnout (Bakker et al., 2004; Bakker, Demerouti & Euwema, 2005). In their meta-analytic study, Lee and Ashford (1996) found that emotional exhaustion is more strongly related to job demands than it is to job resources. Hakanen et al. (2006) found that burnout has a strong positive relationship with job demands. Schaufeli and Bakker (2004) found that a strong relationship existed between job demands and burnout in a sample of school teachers in the Netherlands. Within the South African context, a study conducted by Jackson and Rothmann (2005) on a sample of educators, also found support for the energetic process of the JD-R Model.

Literature further suggests that the motivational and energetic processes do not operate in isolation, and that there are interconnections between the two (Jackson & Rothmann, 2005; Salanova & Schaufeli, 2008). Studies have shown that job resources are more salient in the context of high job demands and thus act as a buffer in the relationship between job demands and burnout (Bakker et al., 2005; Verbruggen, 2009). A lack of job resources has also been shown to influence burnout. Schaufeli and Bakker (2004) found social support, coaching and feedback to be negatively related with the levels of exhaustion, cynicism and lack of professional efficacy (dimensions of burnout). Bakker, Demerouti, Taris, Schaufeli and

Schreurs (2003) also found a negative relationship between a lack of job resources and burnout.

To summarise, research and literature up until now has found support for the JD-R/Dual Processes Model. It has been found by many studies, as discussed above, that a positive relationship between job resources, work engagement and positive organisational outcomes such as organisational commitment (motivational process); between job demands, burnout and negative outcomes such as ill health (energetic process); further, a negative relationship between job resources and burnout has been found to exist.

2.6.2.1 The differentiated approach to job demands. A critical review of the literature around the JD-R/Dual Processes Model suggests that no relationship between job demands and engagement exists; this is maintained even though many researchers have suggested that the motivational process and the energetic process do not exist in isolation (Schaufeli & Bakker, 2004). This can be seen as a critical gap in the literature, as well as an underdeveloped component of the model. Much research focusing on the links between the two processes exists mainly around the buffering of job resources in the relationship between job demands and burnout (Bakker et al., 2005; Bakker et al., 2007; Schaufeli & Bakker, 2004). Demands have solely been conceptualised as being related to, and causing negative organisational outcomes (Schaufeli & Bakker, 2004), and thus very little empirical evidence exists regarding the relationship between job demands and work engagement, or if in fact certain job demands are antecedents of work engagement.

Some research studies testing the JD-R model have supported the notion that job demands have no relationship with work engagement (Llorens, Bakker, Schaufeli, & Salanova, 2006). Other studies have found a slightly negative relationship between job demands and work

engagement, as was found by Hakanen et al. (2008) among a sample of Finish dentists. However, interestingly, there have been some studies that have found positive relationships between job demands and work engagement. In their longitudinal study among health care personnel, Mauno, Kinnunen and Ruokolainen (2007) found that the job demand, labelled *time demands* was found to be positively related to the absorption dimension of work engagement. This is a particularly interesting finding due to the fact that the study is longitudinal in nature, as opposed to a cross-sectional type of research design, which dominates most of the research conducted on the JD-R model, and is often critiqued. Longitudinal studies are much preferred as they can test causal relationships and are generally a more robust form of research than cross-sectional designs. This finding thus is based in a highly legitimate study and is a very new and prominent finding within the JD-R model. Further, Schaufeli and Bakker (2004) found positive correlations between emotional overload (job demand) and vigour and dedication (the core dimensions of work engagement).

Further, South African studies have also shown that positive relationships exist between certain job demands and work engagement. A study conducted by Rothmann and Jordaan (2006) found that job demands can contribute to predicting dedication, which is a dimension of work engagement. In the context of the above findings, it becomes apparent that there is a glaring gap in the literature around the JD-R/Dual Processes Model, due to the fact that the possible and probable relationship between job demands and work engagement largely seems to be ignored, assumed away, or appraised as a coincidental finding (Crawford et al., 2010). The above results thus show that “some job demands bring about a positive effect on engagement, but others provoke a negative effect on engagement... this means that perhaps the JD-R Model should be adjusted, as it seems that there does exist a relationship between job demands and engagement” (Verbruggen, 2009, p. 9).

In light of the above findings, the current study hypothesizes that a relationship exists between job demands and work engagement, however that this relationship depends on the *differentiation* of job demands. Thus, what is proposed is that certain *types* of job demands are positively related to, and are antecedents of work engagement and could therefore lead to positive organisational outcomes such as organisational commitment. A theoretical distinction between types of job demands has recently been suggested by Crawford et al. (2010).

Crawford et al. (2010) distinguish between *challenge stressors* and *hindrance stressors*, within the present study *stressor* will be substituted with *demand*. According to Crawford et al. (2010) “challenges tend to be appraised as stressful demands that have the potential to promote mastery, personal growth, or future gains. Examples of challenges include demands such as high workload, time pressure, and high levels of job responsibility” (Crawford et al., 2010, p. 836). Thus challenge demands are demands that can result in work engagement due to the fact that they are more of a mechanism for eustress, rather than distress (Crawford et al., 2010). On the other hand, hindrance demands tend to “...be appraised as stressful demands that have the potential to thwart personal growth, learning, and goal attainment ... examples of hindrances include demands such as role conflict, role ambiguity, organisational politics, red tape and hassles” (p. 836). As can be seen from the above, when job demands are differentiated into challenge and hindrance demands, a positive outlook of job demands can then become more viable. Therefore, hindrance demands have an opposite function of challenge demands in that they do not challenge the individual to higher functioning, and thus lead to distress.

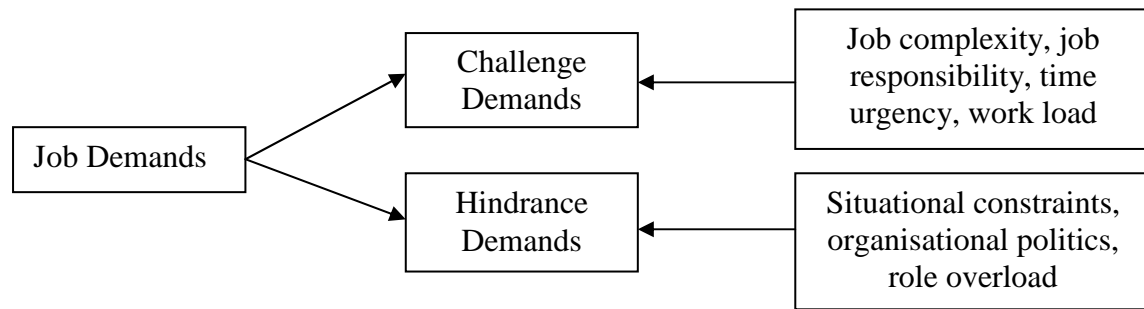


Figure 1. Differentiated job demands. Adapted from “Linking job demands and resources to employee engagement and burnout: a theoretical extension and meta-analytic test” by E.R. Crawford, J.A. LePine, and B.L. Rich, 2010, *Journal of Applied Psychology*, 95, p. 836.

In summary, the present study hypothesises that when differentiation of job demands is undertaken, a possible relationship between certain job demands (challenge demands) can be seen as generating positive effects on, and possibly hold predictive value for work engagement; whereas in line with the literature, other job demands (hindrance demands) will have a negative relationship with work engagement. Due to the fact that certain job demands have been found to be positively related to work engagement (Crawford et al., 2010), it can further be presumed that this relationship in turn impacts upon other positive organisational outcomes. Within the literature although, a model has been found showing that job resources lead to work engagement which further leads to positive organisational outcomes such as organisational commitment (Schaufeli & Bakker, 2004). No existing research has investigated whether job demands, that are shown to lead to work engagement, further lead to positive organisational outcomes, even less research has been conducted on high school teachers in South Africa. The findings of the current study thus will lead to an expansion and adaption of what is already known about the JD-R/Dual Processes Model. In order to further extend the notion that challenge job demands have a role to play within the motivational process of the JD-R model, the present study also hypothesizes that work engagement mediates the relationship between challenge job demands and organisational commitment.

2.7 Theoretical Framework

As has been referred to in the previous section of this chapter, the *Job Demands Resources Model* (JD-R) of Demerouti, Schaufeli, Nachreiner et al. (2001) and its extension, the *Dual Process Model* of Schaufeli and Bakker (2004) serve as the theoretical framework for the present study. In light of the present study, the above are suitable as the theoretical framework underlying the research due to the fact that these models allow for the incorporation of all of the constructs of the present study.

2.7.1 The Job Demands-Resources Model (JD-R). The JD-R model is a heuristic model that specifies how employee wellbeing may be produced by two specific sets of working conditions, these conditions being: job demands and job resources (Demerouti, Schaufeli, Nachreiner et al., 2001). These two conditions influence respectively the health and commitment of employees, or more specifically these conditions influence the levels of burnout and wellbeing of employees (Bakker, Demerouti, Hakanen, & Xanthopoulou, 2007; Verbruggen, 2009). As discussed above, job demands refer to "... those physical, social or organisational aspects of the job that require sustained physical or mental effort and are therefore associated with certain psychological costs" (Bakker et al., 2005, p. 170). This definition of job demands does not necessarily mean that demands are negative; however, if demands are experienced as too high for a long period of time, this may result in a loss of functioning, stress which could lead to burnout, or illness (Hakanen et al., 2008). Job resources refer to "... those physical, psychological, social, or organisational aspects of the job that (a) are functional in achieving work goals, (b) reduce job demands and the associated physiological and psychological costs, or (c) stimulate personal growth and development" (Bakker et al., 2005, p. 170). A lack of job resources can lead to disengagement and mental withdrawal, which are also symptoms of burnout (Demerouti, Schaufeli, Nachreiner et al., 2001)

As can be posited from the above, the conceptualisation of the JD-R model can be seen as solely focused upon negative organisational states and outcomes, as the focus is mainly on the causes of burnout due to high job demands, or disengagement due to low job resources. Thus, the JD-R model was developed as a burnout model to begin (Demerouti, Schaufeli, Nachreiner et al., 2001)

2.7.2 An extension of the JD-R Model: The Dual Process Model. Building upon the JD-R model, Schaufeli and Bakker (2004) extended the model to include a positive outcome: *work engagement*. With the extension of the JD-R model, it was proposed that two parallel processes take place in the context of job demands and job resources, these being the *energetic process* which links job demands with burnout leading to negative organisational outcomes such as ill health, and the *motivational process* which links job resources with work engagement leading to positive organisational outcomes such as organisational commitment (Hakanen et al., 2006; Schaufeli & Bakker, 2004). It is further proposed that there exists a cross-link between the two processes whereby job resources relate negatively to burnout due to the fact that if job resources are high they can act as a buffer in the relationship between job demands and burnout (Hakanen et al., 2006; Schaufeli & Bakker, 2004).

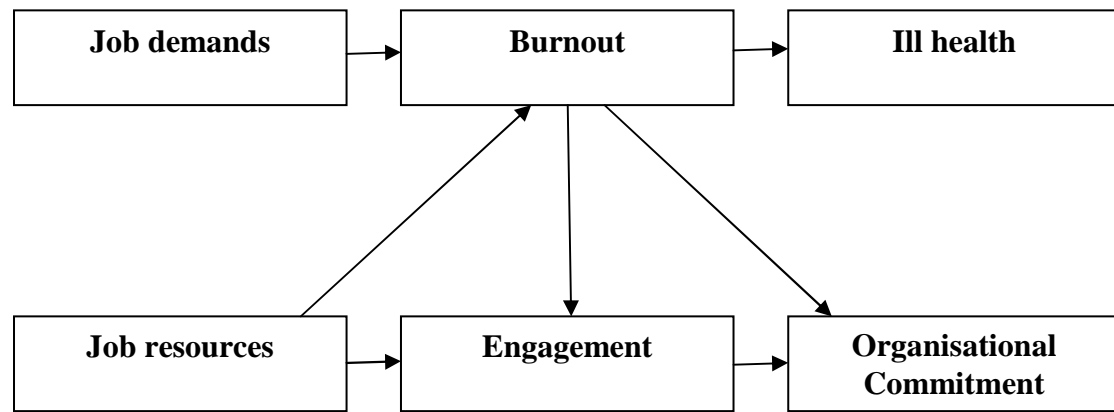


Figure 2. Proposed directions according to the JD-R Model/Dual Processes Model. Taken from “Burnout and work engagement among teachers” by J.J. Hakanen, A.B. Bakker, and W.B. Schaufeli, 2006, *Journal of School Psychology*, 43, p. 497.

The JD-R Model has been tested in various countries such as the Netherlands (Bakker et al., 2004), Finland (Hakanen et al., 2008; Mauno et al., 2007), and South Africa (Coetzer & Rothmann, 2009; Jackson & Rothmann, 2005a). Further, the JD-R Model has also been tested for its robustness among various samples (Schaufeli & Bakker, 2004). Current literature overwhelmingly supports the proposed existence of the two processes within the JD-R/Dual Processes Model (Coetzer & Rothmann, 2009; Jackson & Rothmann, 2005a; Schaufeli & Bakker, 2004).

2.9 The Present Study

The aim of the present study was to investigate the relationship between work engagement, organisational commitment, job resources and job demands (through the differentiation between challenge demands and hindrance demands). As shown within the literature review, previous studies within the theoretical framework of the JD-R Model have focused on addressing the specific relationship between job demands and burnout, job resources and work engagement, and job resources as buffers in the relationship between job demands and burnout. Further, although some research has been conducted within samples of educators

and teachers nationally and internationally, very few studies have focused specifically on high school teachers in South Africa, with no research being conducted on job demands, job resources, work engagement and organisational commitment of teachers working within former model C high schools. Current literature has further suggested that existing research has only investigated a process consisting of job resources, work engagement and organisational commitment (the motivational process of the JD-R/Dual Processes Model), thus overlooking the role of certain job demands within this model. Thus there is a gap in the literature in the international context, and, specifically within the South African context.

Therefore, the aim of the present study is to investigate a model (based on the JD-R/Dual Processes Model) where work engagement mediates the relationship between challenge job demands and organisational commitment, and also mediates the relationship job resources and organisational commitment. By doing so, the present study will contribute greatly to, as well as expand upon the existing body of literature of the JD-R Model. Findings from the study will especially contribute to the South African context where such research would prove invaluable in the insights of high school teachers' psychological wellbeing and facilitate in certain interventions and change management programs.

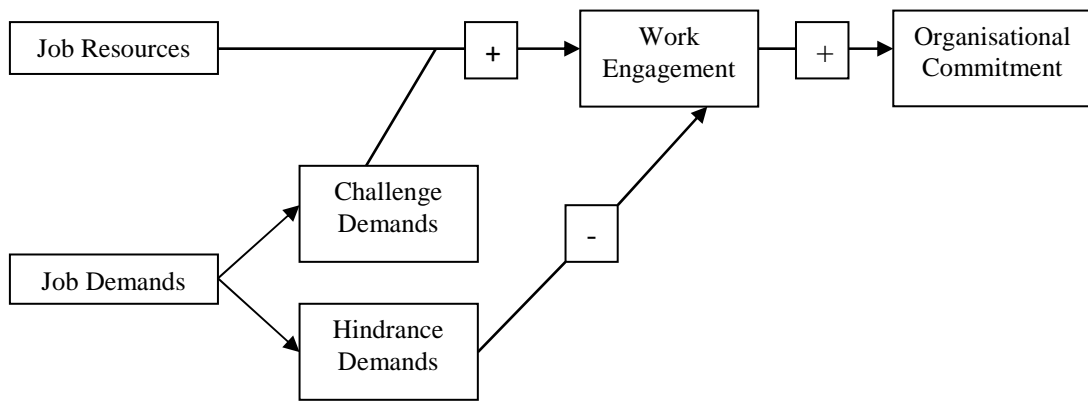


Figure 3. Theoretical Model: The hypothesised relationships between work engagement, organisational commitment, job demands and job resources.

In summary, in the current literature, it is expected that a positive relationship between job resources and work engagement exists; and that job resources are predictive of work engagement. Further, it is expected that work engagement mediates the relationship between job resources and organisational commitment (Hakanen et al., 2006). In terms of the relationship between differentiated job demands, it was expected that challenge job demands were positively related to work engagement, whereas hindrance job demands were negatively related to work engagement. It is further expected that work engagement mediates the relationship between challenge job demands and organisational commitment.

In light of the above, the following has been hypothesised:

H¹: Job resources are positively related to work engagement.

H²: Challenge job demands are positively related to work engagement.

H³: Hindrance job demands are negatively related to work engagement.

H⁴: Job resources are predictive of work engagement.

H⁵: Work engagement mediates the relationship between job resources and organisational commitment.

H⁶: Work engagement mediates the relationship between challenge job demands and organisational commitment.

2.10 Summary

In conclusion, the above chapter provided an in-depth discussion pertaining to the constructs that are to be researched in the present study, these being, work engagement, organisational commitment, job demands and job resources. Each of these constructs were defined and conceptualised. Further, the current body of research with regards to each of the constructs was discussed, and a discussion of the relationships between the constructs was also undertaken. Throughout the discussion the aims of the present study were highlighted so as to make clear where the present research fits in, and will contribute to, existing bodies of knowledge and current literature. The theoretical framework underlying the present was then elucidated.

Chapter 3: Research Methodology

3.1 Introduction

The purpose of this chapter is to discuss the research methodology that was used within the present study. The chapter will first start by discussing the research design used. Second, a discussion of the participants who took part in the study will take place. Third, the sampling method of the study will be highlighted. Fourth, the measuring instruments used in this study, namely: the Utrecht Work Engagement Scale, Organisational Commitment Questionnaire and the Job Demands-Resources Scale, shall be discussed in terms of their items, underlying factor structure as well as their reliability. Fifth, the method of statistical analysis of the data collected will take place. Sixth, the data collection procedure shall be explained. Finally, the ethical considerations of the present study shall be elucidated.

3.2 Research Design

In order to reach the objectives of this research, a quantitative research design was used. A booklet consisting of a biographical data sheet and three psychological scales was used for the purpose of data collection. The specific research design used in the present study was a cross-sectional design, whereby a sample was drawn from the population at any one time and point (Huysamen, 1994; Shaughnessy & Zechmeister, 1997). This design can also be used to evaluate interrelationships among variables within a population and is ideal to describe and predict functions associated with correlative research, thus, within the present study, the data collected was used to describe the population at a specific point in time. According to Shaughnessy and Zechmeister (1997) this type of research design is ideally suited to descriptive and predictive functions and, thus is well suited to achieve the aims and objectives of the present study.

3.3 Research Participants

The research participants of the present study consisted of teachers employed at two former model C high schools in Durban North, KwaZulu-Natal. A 'teacher', in the case of this study, refers to any individual employed to teach students at either of the two former model C high schools aforementioned. A total of approximately 159 teachers are employed at the two former model C high schools in Durban North, KwaZulu-Natal. Out of a targeted possible 159 participants, a non-probability convenience sample of 117 participants (n=117) took part in the study and completed the questionnaire that was distributed. The response rate is acceptable as 74% of the population was accessed, which is an appropriate sample size for this population (Sekaran, 2000).

The majority of the sample comprised of females (76.9%) in relation to the number of males (23.1%), this is acceptable due to the fact that there were more females generally employed as high school teachers within the population as opposed to males. Most of the participants in the study (29.9%) belonged to the age category of 25-35 years old. Further 25.6% of the participants were aged 24 years or younger; 23.9% of the participants were 46-55 years of age; whereas 11.1% of participants were 56 years and older; and, 9.4% of participants was of the age group of 36-45 years old. It can be inferred from Table 1 that the majority of the sample used in the present study were younger participants, with a cumulative percentage of 55.5% of participants being 35 years or younger. In terms of marital status, the majority (45.3%) of the participants were married; with 35% of participants being single; 12% being divorced, 6.8% living with a partner; and 0.9% widowed. Most of the participants in this study had been teaching at their organisation for less than 5 years (59%); whereas 15.4% had been at their organisation for more than 20 years; 14.5% at their organisation for 6-10 years; and, 11.1% teaching at their organisation for 11-20 years. The fact that the majority of participants had worked at their organisation for 5 years or less could be explained by the fact

that the majority of the participants too, were young and thus it could be deduced that they had not been in the teaching profession for a vast amount of time to be teaching for longer periods. Pertaining to the highest qualifications attained by the participants, the majority (48.8%) had attained a degree as their highest qualification to date. Further, 38.5% of the participants had attained a postgraduate degree as their highest level of qualification attained, and lastly, 12% of participants reported to have obtained a diploma as their highest qualification.

The characteristics of the participants are described in Table 1.

Table 1

Characteristics of Participants

Item	Category	Frequency	Percentage
Gender	Male	27	23.1
	Female	90	76.9
Age	24 years and younger	30	25.6
	25-35 years	35	29.9
	36-45 years	11	9.4
	46-55 years	28	23.9
	56 years and older	13	11.1
Marital status	Single	41	35
	Divorced	14	12
	Widowed	1	0.9
	Married	53	45.3
	Living with a partner	8	6.8
Years in organisation	Less than 5 years	69	59
	6-10 years	17	14.5
	11-20 years	13	11.1
	More than 20 years	18	15.4
Highest qualification attained	Matric certificate	0	0
	Diploma	14	12
	Degree	57	48.8
	Postgraduate degree	45	38.5

Note: Percentages may not add up to 100% owing to missing data in some categories

3.4 Sampling Method

The sample was gathered using a non-probability convenience sampling method. A non-probability sample means that the sample selected does not have a probable chance of representing the target population. Convenience sampling is a non-probability sampling technique whereby subjects are selected because of their convenient accessibility and proximity to the researcher (Shaughnessy & Zechmeister, 1997). This sampling method was used because it is the most convenient way of collecting data from the teachers due to the fact that, out of the population, it was unknown what particular teachers would be accessible on the data collection dates. Due to the fact that the targeted population is relatively small (N=159), the use of non-probability convenience sampling is acceptable as drawing a non-random sample will include a large proportion of the population nonetheless. This type of sampling method was also chosen for the advantages of being less complicated and less time consuming, in addition to being more economical (Huysamen, 1994).

3.5 Measuring Instruments

A demographic questionnaire as well as three measuring instruments were used in this study, namely the Utrecht Work Engagement Scale (UWES) (Shaufeli et al., 2002), the Organisational Commitment Questionnaire (OCQ) (Allen & Meyer, 1990), the Job Demands-Resources Scale (JD-RS) (Jackson & Rothmann, 2005a) (See Appendices 1, 2, 3 and 4 respectively).

3.5.1 Demographic questionnaire. A demographic questionnaire was developed by the researcher in order to collect demographic information about the participants of the present study. Information collected included the following: gender, age group, marital status, years working within the organisation (tenure) and highest qualification attained.

3.5.2 Utrecht Work Engagement Scale (UWES). The UWES (Schaufeli et al., 2002) was used to measure levels of engagement of the participants within the present study. The UWES was chosen as a measure for this study due to the fact that it is the most commonly used measure of work engagement, further, this measuring instrument is in keeping with the definition of work engagement as prescribed to by this study and thus was chosen as a measure. The UWES measures three underlying dimensions of work engagement, namely: vigour, dedication and absorption in the form of a 17-item, self-report questionnaire (UWES-17). The three dimensions of engagement can be distinguished, namely *vigour* (6 items; for example “I am bursting with energy in my work”), *dedication* (5 items; for example “I find my work full of meaning and purpose”) and *absorption* (6 items; for example “When I am working, I forget everything else around me”).

Engaged workers are characterised by high levels of vigour and dedication and are highly immersed in their jobs (Coetzee & Rothmann, 2005). The UWES is scored on a seven-point Likert-scale ranging from 1 (never) to 7 (everyday) and has been validated in many countries such as China, Finland, Greece, Japan and South Africa (Bakker et al., 2008; Seppälä et al., 2009). In most cases the three-factor structure has been validated within the South African context (Rothmann & Jordaan, 2006). Internal consistency and reliability for the three subscales of this instrument have been found to range between 0.68 and 0.91 (Coetzee & Rothmann, 2005). Improvement of the alpha coefficient (ranging from 0.78 to 0.89) seems to be possible without adversely affecting the internal consistency of the scale (Storm & Rothmann, 2003). In a South African sample Storm and Rothmann (2003) reported the following alpha coefficients for the three subscales: vigour: 0.79; dedication: 0.89 and absorption, 0.78; all of which indicate high levels of internal consistency of the scale items. Within a sample of South African educators the following alpha coefficients were found: vigour: 0.70 and dedication: 0.81 (Jackson et al., 2006). Within the literature there is an

ongoing debate that vigour and dedication are the core dimensions measuring work engagement, with absorption as a unnecessary dimension (Jackson et al., 2006).

3.5.3 The Organisational Commitment Questionnaire (OCQ). The OCQ (Allen & Meyer, 1990) was used to measure affective, continuance as well as normative organisational commitment of the participants. The OCQ measures organisational commitment along three subscales (dimensions). Inter-correlations between populations were found to be consistent above 0.90 (Allen & Meyer, 1990). Response to this scale was given on a five-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). The three dimensions of organisational commitment can be distinguished, namely *affective commitment* (6 items; for example “I do not feel emotionally ‘attached’ to this organisation”), *continuance commitment* (6 items; for example “One of the few negative consequences of leaving this organisation would be the scarcity of available resources”), and *normative commitment* (6 items; for example “I would not leave my organisation right now because I have a sense of obligation to the people in it”).

The internal consistency for this questionnaire has been confirmed at the 0.80 level (Suliman & Iles, 2000). Intercorrelations among populations have been found to be consistently above 0.90 (Allen & Meyer, 1996). In South African studies, Kwela (2001) found the alpha coefficient of 0.87, as did Rugg (2001). A study conducted by Stander and Rothmann (2010), utilising a two-factor model of organisational commitment, found an alpha coefficient of 0.88 for attitudinal commitment (consisting of affective and normative components) and 0.54 for continuance commitment. There is some debate within existing literature with regards to the fact that some research has found that the three dimensions measured by the OCQ (affective, continuance and normative) overlap to a great extent (Cohen, 2007).

3.5.4 The Job Demands-Resources Scale (JDRS). The JDRS (Jackson & Rothmann, 2005a) was used to measure specific job characteristics (demands and resources) of the participants. The JDRS consists of 42 items with the questions rated on a four-point Likert-scale ranging from 1 (never) to 4 (always). The 42 items that comprise the scale consist of dimensions related to; pace and amount of work, mental load, emotional load, variety in work, opportunities to learn, independence in work, relationships with colleagues, relationship with immediate supervisor, ambiguities about work, information participation, contact possibilities remuneration and career possibilities. Jackson and Rothmann (2005a) found that the dimensions of the JDRS consisted of seven reliable factors, namely; organisational support, growth opportunities, overload, job insecurity, relationship with colleagues, control and rewards. A psychometric evaluation of the JDRS conducted by Rothmann et al. (2006), found that the dimensions of the JDRS consisted of five reliable factors, namely: *overload* (8 items; for example “Do you work under time pressure?”), *growth opportunities* (7 items; for example “does your work give you the feeling that you can achieve something?”), *organisational support* (18 items; for example “can you discuss work problems with your direct supervisor?”), *job insecurity* (3 items; for example “do you need to be more secure that you will keep your current job in the next year?”), and *advancement* (6 items; for example “does your organisation give you opportunities to follow training courses?”).

The JDRS was chosen as a measure for job demands and resources within the present study due to the fact that it was developed within the South African context and have been widely validated among South African samples (Jackson et al., 2006; Rothmann et al., 2006), it has thus been tested with a variety of samples and has been found to have sufficient internal consistency and high levels of reliability. Rothmann et al. (2006) found reliable alpha coefficients for the JDRS as a whole, which ranged between 0.76 and 0.92. Further,

Rothmann et al. (2006) found highly reliable alpha coefficients for the five factors that were extracted from the JDRS: growth opportunities, 0.86; organisational support, 0.92; advancement, 0.83; overload, 0.76; and job insecurity, 0.89. A study conducted by Jackson et al. (2006) using a sample of educators in South Africa further reported the following alpha coefficients for four factors (renamed by the researchers) of the JDRS: organisational support, 0.88; overload, 0.73; growth opportunities, 0.81 and advancement, 0.75.

3.6 Statistical Analysis

The Statistical Package for the Social Sciences program (version 19) was used to carry out statistical analysis (SPSS, 2003). This program was chosen due to the fact that it is a program widely used to analyse quantitative data within the Social Sciences, and was appropriate to use when taking into account the volume of data anticipated to be collected within the present study.

Firstly, exploratory factor analysis was undertaken in order to determine the factor structure of the UWES, OCQ as well as the JDRS; the factor structure was tested in a path analysis following a two-step procedure. In the first step, a simple principle components analysis was conducted on the constructs which form part of the proposed model, including work engagement, organisational commitment as well as job demands and job resources the eigenvalues and scree plots were then studied to determine the number of factors. In the second step, either a principle components analysis with direct oblimin rotation was conducted if factors were related, or principle components analysis with varimax rotation was used if the obtained factors were not related (Tabachnick & Fidell, 2001).

Secondly, descriptive statistics were used to explore the data that was collected from the participants. Descriptive statistics consist of means, medians, standard deviations, skewness and kurtosis (Tabachnick & Fidell, 2001).

Thirdly, Cronbach alpha coefficients (α) were then used to assess the internal consistency of the measuring instruments (Gregory, 2007). The alpha coefficient conveys important information regarding the proportion of error variance contained in a scale, a test with high internal consistency will also tend to show stability of scores, and therefore is a useful measure of reliability (Gregory, 2007). When using Likert-type scales, such as in the case of the present study, it is imperative to calculate the Cronbach alpha coefficient in order to determine the internal consistency reliability for any scale or sub-scale being used (Gregory, 2007). Nunnally and Bernstein (1994), suggest at least a Cronbach alpha coefficient of around 0.70 as being an acceptable level of internal consistency.

Fourthly, Pearson product-momentum correlation coefficients were used to specify the relationship between the variables in the present study. The level of statistical significance was set up as $p \leq .05$. It must be noted that criticism have been levelled against the sole use of statistical significance testing and thus it is recommended that effect sizes be established in order to determine the practical importance of a statistically significant relationship (Steyn, 2002). Therefore, effect sizes (Cohen, 1988) were used in addition to statistical significance testing in order to determine the significance of relationships. Effect sizes indicate whether obtained results are of practical importance (whereas statistical significance may often show results which are of little practical relevance). As the use of only statistical significance testing in a routine manner has recently been criticised by some researchers, with the request to place more emphasis on effect sizes (Steyn, 2002); a cut-off point of 0.30, was set for the

determination of practical significance. Generally, a medium effect size ranges between 0.30 to 0.49, whilst a large effect size ranges from 0.50 and above (Steyn, 2002).

Fifthly, multiple regression analysis was conducted in order to determine whether job resources held predictive value for work engagement. Multiple regression analysis was used to analyse whether two or more predictors (independent variables) would predict a criterion (dependent variable) (Howell, 1995). Therefore, within the present study, multiple regression analyses were conducted with job resources as the independent variable, and work engagement as the dependent variable.

Lastly, in order to test the hypothesised meditational relationships of the present study, a series of multiple regression analyses were carried out. The procedure for testing meditational relationships set by Baron and Kenny (1986) was followed. According to these authors, Beta coefficients (β) of different regression equations must be compared in order to test for a mediation effect. Specifically, Baron and Kenny (1986) recommend that a series of regression models should be estimated in order to test for mediation. The authors suggest a three step procedure, whereby; first, the mediator should be regressed on the independent variable; second, the dependent variable should be regressed on the independent variable; and third, the dependent variable should be regressed on both the independent variable and the mediator. Separate coefficients for each of the above equations are then estimated and tested (Baron & Kenny, 1986). These three regression equations then provide tests for the linkages of the meditational model. Full mediation occurs when, controlling for the mediator, the independent variable no longer affects the dependent variable (in other words, when the independent variable is no longer statistically significant), whereas partial mediation occurs when, controlling for the mediator, the effect of the independent variable on the dependent

variable is reduced, but is still statistically significant (Baron & Kenny, 1986; Preacher & Hayes, 2004).

3.7 Procedure

A letter asking permission to enter school premises for the purpose of administering the survey booklets to the teachers was sought from each of the school principals of the two former model C high schools in the Durban North area of KwaZulu-Natal (see Appendix 5). The teachers were then briefed about the focus of the study and were given a letter describing precisely and specifically what was required of them, after which they were asked if they were willing to participate in the study. Participation was voluntary and participants were told that they were free to withdraw from the study at whatever time and for whatever reason. If the individual choose to participate in the research study, then they were required to sign a letter of consent (see Appendix 6). Those who choose to participate were then required to complete the survey booklet consisting of the biographical questionnaire, the Utrecht Work Engagement Scale, the Organisational Commitment Questionnaire, and the Job Demands-Resources Scale. Teachers that were on the school premises on the day of the survey administration were told about the aims and the underlying rationale of the study and then asked if they wished to participate in this study. If they agreed to participate, they were given a survey to complete at their own convenience and were asked when it would be appropriate for the researcher to return to them in order to collect the completed survey. The researcher then recorded the appropriate time to return, and did so.

3.8 Ethical Considerations

The participants that were on the school premises on the day of the data collection were informed about the study, including the aims and rationale of the study. The participants were then given a letter detailing what would be required of them, as well as what would be done

with the data once it had been collected, where it would be kept and for how long, as well as how the data will be disposed of. The participants were told that participation is voluntary, that the survey was anonymous, confidential, and that no personal information or personal feedback would be given. The participants were further assured that that they could withdraw from the study at any time they so choose, and for any reason. The data collected will be kept in the supervisor's office under lock and key for a period of five years, to prevent any misuse of the data. Once this time has lapsed, the data will be disposed of using a shredder. The names and contact numbers of the supervisor and researcher were put on the letter in case the participants wished to contact us should they have any questions regarding the study, as well as the contact number of a representative working in the University of KwaZulu-Natal research office.

3.9 Summary

The current chapter highlighted the research methodology guiding the present research study. This chapter aimed to set forward the type of research design utilised, the participants who took part in the study, as well as the sampling method employed. Further, this chapter discussed the measuring instruments that were used in the data collection process, by referring to their structure, the types of items found within the instruments, as well as reporting of the reliabilities of each of the instruments found in previous research studies, both international and within the South African context. Within this chapter, the statistical analysis procedure was also discussed in a step-by-step manner. Finally the procedure of data collection that was followed was elucidated to, as well as the ethical issues pertaining to the present study. In the following chapter, the results of the study shall be discussed.

Chapter 4: Results

4.1 Introduction

The purpose of this chapter is to report the results of the statistical analyses undertaken in the study. The results will be reported in the order in which they were carried out. Firstly, the results of the exploratory factor analysis on the UWES, OCQ and JDRS shall be reported on. Secondly, the descriptive statistics of each of the measures shall be reported on, along with the Cronbach alpha coefficients for each of the instruments used in the study. Thirdly, the results from the Pearson product-moment correlation coefficients will be discussed in terms of the relationships found between the variables under study. Fourthly, the results from the multiple regression analyses, which were used in order to determine whether job demands are predictive of work engagement, shall be reported. Finally, the series of multiple regression analyses undertaken in order to test the hypothesised meditational effects shall then be reported on for each meditational relationship that was hypothesised in the present study.

4.2 Exploratory Factor Analysis

Exploratory factor analysis was conducted on all three of the measuring instruments used in the present study. Factor analysis was then undertaken in order to determine the factor structure of the UWES, OCQ as well as the JDRS. The results of the exploratory factor analysis of the UWES, OCQ and JDRS are shown in Tables 2, 3 and 4 respectively. Variables are grouped by size and ordered to facilitate interpretation. Zeros represent loadings lower than 0.45. Labels for each factor are suggested in the table footnote.

Table 2

Factor Loadings for Principle Component Extraction and Varimax Rotation on UWES Items

Items	F₁
I am bursting with energy in my work.	0.77
I find my work full of meaning and purpose.	0.73
Time flies when I'm working	0.65
I feel strong and vigorous in my job.	0.69
I am enthusiastic about my job.	0.78
When I am working, I forget everything else around me.	0.67
My job inspires me.	0.75
When I get up in the morning, I feel like going to work.	0.74
I feel happy when I am engrossed in my work.	0.76
I am proud of the work that I do.	0.66
I am immersed in my work.	0.71
In my job, I can continue working for very long periods at a time.	0.68
To me, my work is challenging.	0.60
I get carried away by my work.	0.67
I am very resilient, mentally, in my job.	0.51
It is difficult to detach myself from my job.	0.49
I always persevere at work, even when things do not go well.	0.67

Note: F₁ Work engagement

The exploratory factor analysis carried out on the UWES, through examination of the eigenvalues (≥ 1) and the scree plot, indicated that one factor could be extracted, explaining 46.5% of the total variance. An inspection of Table 2 shows that all 17 items of the UWES loaded on one factor, indicating that a one-factor model of work engagement fitted the data best, this factor was named work engagement. The one factor of work engagement thus incorporates all three dimensions of vigour, dedication and absorption (Schaufeli, Bakker & Salanova, 2006). Work engagement as a one factor construct was thus defined as “a positive,

fulfilling work-related state of mind that is characterised by vigour, dedication and absorption” (Schaufeli et al., 2006, p. 702).

Table 3

Factor Loadings for Principle Component Extraction and Varimax Rotation on OCQ Items

Item	F ₁	F ₂
I would be very happy to spend the rest of my career in this organisation.	0.69	0.00
It would be very hard for me to leave the organisation right now, even if I wanted to.	0.75	0.00
I do not feel any obligation to remain with my current employer.	0.66	0.00
I really feel as if this organisation’s problems are my own.	0.00	0.00
Too much of my life would be disrupted if I decided I wanted to leave my organisation right now.	0.00	0.00
Even if it were to my advantage, I do not feel it would be right to leave my organisation right now.	0.62	0.00
I do not feel like “part of the family” at my organisation	0.00	0.00
Right now, staying with my organisation is a matter of necessity as much as desire.	0.00	0.64
I would feel guilty if I leave my organisation right now.	0.68	0.00
I do not feel emotionally “attached” to this organisation.	0.78	0.00
One of the few negative consequences of leaving this organisation would be scarcity of available resources.	0.00	0.63
My organisation deserves my loyalty.	0.60	0.00
This organisation has a great deal of personal meaning for me.	0.78	0.00
I feel that I have too few options to consider leaving this organisation	0.00	0.76
I would not leave my organisation right now because I have a sense of obligation to the people in it.	0.67	0.00
I do not feel a strong sense of belonging to my organisation.	0.65	0.00
If I had not already put so much of myself into this organisation, I might consider working elsewhere.	0.00	0.67
I owe a great deal to my organisation.	0.70	0.00

Note: F₁ Attitudinal commitment; F₂ Continuance commitment

The exploratory factor analysis carried out on the OCQ, through examination of the eigenvalues (≥ 1) and the scree plot, indicated that two factors could be extracted, explaining 41.5% of the total variance. Inspection of Table 3 shows that 15 of the 18 items loaded on two factors which were named attitudinal commitment (consisting of both normative and affective commitment) and continuance commitment. Meyer and Allen (1990) refer to continuance commitment as an employee's behavioural orientation; "while normative commitment, together with affective commitment, refers to an employee's attitudinal disposition" (Stander & Rothmann, 2010, p. 9).

Table 4

Factor Loadings for Principle Component Extraction and Varimax Rotation on JDRS Items

Items	F₁	F₂	F₃	F₄
Do you have too much work to do?	0.00	0.00	0.74	0.00
Do you work under time pressure?	0.00	0.00	0.79	0.00
Do you have to be attentive to many things at the same time?	0.00	0.00	0.70	0.00
Do you have to give continuous attention to your work?	0.00	0.00	0.73	0.00
Do you have to remember many things in your work?	0.00	0.00	0.70	0.00
Are you confronted with things in your work that affect you personally?	0.00	0.00	0.00	0.00
Do you have contact with difficult people in your work?	0.00	0.00	0.45	0.00
Does your work put you in emotionally upsetting situations?	0.00	0.00	0.00	0.00
Do you have enough variety in your work?	0.00	0.00	0.00	0.00
Does your job offer you opportunities for personal growth and development?	0.00	0.51	0.00	0.00
Does your work give you the feeling that you can achieve something?	0.00	0.62	0.00	0.00
Does your job offer you the possibility of independent thought and action?	0.00	0.64	0.00	0.00

*Factor Loadings for Principle Component Extraction and Varimax Rotation on JDRS Items
(Continued)*

Do you have freedom in carrying out your work activities?	0.00	0.68	0.00	0.00
Do you have influence in the planning of your work activities?	0.00	0.74	0.00	0.00
Can you participate in the decision about when a piece of work must be completed?	0.00	0.48	0.00	0.00
Can you count on your colleagues when you come across difficulties in your work?	0.60	0.00	0.00	0.00
If necessary can you ask your colleagues for help?	0.63	0.00	0.00	0.00
Do you get on well with your colleagues?	0.68	0.00	0.00	0.00
Can you count on your supervisor when you come across difficulties in your work?	0.71	0.00	0.00	0.00
Do you get on well with your supervisor?	0.67	0.00	0.00	0.00
In your work, do you feel appreciated by your supervisor?	0.63	0.00	0.00	0.00
Do you know exactly what other people expect of you in your work?	0.54	0.00	0.00	0.00
Do you know exactly for what you are responsible?	0.00	0.00	0.00	0.00
Do you know exactly what your direct supervisor thinks of your performance?	0.55	0.00	0.00	0.00
Do you receive sufficient information on the purpose of your work?	0.66	0.00	0.00	0.00
Do you receive sufficient information of the results of your work?	0.57	0.00	0.00	0.00
Does your direct supervisor inform you about important issues within your department/organisation?	0.45	0.00	0.00	0.00
Are you kept adequately up-to-date about important issues within your organisation?	0.57	0.00	0.00	0.00
Is the decision-making process in your organisation clear to you?	0.66	0.00	0.00	0.00
Is it clear to you whom you should address within the organisation for specific problems?	0.76	0.00	0.00	0.00
Can you discuss work problems with your direct supervisor?	0.67	0.00	0.00	0.00

Factor Loadings for Principle Component Extraction and Varimax Rotation on JDRS Items (Continued)

Can you participate in decisions about the nature of your work?	0.57	0.00	0.00	0.00
Do you have a direct influence on your organisations decisions?	0.00	0.00	0.00	0.00
Do you need to be more secure that you will still be working in one year's time?	0.00	0.00	0.00	0.58
Do you need to be more secure that you will keep your current job in the next year?	0.00	0.00	0.00	0.54
Do you need to be more secure that next year you will keep the same function level as currently?	0.00	0.00	0.00	0.00
Do you think that your organisation pays good salaries?	0.00	0.00	0.00	0.00
Can you live comfortably on your pay?	0.00	0.00	0.00	0.00
Do you think you are paid enough for the work you do?	0.00	0.00	0.00	0.00
Does your job offer you the possibility to progress financially?	0.00	0.00	0.00	0.00
Does your organisation give you opportunities to follow training courses?	0.00	0.00	0.00	0.00
Does your job give you the opportunity to be promoted?	0.00	0.00	0.00	0.00

Note: F₁ Organisational support; F₂ Growth opportunities; F₃ Overload; F₄ Job insecurity

The exploratory factor analysis carried out on the JDRS, through examination of the eigenvalues (≥ 1) and the scree plot, indicated that four factors could be extracted, explaining 48.4% of the total variance. Inspection of Table 4 shows that 30 of the 42 items of the JDRS loaded on the four factors found. The factors were defined as follows: a) Organisational support, which refers to the relationship with the colleagues and supervisor, ambiguities regarding work, information, communication, participation and contact possibilities. b) Growth opportunities, which refers to variety in work, opportunities to learn and independence in work. c) Overload, which involves the pace and amount of work, opportunities to learn, confrontation with difficult people at the work place, as well as

independence in work. d) Job insecurity, which refers to uncertainty about the future pertaining to working in general and more specifically, ones current job.

Therefore, through conducting exploratory factor analysis, the current research has identified two job resources, namely; organisational support and growth opportunities. Two job demands were also identified through exploratory factor analysis, namely; overload and job insecurity. Due to the fact that the present research also is premised upon a differentiated approach to job demands (namely the distinction between challenge and hindrance demands), overload was classified as a challenge demand, whereas job insecurity was classified as a hindrance demand (Crawford et al., 2010).

4.3 Descriptive Statistics and Cronbach Alpha Coefficients

Table 5

Descriptive Statistics

Variable	N	Min.	Max.	Mean	SD	Skewness	Kurtosis	α
UWES								
Work engagement	117	41	119	93.17	18.10	-0.94	0.45	0.92
OCQ								
Attitudinal commitment	114	17	55	36.89	8.59	-0.23	-0.47	0.86
Continuance commitment	114	14	33	22.89	3.76	0.23	0.47	0.35
JDRS								
Organisational support	117	18	63	47.26	9.71	-0.68	0.41	0.93
Growth opportunities	117	10	24	16.82	3.53	-0.17	-0.01	0.77
Overload	117	11	24	19.09	3.48	-0.17	-0.66	0.81
Job insecurity	117	0	8	4.00	2.08	0.54	-0.64	0.86

Table 5 shows the descriptive statistics (minimum, maximum, mean, standard deviation, skewness and kurtosis) as well as the Cronbach alpha coefficients of the UWES, the OCQ

and the JDRS. From Table 5 it is evident that all scores on the scales are normally distributed. A further inspection of Table 5 shows that the internal consistencies of all of the constructs, with the exception of continuance commitment ($\alpha=0.35$), are acceptable according to the 0.70 guideline as set by Nunnally and Bernstein (1994). The results indicate high levels of reliability which is in line with the findings of other research. Due to the fact that such a low Cronbach alpha coefficient was found for continuance commitment ($\alpha \leq 0.70$), it was not used in any further statistical analysis.

4.4 Pearson Product-Momentum Correlation Coefficients

Table 6

Pearson Momentum Correlation Coefficients

	1	2	3	4	5	6
1. Work Engagement	0.66					
2. Attitudinal Commitment	0.55 ^{**++}					
3. Job Insecurity	-0.21 [*]	-0.14				
4. Organisational Support	0.56 ^{**++}	0.51 ^{**++}	-0.34 ^{**+}			
5. Growth Opportunity	0.51 ^{**++}	0.39 ^{**+}	-0.16	0.47 ^{**+}		
6. Overload	0.30 ^{**+}	0.15	0.05	-0.11	0.15	

Note: * Statistically significant $p \leq 0.05$
 ** Statistically significant $p \leq 0.01$
 + Correlation is practically significant $r \geq 0.30$ (medium effect)
 ++ Correlation is practically significant $r \geq 0.50$ (large effect)

Pearson product-momentum correlation coefficients were used in order to examine the relationships between the variables of the present study. The correlations between the UWES, OCQ and JDRS are reported in Table 6. As is indicated, both statistically significant as well as practically significant relationships were found.

Table 6 shows that positive statistically significant as well as practically significant correlation coefficients were found between work engagement and attitudinal commitment

(consisting of both normative and affective commitment) ($p \leq 0.01$; large effect); organisational support ($p \leq 0.01$; large effect); growth opportunity ($p \leq 0.01$; large effect); and overload ($p \leq 0.01$; medium effect). Further, a negative statistically significant, however not a practically significant relationship was found between work engagement and job insecurity ($p \leq 0.05$). This indicates that higher levels of work engagement are associated with higher levels of attitudinal commitment, organisational support, growth opportunity and overload; and further that higher levels of work engagement are associated with lower levels of job insecurity.

A further inspection of Table 6 shows that positive statistically significant as well as practically significant correlation coefficients were found between attitudinal commitment (consisting of both normative and affective commitment) and organisational support ($p \leq 0.01$; large effect); and growth opportunity ($p \leq 0.01$; medium effect). No statistically or practically significant relationships were found between attitudinal commitment and job insecurity; or overload. These findings indicate that higher levels of attitudinal commitment are associated with higher levels of organisational support and growth opportunity.

Table 6 shows that a negative statistically significant as well as practically significant correlation coefficient was found between job insecurity and organisational support ($p \leq 0.01$; medium effect). This finding indicates that higher levels of job insecurity are associated with lower levels of organisational support. Further, no statistically significant or practically significant relationships were found between job insecurity and growth opportunity or job insecurity of overload.

A further inspection of Table 6 shows that a positive statistically significant as well as practically significant correlation coefficient was found to exist between organisational

support and growth opportunity ($p \leq 0.01$; medium effect). Therefore this indicates that higher levels of organisational support are associated with higher levels of growth opportunity within the workplace. No statistically significant or practically significant relationships between organisational support and overload were found to exist.

Finally, an inspection of Table 6 shows that no statistically significant or practically significant relationship was found to exist between growth opportunity and overload.

The findings of the Pearson product-moment correlation coefficients that have been reported above thus support the first three hypotheses of the present study, these being; hypothesis 1, stating that job resources (indicated by organisational support and growth opportunity) are positively related to work engagement; hypothesis 2, stating that challenge job demands (indicated by overload) are positively related to work engagement; and hypothesis 3, stating that hindrance job demands (indicated by job insecurity) are negatively related to work engagement.

4.5 Multiple Regression Analysis to Determine the Predictive Value of Job Resources for Work Engagement

Table 7

Multiple Regression Analysis with Work Engagement as Dependent Variable and Organisational Support and Growth Opportunities (Job Resources) as Independent Variables

Variable	Unstandardised		Standardised	t	p	F	R	R ²	ΔR^2
	Beta								
	β	SE	β						
						35.09**	0.62	0.38 ⁺	0.38
Constant	30.96	7.59		4.08	0.00**				
Organisational Support	0.81	0.16	0.44	5.20	0.00***				
Growth Opportunity	1.42	0.43	0.28	3.31	0.01**				

Note: * Statistically significant $p \leq 0.05$
 ** Statistically significant $p \leq 0.01$
 + Correlation is practically significant $r \geq 0.30$ (medium effect)
 ++ Correlation is practically significant $r \geq 0.50$ (large effect)

A standard multiple regression analysis was conducted with job resources (organisational support and growth opportunities) as the independent variables and work engagement as the dependent variable. The purpose of the regression analyses was to determine what percentage of variance in the dependent variable (work engagement) was explained by the independent variables (organisational support and growth opportunities). The results are shown in Table 7.

The results showed in Table 7 indicate that organisational support and growth opportunities can both be viewed as predictive of work engagement ($F=35.09$; $R^2=0.38$; $p \leq 0.01$; medium effect). Further, these job resources were found to explain 38% of the variance in work engagement. The inspection of Table 7 shows that organisational support, out of the two independent variables, can be seen as being the most statistically significant as well as practically significant predictor of work engagement ($\beta = 0.44$; $p \leq 0.01$; medium effect) when

the variance explained by all other independent variables in the model are controlled for. Further, an inspection of Table 7 indicates that growth opportunity can be seen as being the second most statistically significant predictor of work engagement ($\beta = 0.28$; $p \leq 0.01$).

The fourth hypothesis of the present study, being that job resources are predictive of work engagement was thus supported by the findings of the multiple regression analysis displayed in Table 7.

4.6 Multiple Regression Analyses to Determine the Hypothesised Mediation Relationships

In order to test the last two hypotheses of the present study, namely; hypothesis 5, stating that work engagement mediates the relationship between job resources and organisational commitment; and hypothesis 6, stating that work engagement mediates the relationship between challenge job demands and organisational commitment, a series of multiple regression analyses was performed.

Baron and Kenny (1986) recommend three steps in order to test for mediation. According to these authors, three separate regression analyses must be performed and the Beta coefficients of each regression compared. Firstly, the mediator should be regressed on the independent variable; secondly, the dependent variable should be regressed on the independent variable; and finally, the dependent variable should be regressed on both the independent variable and the mediator (Baron & Kenny, 1986). Further, to establish mediation, certain conditions must hold: first, the independent variable must affect the mediator in the first equation; second, the independent variable must be shown to affect the dependent variable in the first equation; and third, the mediator must affect the dependent variable in the third equation. "If these conditions all hold in the predicted direction, then the effect of the independent variable on

the dependent variable must be less in the third equation than in the second” (Baron & Kenny, 1986, p, 1177). Further there is a distinction between full mediation and partial mediation. Full mediation occurs when, controlling for the mediator, the independent variable does not predict the dependent variable. Partial mediation occurs when, controlling for the mediator, the independent variable still holds significant predictive value for the dependent variable.

In order to test hypothesis 4, stating that work engagement mediates the relationship between job resources (organisational support and growth opportunities) and organisational commitment, two separate regression analyses were conducted. Within the first set of analyses, the independent variable was organisational support, whereas in the second set of analyses the independent variable was growth opportunities. This procedure allowed for both of the job resources of the present study to be tested as independent variables with work engagement as the mediator and organisational commitment as the dependent variable.

Refer to Tables 8 and 9 respectively, for the results of these two sets of mediation analyses.

Table 8

Multiple Regression Analysis with Attitudinal Organisational Commitment as Dependent Variable and Organisational Support (Job Resource) and Work Engagement as Independent Variables

Variable	Unstandardised Beta Coefficients		Standardised Beta Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	β	SE	β						
Step 1						39.71**	0.51	0.26	0.26
Constant	15.6	3.45		4.52	0.00**				
Organisational Support	0.45	0.07	0.51	6.3	0.00***				
Step 2						30.87**	0.6	0.36 ⁺	0.32
Constant	7.54	3.8		1.98	0.05*				
Organisational Support	0.26	0.08	0.29	3.17	0.00**				
Work Engagement	0.18	0.04	0.39	4.18	0.00***				

Note: * Statistically significant $p \leq 0.05$
 ** Statistically significant $p \leq 0.01$
 + Correlation is practically significant $r \geq 0.30$ (medium effect)
 ++ Correlation is practically significant $r \geq 0.50$ (large effect)

The results in Table 8 show evidence of the second and third steps in Baron and Kenny's (1986) procedure to test mediation. Within this analysis the independent variable was organisational support (a job resource), the mediator was work engagement, and the dependent variable was attitudinal organisational commitment. The results in Table 7 already showed that the mediator (work engagement) can be predicted by the independent variable (organisational support) ($\beta = 0.44$; $p \leq 0.01$; medium effect), suggesting evidence for the first step of Baron and Kenny's (1986) procedure. The results step 1 of Table 8 showed that the dependent variable (attitudinal organisational commitment) can be predicted by the independent variable ($\beta = 0.51$; $p \leq 0.01$; large effect). (evidence for the second step in Baron and Kenny's procedure). The results in step 2 of Table 8 provide evidence for step 3 in Baron and Kenny's procedure as it shows that the mediator (work engagement) both statistically and

practically affects the dependent variable (attitudinal organisational commitment) ($\beta = 0.39$; $p \leq 0.01$; medium effect). The results in Table 8 show that the introduction of work engagement in the analysis reduces the impact of organisational support on affective organisational commitment as the Beta coefficient drops from 0.51 ($p \leq 0.01$; large effect) to 0.29 ($p \leq 0.01$). Organisational support, however, still remains a statistically significant predictor of attitudinal organisational commitment ($\beta = 0.29$; $p \leq 0.01$). According to Baron and Kenny (1986) it can be said that work engagement partially mediates the relationship between organisational support and attitudinal organisational commitment. Therefore the first part of hypothesis 5 is corroborated: work engagement mediates the relationship between organisational support (one of the job resources in the study) and attitudinal commitment.

Table 9

Multiple Regression Analysis with Affective Organisational Commitment as Dependent Variable and Growth Opportunities (Job Resource) and Work Engagement as Independent Variables

Variable	Unstandardised Beta Coefficients		Standardised Beta Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	β	SE	β						
Step 1						20.60**	0.39	0.16	0.16
Constant	20.84	3.61		5.77	0.00**				
Growth Opportunities	0.96	0.21	0.39	4.54	0.00**+				
Step 2						26.66**	0.57	0.31 ⁺	0.32
Constant	9.68	3.88		2.49	0.01*				
Growth Opportunities	0.39	0.22	0.16	1.81	0.07				
Work Engagement	0.22	0.04	0.47	5.27	0.00**+				

Note: * Statistically significant $p \leq 0.05$
 ** Statistically significant $p \leq 0.01$
 + Correlation is practically significant $r \geq 0.30$ (medium effect)
 ++ Correlation is practically significant $r \geq 0.50$ (large effect)

In order to further test hypothesis 5, the second job resource of the study, growth opportunities, was tested in a series of regression analyses whereby it was put as the independent variable, with work engagement as the mediator and attitudinal organisational commitment as the dependent variable. The results of this set of analyses are reported in Table 9.

The results in Table 9 show evidence of the second and third steps in Baron and Kenny's (1986) procedure to test mediation. Within this analysis the independent variable was growth opportunities (a job resource), the mediator was work engagement, and the dependent variable was attitudinal organisational commitment. The results in Table 7 already showed that the mediator (work engagement) can be predicted by the independent variable (growth opportunities) ($\beta = 0.28$; $p \leq 0.01$), suggesting evidence for the first step of Baron and Kenny's procedure. The results step 1 of Table 9 showed that the dependent variable (attitudinal organisational commitment) can be statistically and practically significantly predicted by the independent variable ($\beta = 0.39$; $p \leq 0.01$; medium effect), which is evidence for the second step in Baron and Kenny's procedure. The results in step 2 of Table 9 provide evidence for step 3 in Baron and Kenny's procedure, as it shows that the mediator (work engagement) statistically and practically significantly affects the dependent variable (attitudinal organisational commitment) ($\beta = 0.47$; $p \leq 0.01$; medium effect).

The results in Table 9 show that the introduction of work engagement in the analysis reduces the impact of growth opportunities on affective organisational commitment as the Beta coefficient drops from 0.39 ($p \leq 0.01$; medium effect) to 0.16. Therefore, as is indicated by Table 9, with the introduction of work engagement, growth opportunities is no longer a statistically significant or practically significant predictor of attitudinal organisational commitment ($\beta = 0.16$). According to Baron and Kenny (1986) it can be said that work

engagement fully mediates the relationship between growth opportunities and attitudinal organisational commitment, due to the fact that when the mediator is introduced into the analyses, the independent variable no longer has a significant effect on the dependent variable. Therefore the second part of hypothesis 5 is corroborated: work engagement mediates the relationship between growth opportunities (one of the job resources in the study) and attitudinal commitment.

Finally, in order to test the sixth and final hypothesis of the study, stating that work engagement mediates the relationship between challenge job demands (overload) and attitudinal organisational commitment, Baron and Kenny's (1986) procedure was followed. However, it was found that the regression equations did not provide evidence for any of the three steps suggested by the authors. Therefore the researcher was not able to test the mediational affects of work engagement on the relationship between overload and attitudinal commitment. Thus, hypothesis 6 was not able to be tested in the present study.

4.7 Summary

In conclusion, the present chapter discussed the results of the statistical analyses undertaken in the present study in the order in which the analyses were undertaken. Throughout this chapter, each of the stated hypotheses that were tested, and it was highlighted what analyses were undertaken to test the specific hypotheses of the study.

Firstly, exploratory factor analysis was conducted on all of the measuring instruments under study, these being: the UWES, the OCQ and the JDRS. A one-factor model of the UWES was found to fit the data best and this factor was named work engagement. A two-factor model consisting of attitudinal organisational commitment (consisting of the affective and normative components) and continuance organisational commitment was found to fit the data

best in terms of the OCQ. Finally, a four-factor model consisting of two job resources, being, organisational support and growth opportunities; as well as job demands two demands, being, overload (challenge demand) and job insecurity (hindrance demand) was found to fit the data best in terms of the JDRS.

The descriptive statistics as well as the Cronbach alpha reliabilities of each of the measures used in the present study were reported. The data was found to be normally distributed with all alpha coefficients, except continuance organisational commitment, being above the 0.70 guideline (Nunnally & Bernstein 1994). As a result of the above, the measure of continuance organisational commitment was subsequently left out of further statistical analysis.

Analysis conducted using Pearson product-moment coefficients corroborated hypotheses 1, 2 and 3 of the present study which were; hypothesis 1, job resources are positively related to work engagement; hypothesis 2, challenge job demands are positively related to work engagement; and, hypothesis 3, hindrance demands are negatively related to work engagement.

Multiple regression analyses provided support for hypothesis 4 of the present study, which stated that job resources (consisting of organisational support and growth opportunities) were predictive of organisational commitment.

A series of multiple regression analyses to test for mediation, suggested by Baron and Kenny (1986) were used in order to test the last two hypotheses of the study which stated that; hypothesis 5, work engagement mediates the relationship between job resources and organisational commitment; and, hypothesis 6, which stated that work engagement mediates the relationship between challenge job demands and organisational commitment. Hypothesis

5 was corroborated by the analysis as it was found that work engagement partially mediates the relationship between organisational support (the first job resource of the study) and attitudinal organisational commitment, and, that work engagement fully mediates the relationship between growth opportunities (the second job resource of the study) and attitudinal organisational commitment. In terms of testing hypothesis 6, however, preliminary statistical analysis found that this hypothesis could not be tested, due to the fact that the three step procedure suggested by Baron and Kenny (1986) were not met.

Chapter 5: Discussion

5.1 Introduction

Within the previous chapter, the results of the statistical analyses undertaken in this study were reported. The purpose of the present chapter is to discuss the findings reported, in the previous chapter, in terms of the relation to the existing body of knowledge around organisational commitment, work engagement, job resources and job demands. Further, the purpose of this chapter is to integrate and compare the findings of the present study with previous scientific research findings, and with particular reference to the theoretical framework underpinning the study, namely the JD-R/Dual Processes Model.

The objective of the present study was three-fold. Firstly, it attempted to determine the relationship between organisational commitment, work engagement, job demands and job resources of teachers working within former model C high schools in Durban North, KwaZulu-Natal. Secondly, it attempted to determine the predictive value that job resources hold for work engagement of former model C high school teachers in Durban North, South Africa; and finally, it attempted to determine the mediating role of work engagement in the relationship between various job demands and resources, and organisational commitment of former model C high school teachers in Durban North, South Africa.

Engaged and committed teachers are an important asset to any nation, however, within the current South African context; it has become ever more evident that teachers, in general, are faced with increasing job demands in spite of having few job resources. Former model C schools, in particular, have heavy demands placed on them due to the fact that these schools have to deal with an influx of students that, in the apartheid era, would have attended former model A and B schools (Makhubu, 2011). Therefore, teachers within these institutions

especially, are faced with heavy work demands, with very few resources. Previous studies addressing organisational commitment, work engagement, job demands and job resources specifically within former model C schools in South Africa have been minimal. The underlying rationale of this study is that, as teacher dissatisfaction in South Africa is becoming more prominent, research is needed in terms of how job demands and job resources impact upon teachers' levels of engagement to their work and commitment to their organisations.

5.2 Discussion of Results

Exploratory factor analysis was conducted on all of the three measuring instruments used within the present study, namely the UWES, OCQ and JDRS.

Analysis on the UWES found a one-factor model to suite the data best. This was an interesting finding as most international studies, such as those conducted by Schaufeli et al. (2006) and Seppälä et al. (2008), as well as studies using South African samples, such as that of Barkhuizen and Rothmann (2006), have confirmed the three-factor model of the UWES consisting of vigour, dedication and absorption. However, there have also been research studies which have not confirmed the three-factor model. A study conducted by Hakanen et al. (2006) found that a two-factor model consisting of vigour and dedication fitted their data best. It has been suggested in the literature that vigour and dedication are the main constituents of work engagement, with absorption being less important (Hakenen et al., 2006). This discussion is confirmed by a study conducted by Coetzer and Rothmann (2009) who found a one-factor model (comprised of vigour and dedication) of the UWES. Interestingly, a study conducted by Hallberg and Schaufeli (2006) also found a uni-factor model of the UWES, it was found that a composite measure suited the data best, therefore

these findings are in line with the finding of the present study in terms of the one-factor model of the UWES.

Exploratory factor analysis conducted on the OCQ found that a two-factor model of organisational commitment fitted the data best. It was found that both the items measuring normative organisational commitment and affective organisational commitment loaded on the first factor (renamed attitudinal organisational commitment), whilst the items measuring continuance organisational commitment loaded on the second factor. This finding is confirmed by a study conducted by Stander and Rothmann (2010) who also found a two-factor model of the OCQ. As with the findings of the present study, the study conducted by Stander and Rothmann (2010) found that the normative and affective items loaded on one factor, with the continuance items loading on a second factor. Meyer, Allen and Smith (1993) refer to continuance commitment as an employee's behavioural orientation, while both normative commitment and affective commitment refer to an employee's attitudinal orientation. Although Allen and Meyer (1990) propose that one can measure organisational commitment using a three-factor model; other studies (Cohen, 2007; Solinger, Van Olffen & Roe, 2008) question this by arguing that the factors of the OCQ tend to overlap. Findings of the present study confirm the discussion of Cohen (2007) and others pertaining to overlapping constructs in the OCQ.

The results of the exploratory factor analysis of the JDRS indicated that a four-factor model consisting of the job resources: organisational support and growth opportunities; and the job demands: overload and job insecurity, fitted the data best. The factor structure of the JDRS has been found to vary between studies. A study conducted by Coetzer and Rothmann (2009) found a six-factor model of the JDRS consisting of; organisational support, growth opportunities, social support, advancement, insecurity as well as a broader factor job

demands; whilst a study conducted by Jackson et al. (2006) found a four-factor structure consisting of; overload, organisational support, growth opportunities and advancement. These studies thus support the four-factor model of the JDRS found in the present study.

The present study further aimed to differentiate between challenge demands and hindrance demands (Crawford et al., 2010). The differentiation of job demands is premised on the fact that not all demands cause negative states such as burnout, stress and ill health in so much as some demands can actually result in positive states, such as engagement and commitment as well as job satisfaction (Crawford et al., 2010). Challenge job demands tend to “be appraised as stressful demands that have the potential to promote mastery, personal growth or future gains” (Crawford et al., 2010, p. 836); whereas hindrance job demands “are appraised as stressful demands that have the potential to thwart personal growth, learning and goal attainment” (Crawford et al., 2010, p. 836). Challenge job demands can include the level of attention required to perform a job, job complexity, job responsibility as well as workload (Lazarus & Folkman, 1984). Hindrance job demands include organisational politics and situational constraints (Lazarus & Folkman, 1984). In line with these distinctions and definitions, the researcher classified the JDRS factor of overload as a challenge job demand, and the JDRS factor of job insecurity as a hindrance job demand.

Findings indicated high levels of reliability for all of the measuring instruments as well as the factors found. Cronbach alpha coefficients (α) were used as a reliability estimate and all, except continuance organisational commitment, were found to be acceptable according to the guideline of $\alpha \geq 0.70$ (Nunnally & Bernstein, 1994).

A high level of reliability for the one-factor model of work engagement was found. Cronbach’s alpha was found to be 0.92. This is higher than the Cronbach alpha found by

Jackson et al. (2006) who found the UWES dimension to range from 0.70 to 0.81; as well as that found by Rothmann and Jordaan (2006) who found Cronbach alphas of the UWES to range between 0.76 and 0.86.

Reliability analysis of the two-factor model of the OCQ found that whilst attitudinal organisational commitment (consisting of normative and affective commitment) had a high Cronbach alpha of 0.86, the second factor of the OCQ, continuance commitment, had a very low reliability of only 0.35. This finding is similar to that of Stander and Rothmann (2010), who also found a two-factor model of the OCQ. These authors found an acceptable Cronbach alpha coefficient of 0.88 for attitudinal commitment and a low Cronbach alpha coefficient of 0.54 for continuance commitment. This similar finding could suggest that there is a problematic aspect of the measure of continuance commitment when a two-factor model is used. Due to the low Cronbach alpha found for continuance commitment ($\alpha \leq 0.70$), this factor was not used in any further analysis.

Cronbach's alpha for the four factors found in the JDRS were all found to be acceptable with: organisational support, 0.93; growth opportunities, 0.77; overload, 0.81; and job insecurity, 0.86. These findings are consistent with previous research such as the study by Rothmann et al. (2006), who found Cronbach alphas of: organisational support, 0.92; growth opportunities, 0.86; overload, 0.76; and job insecurity, 0.89.

Pearson product-moment correlation coefficients were used in order to identify the relationships between the variables under study. In particular this analysis was used in order to test the first three hypotheses of the study. These were, hypothesis 1, stating that job resources are positively related to work engagement; hypothesis 2, stating that challenge job

demands are positively related to work engagement; and, hypothesis 3, stating that hindrance job demands are negatively related to work engagement.

Findings indicated that both of the job resources of the study, namely, organisational support (including relationships with supervisors and colleagues, information, communication, participation and contact possibilities) and growth opportunities (including variety in work, opportunities to learn, feedback and independence at work), were positively related to work engagement. This suggests that higher levels of organisational support and growth opportunities are associated with higher levels of work engagement. This finding is supported by both internationally as well as nationally based studies.

Research studies conducted internationally have found that supervisor support and information at work (components of organisational support) were positively related to all three factors of work engagement in a sample of Finnish teachers working at a variety of schools (Bakker et al., 2007). Further, in a cross-national study conducted by Salanova and Schaufeli (2008), feedback and work variety (components of growth opportunities) were found to be positively related to both the vigour and dedication factors of work engagement. Finally, a study conducted by Schaufeli and Bakker (2004) found that both social support (a component of organisational support) and feedback (a component of growth opportunities) were positively related to all three factors of the UWES.

Nationally, a study conducted by Coetzer and Rothmann (2009) found that organisational support, growth opportunities and social support all to be positively related to work engagement of employees at a South African manufacturing organisation. Similarly, in their study conducted on the work related well-being of educators in South Africa, Jackson et al. (2006) found both organisational support and growth opportunities to be positively related to

work engagement. These findings all support the finding of the present study that job resources are positively related to work engagement. It is also interesting to note that similar job resources of the present study have been found to be the ones that are most strongly related to work engagement within previous studies. This suggests the importance of organisational support and growth opportunities as job resources that can be used to increase the levels of work engagement of employees. Therefore, the first hypothesis of the study was accepted.

The analyses further indicated that overload (classified within the study as a challenge job demand) was positively related to work engagement. The differentiated approach to job demands was adopted in the present study in order to contribute knowledge to a gap in the existing literature pertaining to the JD-R Model. A majority of the literature has contributed to the finding of a positive relationship between job resources and positive states such as work engagement and organisational commitment; and the positive relationship between job demands and negative states such as burnout and stress (Bakker et al., 2005; Llorens et al., 2006). With this in mind, however, a critical review of the literature around the JD-R/Dual Processes Model suggests that no relationship exists between job demands and work engagement, and the possible relationship between these has generally been overlooked. This can be seen as a critical gap in the literature, as well as an underdeveloped component of the JD-R Model.

Some research studies have supported the notion that job demands have no relationship with work engagement (Llorens et al., 2006), whilst other studies have found a slightly negative relationship to exist between job demands and work engagement (Hakanen et al., 2008). In spite of this, interestingly, there have been some studies that have found job demands to be positively related to work engagement. Mauno et al. (2007) found time demands to be

positively related to the absorption dimension work engagement. Schaufeli and Bakker (2004) also found that emotional overload (job demand) was positively related to work engagement. Lastly, a study conducted by van den Berg et al. (2008) found workload to be positively related to all three factors of work engagement. These findings suggest that a high amount of certain job demands can be associated with higher levels of work engagement. Although these findings highlight the possible and probable positive relationship between job demands and positive states at work, such as work engagement, these findings generally are not hypothesised at the onset of the study, and thus, when they appear in the findings, are largely ignored, been attributed as a coincidental finding, or are assumed away (Crawford et al., 2010). It is with this in mind that the call for the focus on a differentiated approach to job demands has been argued by many researchers (Crawford et al., 2010; Verbruggen, 2009). This approach suggests that while some job demands may have a negative effect on engagement (i.e. hindrance demands); there are certain ones that may have positive effect on work engagement (i.e. challenge demands).

The overload factor of the JDRS found in the present study was classified as a challenge job demand based on the argument of Crawford et al. (2010) who suggest that challenge job demands tend to be appraised as stressful, however they have the potential to induce positive work-related states. These authors list various types of job demands that can be classified as challenge demands, a few of these are: job complexity, job responsibility, high workloads and time urgency. With this classification in mind, the researcher found it appropriate to classify overload (which involves aspects such as pace and amount of work) as a challenge job demand. Although work overload can be seen to place stress on an employee, the nature of this stress is such that one may actually be more motivated to achieve the work-task/job-role at hand. In this sense overload has been perceived as a type of eustress (Verbruggen, 2009). It

was with this reasoning that the second hypothesis of this study stated that challenge job demands (overload) are positively related to work engagement.

The second hypothesis of the study, stated above, was accepted. Overload was found to be positively related to work engagement. This is an important finding, and one that contributes new knowledge to the existing JD-R Model in that it shows a differentiated focus on job demands can result in deeper understandings of the scope as well as the nature of the relationship between certain job demands (challenge demands) and positive organisational outcomes (such as work engagement). In contrast to existing studies, which are generally based in a negative orientation of organisational behaviour, this study, which has adopted a positive psychology approach, is a starting point in showing that, through a more positively-oriented outlook, job demands can be seen as contributing to positive states at work. Further, this finding is important as, to the knowledge of the researcher, no other study has been conducted on the positive relationship of challenge job demands (such as overload) and work engagement of teachers working within former model C high schools in South Africa. This finding suggests that future studies that adopt the JD-R Model of work engagement as a theoretical framework should not assume away the importance of the relationship that job demands have with work engagement, and for that matter, other positive organisational outcomes such as job satisfaction, organisational commitment and the like.

Findings showed a negative relationship to exist between job insecurity (including, uncertainty about the future pertaining to work in general and, more specifically, ones current job) and work engagement, suggesting that when one experiences higher levels of job insecurity, this is associated with lower levels of work engagement. Therefore, hypothesis 3 of the study, stating that hindrance job demands are negatively related to work engagement, was accepted. The classification of job insecurity as a hindrance demand was based on the

discussion by Crawford et al. (2010). According to these authors, a hindrance job demand is one which is appraised as being stressful, and thus functions to thwart growth, learning and goal attainment. Examples of hindrance demands are: situational constraints, hassles and organisational politics (Lazarus & Folkman, 1984). It can be argued that job insecurity can be likened to a situational constraint in so much as it functions to constrain an employee's actions and decisions and therefore how they behave within the work context. Therefore, individuals experiencing job insecurity would be less likely to be engaged in their work.

Due to the fact that the negative relationship between job demands and positive organisational outcomes has been well researched, there are many studies which have found a negative relationship between job demands, such as those that would be classified as hindrance job demands, and work engagement. Therefore the above finding of this study is supported by previous research studies such as that conducted by van den Berg et al. (2008) who found job insecurity to be negatively related to all three factors of the UWES. Further, using a sample of South African academic support staff in higher education institutions, Rothmann and Jordaan (2006) found job insecurity to be negatively related to both the vigour and dedication factors of work engagement.

Internationally, a longitudinal study conducted by Mauno et al. (2007) found a negative relationship between job insecurity and all three factors of the UWES. The finding of the current study is seen to be important due to the fact that minimal studies have been conducted, specifically, on teachers working within former model C high schools in South Africa, especially pertaining to the relationship between certain job demands and work engagement of this group of educators. This research thus can add to the body of knowledge around job demands and its relationship with work engagement. This research further extends the existing body of knowledge pertaining to the JD-R Model as it provides evidence that,

when one differentiates between job demands (into hindrance and challenge demands), the same sample indicates very different outcomes in relation to the type of job demand and their relationship with work engagement.

The fourth hypotheses of the present study suggested that job resources are predictive of work engagement. In order to test this proposition, multiple regression analysis was conducted with the two job resources of organisational support and growth opportunities as independent variables, and with work engagement as the dependent variable. The findings firmly supported this hypothesis. It was found that together, organisational support and growth opportunities explain 38% of the variance in work engagement. Organisational support was found to be the most predictive job resource of work engagement, with all other variables held constant; while growth opportunities was found to be the second most predictive job resources, when all other variables were held constant. Organisational support was found to hold statistically as well as practically significant predictive value for work engagement while growth opportunities was found to hold only statistically significant value for work engagement.

As argued by Klusman, Kunter, Trautwein, Ludtke and Baumert (2008) the school context within which teachers work vitally impacts both the engagement and the emotional exhaustion of teachers. In particular, it was found that when controlling for individual teacher characteristics, the supervisors (principle's) support predicted higher levels of teachers' work engagement.

The finding of this study, that job resources (organisational support and growth opportunities) are predictive of work engagement is supported by various research studies. In their study Coetzer and Rothmann (2009) found that out of the job resources of organisational support,

growth opportunities, social support and advancement, the only two resources that were found to be statistically significantly predictive of work engagement were that of organisational support and growth opportunities. Therefore, even within a study that incorporated various types of job resources in comparison to the present study, the most valuable job resources in predicting engagement were still found to be that of organisational support and growth opportunities. It was found that participants seem to be more engaged in their work when they are provided with organisational support and growth opportunities (Coetzer & Rothmann, 2009). This finding suggests that not all job resources are as effective as others in enhancing the engagement levels of employees, it is therefore important that organisations provide their employees with the correct types of resources that will specifically impact on their levels of work engagement.

Another South African study found that job resources contributed strongly to work engagement levels of educators (Jackson et al., 2006). Resources included organisational support, growth opportunities as well as advancement (resources needed to perceive that one is advancing in life, such as remuneration and career possibilities). This study found that job resources lead to work-wellness and in particular, high levels of vigour and dedication (work engagement). A self-reported limitation of this study was that it focused upon various types of educators, however, was noted that different types of educators (i.e. primary, secondary and high school) experience different levels of work-related well-being. In this sense the Jackson et al. (2006) study confirms the findings of the present study. Moreover, the present study can be seen as addressing a limitation of the Jackson et al. (2006) study, in that the sample used solely focused on high school educators, and in particular, those working within former model C schools, thus allowing a more specific insight into the predictive value of job resources for work engagement of this particular group of educators.

In contrast to the present study, as well as the studies discussed above, Mauno et al. (2007) only found tentative support for the predictive role of job resources for work engagement. A possible explanation for this study only finding tentative support for this predictive relationship could be related to the fact that the job resources used within the Mauno et al. (2007) study were job control and organisational-based self-esteem (OBSE) which seem to be fundamentally different types of job resources to those in the present study, as well as the studies of Coetzer and Rothmann (2009) and Jackson et al. (2006).

Schaufeli and Bakker (2004) found that work engagement is exclusively predicted by available job resources in their multi-sample study. The resources found to be predictive of work engagement were performance feedback, social support from colleagues and supervisory coaching. It is interesting to note that, although labelled as different names, these resources are similar to the ones used in the present study. For example, the resource of organisational support used in the present study encompasses both the relationships with colleagues and supervisors; while, the growth opportunities used in the present study encompasses feedback in the work situation. Therefore this finding is further supportive of the findings of the present study in which organisational support and growth opportunities were found to predict engagement.

This finding can further be supported by the motivational process posited by the JD-R/Dual Processes Model. The motivational process has found job resources to be the strongest predictor of work engagement, “job resources play either an intrinsic motivational role because they foster employee’s growth, learning and development, or they may play an extrinsic motivational role because they are instrumental in achieving work goals ... in either case the outcome is positive and engagement- a fulfilling, positive work-related state of mind- is likely to occur” (Schaufeli & Bakker, 2004, p. 298). This supports the plausible

finding that when workers have higher levels of support from their organisation and higher levels of growth opportunities available to them, they are more likely to experience the positive work-related state of engagement.

The motivational process of the JD-R/Dual Processes Model further proposes that not only do job resources predict work engagement, but further, that work engagement mediates the relationship between job resources and positive organisational outcomes such as job satisfaction, (low) turnover intention and organisational commitment (Schaufeli & Bakker, 2004). Within the context of these existing research findings, the fifth hypothesis of the present study suggested that work engagement mediates the relationship between job resources and organisational commitment (a positive organisational outcome). In order to test hypothesis 5, two separate mediation analyses were performed (Baron & Kenny, 1986). The first used organisational support as the independent variable, whereas the second used growth opportunities as the independent variable.

In the first series of mediation analyses, findings indicated that work engagement partially mediated the relationship between organisational support and attitudinal organisational commitment (the only reliable measure of commitment found in the present study). Partial mediation occurs when, even in the presence of the mediator, the independent variable is still found to affect the dependent variable (Baron & Kenny, 1986). Therefore it was found that work engagement did mediate the relationship between organisational support and attitudinal commitment, however, that even in the presence of the mediator, organisational support still held statistically significant predictive value for attitudinal commitment.

Also related to hypothesis 5, in the second series of mediation analyses, findings indicated that work engagement fully mediated the relationship between growth opportunities and

attitudinal commitment. Full mediation is said to occur when, in the presence of the mediator, the independent variable ceases to have any significant effect on the dependent variable (Baron & Kenny, 1986; Preacher & Hayes, 2004).

Due to the fact that both series of mediation analyses found work engagement to mediate, albeit in different degrees, the relationship between the two job resources (organisational support and growth opportunities) and attitudinal commitment, the fifth hypothesis of the present study was accepted.

This finding is supported by various other studies cited in the literature. A recent longitudinal study conducted by Hakanen et al. (2008) found that job resources influenced future work engagement, which in turn predicted organisational commitment. Thus work engagement was found to mediate the relationship between job resources and organisational commitment. Interestingly, this study found that over time this relationship became stronger, showing that this relationship holds true even in the long term (Hakanen et al., 2008). Further, Hakanen et al. (2006) found, within a sample of teachers, that work engagement mediated the effects of job resources on organisational commitment. As substantiated by these authors, "... it is plausible to assume that engaged employees are committed to the organisation because the organisation provides them with job resources that not only enable them to achieve their work goals, but that also provide opportunities for learning, growth, and development" (Hakanen et al., 2006, p. 499). Interestingly, the study also found that the motivational process (linking job resources to positive organisational outcomes through work engagement) and energetic process (linking job demands to negative organisational outcomes through burnout) of the JD-R Model intertwine insomuch as when there is a lack of job resources (which are needed to reach job demands), this further undermines work engagement, which leads to lower levels of organisational commitment.

Using a sample of South African educators, Jackson et al. (2006) found that work engagement (consisting of vigour and dedication) mediates the relationship between job resources (growth opportunities, organisational support and advancement) and organisational commitment. This further supports the findings of the present study, as well as the existence of the motivational process which is assumed by the JD-R Model.

As earlier stated, within the context of the supportive research findings discussed above, the fifth hypothesis of this study, stating that work engagement mediates the relationship between job resources and organisational commitment, was accepted. The repercussions of such a finding are that job resources such as organisational support and opportunities for growth need to be harnessed within former model C schools in order for teachers to be more engaged in their work as well as committed to their organisation. When provided with adequate job resources, teachers become engaged in their work because they have at their disposal these resources to carry out their work more effectively. Moreover, engaged teachers will become committed and feel an affiliation towards their organisation due to the fact that it provides them with opportunities to learn, grow, develop and advance further (Houkes, Janssen, De Jong & Nijhuis, 2001).

The sixth and final hypothesis of the present study stated that work engagement mediates the relationship between challenge job demands (overload) and organisational commitment. In order to test this hypothesis a series of multiple regression analyses to test for mediation, suggested by Baron and Kenny (1983), were undertaken using overload as the independent variable, work engagement as the mediator, and attitudinal organisational commitment as the dependent variable. However, preliminary analysis found that this mediational relationship could not be tested due to the fact that none of the three steps necessary for mediation analysis to occur could be satisfied (Baron & Kenny, 1986).

The proposition that work engagement could possibly mediate the relationship between challenge job demands (overload) and attitudinal commitment was found to be a viable hypothesis of the study. The hypothesis stems from the adoption of a differentiated approach to job demands, which reasons that not all demands have a negative impact on organisational outcomes, and that certain types of demands could actually result in positive organisational outcomes such as work engagement and organisational commitment (Crawford et al., 2010; Verbruggen, 2009). This hypothesis was further seen as being viable due to the fact that hypothesis 3 of the present study, which was accepted, suggested that overload was positively statistically as well as practically significantly related to work engagement; thus showing that within the sample under study, higher levels of challenge demands such as overload are likely to result in individual experiencing higher levels of work engagement.

Although the final hypothesis of the study could not be tested, the finding that overload is in fact positively related to work engagement is an important contribution of the present study, as well as a contribution to the existing gaps within the JD-R Model literature. This finding is a starting point for future research studies to investigate possible relationships between certain job demands and positive organisational outcomes, as opposed to adopting a solely negative approach to viewing job demands. Possibly, once these relationships have been tested among extensive occupations and samples, could research move on to establish the mediating role that work engagement may have on the relationship between challenge job demands and positive organisational outcomes, such as that of organisational commitment.

5.3 Summary

In summary, the present chapter discussed the results found within the present study. The results of each analysis were discussed in terms of the stated hypotheses of the study. Each of the findings of the present study was discussed in terms of previous research findings as well

as the similarities and differences with these previous studies. Further, in discussing of each of the findings of the study, there relation to the theoretical framework guiding the present study, namely the JD-R/Dual Processes Model was highlighted.

The first hypothesis of the study, which was accepted, stating that job resources are positively related to work engagement has substantial support within existing literature and thus various studies have found the same relationship between similar job resources, such as organisational support and growth opportunities, and work engagement.

The second accepted hypothesis of the study, stating that challenge job demands are positively related to work engagement is an interesting finding of the present study and one that is seen to add to the theoretical framework of the JD-R/Dual Processes Model. Traditionally, this framework has placed most of its emphasis on the relationship between job demands and negative organisational outcomes, with the possible relationship between job demands and positive organisational outcomes being largely ignored. Interestingly, few studies have in fact found a positive relationship to exist between job demands such as overload, and positive organisational outcomes such as work engagement. However, as these findings have generally not been hypothesised, they are largely explained away or have been appraised as a coincidental finding. On the contrary, the present study hypothesised the relationship, and further scientifically found this relationship to hold true in the sample under study. Therefore this study is an important starting-point for further research in terms of job demands and their relationships with positive organisational outcomes within the JD-R Model. Further, this study approached the JD-R Model using a differentiated approach to job demands, which has only been done in few other studies and therefore adds to the body of knowledge around differentiated job demands and their differential impacts on organisational outcomes.

The third, and accepted, hypothesis of the study stated that hindrance job demands are negatively related to work engagement. Due to the fact that much research studies have been focused on the negative relationship between job demands and positive organisational outcomes, this finding is supported by various studies conducted both internationally and nationally.

The fourth hypothesis of the study, that was accepted, suggested that job resources are predictive of work engagement. This finding has very strong support within existing literature and further is supported by the motivational process proposed by the JD-R Model. Interestingly, many studies have found either the same, or similar, job resources to be predictive of work engagement. Therefore, the finding that job resources (such as organisational support and growth opportunities) are strongly predictive of work engagement is strongly supported by the existing body of knowledge pertaining to the JD-R Model.

The fifth, and accepted, hypothesis of the present study stated that work engagement mediates the relationship between job resources and organisational commitment. The hypothesis was accepted as it was found that work engagement partially mediated the relationship between organisational support and attitudinal commitment; and, further, fully mediated the relationship between growth opportunities and attitudinal commitment. This finding, as with the one above, is expansively supported by the existing research pertaining to the motivational process that is said to occur within the JD-R Model.

It was found that the sixth and final hypothesis of the present study, stating that work engagement mediates the relationship between challenge job demands and attitudinal organisational commitment, could not be tested. This was a disappointing due to the fact that that overload (the challenge job demand of the study) was found to be positively related to

work engagement. In light of this, hypothesis 6 was found to be a viable one. Nevertheless, there is some indication that it would be valuable and beneficial for future research to investigate the possible mediating role of work engagement in the relationship between challenge job demands and positive organisational outcomes, such as organisational commitment. In this way, the existing JD-R/Dual Processes Model can be expanded upon by future research.

Chapter 6: Conclusions, Limitations and Recommendations

6.1 Introduction

Within the previous chapters, the results of the study were discussed. In the present chapter, conclusions about both the literature findings as well as the empirical findings of the study are made. The limitations of the study are also discussed, and recommendations for the organisation are also made. Further, recommendations for future research are also presented.

6.2 Conclusions

Conclusions are made in the following paragraphs in accordance with the specific literature objectives and empirical findings obtained within the present study.

6.2.1 Conclusions in terms of the specific literature objectives of the study. The following conclusions can be made with regards to the constructs of work engagement, organisational commitment, job demands and job resources.

6.2.1.1 Work engagement. For the purpose of this research, work engagement was conceptualised as “a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication and absorption” (Shaufeli et al., 2002, p. 74). Therefore, work engagement was conceptualised as having three components: vigour, which is characterised by “high levels of energy and mental resilience while working, the willingness to invest in one’s work, and persistence even in the face of difficulties” (Bakker et al., 2008, p. 188); dedication, which is characterised by “... being strongly involved in one’s work, and experiencing a sense of significance, enthusiasm, inspiration, pride and challenge” (Bakker, et al., 2008, p. 188); and absorption, which refers to “being fully concentrated and happily engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work” (Bakker et al., 2008, p. 188). Many studies within the literature suggest that work

engagement is a core positive organisational outcome, as well as a core concept of POB. Various studies have found work engagement to be an antecedent of other positive organisational outcomes, such as organisational commitment (Chalofsky & Krishna, 2009; Rothmann & Jordaan, 2006). It is suggested that if organisational members do not have higher levels of work engagement, they are less likely to be committed to the organisation with which they are employed, which could prove harmful to all organisational stakeholders.

As well as work engagement being an antecedent of positive organisational outcomes such as organisational commitment, literature suggests that job resources have an important role to play in affecting and impacting the work engagement of employees (Hakanen et al., 2006). The JD-R/ Dual Processes Models have been tested on various samples with the majority finding support for the motivational process, whereby job resources are linked to positive organisational outcomes (such as organisational commitment), through work engagement.

6.2.1.2 Organisational commitment. For the purpose of the present study, the three-component conceptualisation by Allen and Meyer (1990) was adopted. The authors conceptualise organisational commitment as being constituted by an affective, normative and continuance component, whereby “employees with a strong affective commitment continue employment with the organisation because they want to do so. Employees whose primary link to the organisation is based on continuance commitment remain because they need to do so. Finally, normative commitment reflects a feeling of obligation to continue employment. Employees with a high level of normative commitment feel that they ought to remain with the organisation” (Meyer & Allen, 1991, p, 67). Within the literature, and as noted above, organisational commitment and work engagement have been found to have high positive correlations, and further, work engagement is antecedent of organisational commitment

(Hakanen et al., 2006). It is vital for organisations to have employees who are both engaged in their work as well as committed to their organisation.

6.2.1.3 Job resources. Job resources refer to those physical, social and organisational aspects of a job that may: firstly, reduce job demands and the associated physiological; and psychological costs; secondly, be functional in achieving work goals; and finally, stimulate personal growth, learning and development (Bakker & Demerouti, 2007). The literature suggests that job resources are antecedents of positive organisational outcomes such as work engagement and organisational commitment. As has been previously highlighted, numerous studies have found job resources to be related to various positive organisational outcomes through work engagement. And that work engagement mediates the relationship between job resources and further positive organisational outcomes (Hakanen et al., 2006).

6.2.1.4 Job demands. According to Demerouti, Bakker, Nachreiner et al. (2001), job demands refer to those physical, psychological, social, or organisational aspects of their job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs. Job demands have been highly researched on various samples through the use of the JD-R/Dual Processes Models. Major findings indicate that job resources are negatively related to positive work outcomes such as work engagement and organisational commitment, and highly correlated to negative work outcomes such as stress, burnout, (high) turnover intention and ill-health (Llorens et al., 2006).

The literature highlighted some criticism of the JD-R Model in terms of lack of research conducted on the possible positive relationship between certain job demands and positive organisational outcomes (Crawford et al., 2010). Therefore a differentiated job demands approach was further adopted within the present study whereby job demands were classified

into hindrance demands and challenge demands. Challenge demands “tend to be appraised as stressful demands that have the potential to promote mastery, personal growth and future gains” whereas hindrance demands “tend to be appraised as stressful demands that have the potential to thwart personal growth, learning, and goal attainment” (Crawford et al., 2010, p. 836). Through the differentiation of job demands, the present study aimed to examine whether certain job demands had positive relationships with positive organisational outcomes, and further whether some demands could in fact predict them.

The aforementioned concludes the specific research objective regarding the conceptualisations of work engagement, organisational commitment, job resources and job demands; as well as the relationship between these constructs as found in the literature. Next the conclusions of the empirical objectives shall be discussed.

6.2.2 Conclusions in terms of the specific empirical results of the study. The empirical findings of the study are summarised as follows:

6.2.2.1 Factor structures of the measuring instruments used. The factor structures for all of the measuring items were determined through the use of exploratory factor analysis. A one-factor model for work engagement was found to fit the data best. Although most studies have found support for a three-factor model, as proposed by Schaufeli et al. (2002), this one-factor model has been found in some studies and is thus supported (Hallberg & Schaufeli, 2006).

A two-factor model of organisational commitment was found which consisted of normative and affective commitment loading on one factor (renamed attitudinal commitment by the researcher) with the second factor consisting of continuance commitment. This finding is

supported by a study conducted by Stander and Rothmann (2010) who found a similar factor structure of the OCQ in their study.

Finally, for the JDRS a four-factor model was found to suit the data best, the four factors consisted of two job resources (organisational support and growth opportunities) and two job demands which were then differentiated into challenge (overload) and hindrance (job insecurity) demands by following Crawford et al.'s (2010) classification definitions. The factor structure of the JDRS has been supported by various South African studies (Coetzer & Rothmann, 2009; Jackson et al., 2009).

6.2.2.2 Reliabilities of the measuring instruments used. All three instruments as well as the factors found in each of the instruments employed in this study reported acceptable internal consistency. The only exception was that of the low Cronbach alpha coefficient found for the continuance commitment of the OCQ. As a result, continuance commitment was then excluded from any further statistical analysis. Overall, the instruments were found to be reliable and fit for use.

6.2.2.3 To determine whether job resources are positively related to work engagement. The proposed hypothesis of the study, that job resources are positively related to work engagement, was supported. Both organisational support ($p \leq 0.01$; large effect) as well as growth opportunities ($p \leq 0.01$; large effect), were found to be both statistically, as well as practically significantly positively correlated with work engagement. This finding suggests that higher levels of organisational support and growth opportunities are associated with higher levels of work engagement.

6.2.2.4 To determine whether challenge job demands are positively related to work engagement. Overload, the challenge demand was found to be both statistically and practically significantly positively related to work engagement ($p \leq 0.01$; medium effect). This is an important finding in terms of the present study, due to the fact that the differentiated approach to job demands has not been used widely with regards to the JD-R/Dual Processes Models. Most studies have posited that job demands have no relationship with work engagement or that there is a slightly negative relationship between the two (Hakanen et al., 2008). These studies have not however used a differentiated approach to job demands, and thus the finding of the present study allows for insights to be gained in terms of certain demands being positively related to positive organisational outcomes, such as work engagement.

6.2.2.5 To determine whether hindrance job demands are negatively related to work engagement. Job insecurity, the hindrance demand of the study, was found hold a statistically significant negative relationship with work engagement ($p \leq 0.05$). Due to the fact that the negative relationship between positive organisational outcomes and job demands has been relatively well researched, this finding is supported by the literature (Rothmann & Jordaan, 2006; van den Berg et al., 2008).

6.2.2.6 To determine whether job resources are predictive of work engagement. Findings firmly supported the hypothesis that job resources (organisational support and growth opportunities) are predictive of work engagement. Findings indicated that these resources accounted for 38% of the variance in work engagement ($p \leq 0.01$; medium effect). Organisational support was found to be the most predictive of work engagement, with growth opportunities being the second most predictive. It has been widely found within the literature that the resources of organisational support and growth opportunities particularly are strong

predictors of work engagement (Coetzer & Rothmann, 2009) this has especially been supported by studies conducted on educators within South Africa (Jackson et al., 2006).

6.2.2.7 To determine whether work engagement mediates the relationship between job resources and organisational commitment. Regarding the mediating impact of work engagement in the relationship between job resources and organisational commitment, it was found that work engagement mediated the relationship between organisational support and organisational commitment (partial mediation); and, the relationship between growth opportunities and organisational commitment (full mediation). This finding is supported by various studies cited in the literature which has found support for the motivational process of the JD-R/Dual Processes Models (Hakanen et al., 2006; 2008; Schaufeli & Bakker, 2004).

6.2.2.8 To determine whether work engagement mediates the relationship between challenge job demands and organisational commitment. The mediational effect of work engagement in the relationship between overload (challenge demand) and organisational commitment could not be tested within the present study. This was due to the fact that the three step procedure (Baron & Kenny, 1986) to be followed was not supported when carried out by the researcher.

6.3 Limitations of the Present Study

As in the case of all research studies, the present study is not without limitations. The limitations of the present study are as follows:

- The present study is cross-sectional in design, as opposed to a longitudinal design; the results yielded from this study cannot determine causality among variables. Therefore, consideration must be given to the lack of longitudinal data which is necessary to

match the dynamic characteristics of each of the variables under study in order to be able to study their direct and moderated effects.

- Due to the fact that data was only gathered from two former model C schools within a specific suburb of Durban, KwaZulu-Natal; the diversity of the participants was limited. Further, the study was not able to compare data from former model C schools within different areas of KwaZulu-Natal or South Africa more generally. It is likely that if data was gathered more widely, the findings of this study could be impacted differently.
- Despite the large number of participants encouraged to participate in the study, many teachers feared that the information collected would be used against them by management or school principals. As a result, the amount of responses was limited producing a smaller sample size with which to perform statistical analysis.
- Data was gathered using self-reported questionnaires, and thus it is possible that participants may have answered in a way that they perceived to be more socially desirable, as opposed to answering in a more genuine manner. Also, related to this it is possible that the magnitude of relationships may have been inflated due to the variance common in self-reported questionnaire methods.
- Due to the fact that the sample was relatively small, more sophisticated statistical analysis such as statistical equation modelling (SEM) could not be employed in order to test a whole model of work engagement, organisational commitment, job resources and job demands.

6.4 Recommendations for the Organisations

Recommendations concerning the specific organisations used in the present study include:

- The findings of this study strongly suggest that job resources, as well as job demands, importantly impact upon the levels of work engagement and organisational commitment of the teachers within the two former model C high schools. With these findings in mind, it is clear that the job resources and job demands that a school has, should be importantly surveyed and analysed in terms of the real impacts that they induce on staff members. This is not to say that all job demands should be excluded from the school environment, as this is an impossible task. However, what this does necessitate is that job demands be analysed in terms of their real impacts. Importantly it should be noted that some demands (challenge demands) have positive relationships with work engagement and organisational commitment. What is suggested is that those job demands that thwart growth of organisational members should be decreased as much as possible, when this is done, can teachers be enabled to thrive in their working environment.
- It is suggested that interventions be developed within the school context in order to raise awareness of job resources and job demands, and what impacts these have on levels of teacher engagement and commitment. Interventions should be aimed at creating awareness and further, to teach individuals how to deal with those demands that pose a threat to them in terms of being a hindrance. Interventions should further enable teachers to identify the resources that they have available to them in the workplace and thus by creating an awareness of the available resources, teachers are more likely to draw upon and use them.

- Findings indicate that organisational support is paramount in predicting work engagement. To this end, schools should implement interventions and systems that harness organisational support for their staff members. Organisational support can be harnessed through various social support networks and weekly meetings and by strengthening the relationships between teachers and their supervisors (which in most cases is the school principle).
- As highlighted in the above point, an important form of organisational support is found in terms of the relationship between principle and teacher. Interventions and training programs that teach school principles how to harness this type of support for their staff could be useful in creating higher levels of perceived organisational support for staff members, which in turn will foster work engagement of teachers as well as organisational commitment.

6.5 Recommendations for Future Research

Recommendations concerning future research are made below:

- In the present study a cross-sectional design was employed in order to assess the interrelations among variables under study within the sample. For future research it is recommended that research be repeated using a longitudinal design, whereby the sample are asked to fill out the same survey more than once, and over a period of time, in order to get richer data and in order to determine the direction and extent of change in individual respondents.
- As well as longitudinal designs, experimental designs are further suggested for future research. With experimentally based designs and through using a pre-test-post-test method, the effects of interventions in order to develop work engagement and

organisational commitment of teachers can be determined. Such experiments could form the basis of a country-wide program aimed at decreasing hindrance demands and increasing job resources within schools in order to develop more engaged and committed school teachers/staff members.

- The same study should be applied to a variety of schools and in a more general manner, so that comparisons can be made with regards to work engagement, organisational commitment, job resources and job demands of teachers within all different school contexts. This is especially important within the South African context whereby the demands and resources that schools have, differ significantly within the context of a still very fragmented schooling system. This can also help to determine what schools are in need of interventions the most, in terms of provision of more resources in order to cope with burgeoning demands.
- Further, it is suggested that job resources and demands are researched in terms of other positive organisational outcomes such as job satisfaction, happiness, and well-being in terms of teachers within the South African context. This research is suggested as it is greatly needed in a context within which teacher dissatisfaction has become ever more prominent and increasing.

6.6 Summary

In the present chapter of this research study, conclusions were made based on both the theoretical, as well as the empirical findings of the study. The limitations of the study were discussed. Further, recommendations for the specific organisation and for future research were made.

References

- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organisation. *Journal of Occupational Psychology*, *63*, 1-18.
- Asmal, K., & James, W. (2001). Education and democracy in South Africa today. *Daedalus*, *130*, 185-204.
- Bakker, A. B., & Demerouti, E. (2007). The job-demands resource model: State of the art. *Journal of Managerial Psychology*, *22*, 309-328.
- Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *13*, 209-223.
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, *10*, 170-180.
- Bakker, A. B., Demerouti, E., Hakanen, J. J., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, *99*, 274-284.
- Bakker, A. B., Demerouti, E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. (2003). A multi-group analysis of the job demands-resources model in four home care organizations. *International Journal of Stress Management*, *10*, 16-38.
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resources Management Journal*, *43*, 83-104.
- Bakker, A. B., & Schaufeli, W. B. (2008). Positive organisational behaviour: Engaged employees in flourishing organisations. *Journal of Organizational Behaviour*, *29*, 147-154.

- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress, 22*, 187-200.
- Barkhuizen, N., & Rothmann, S. (2006). Work engagement of academic staff in South African higher education institutions. *Management Dynamics, 15*, 38-46.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Chalofsky, N., & Krishna, V. (2009). Meaningfulness, commitment, and engagement: The intersection of a deeper level intrinsic motivation. *Advances in Developing Human Resources, 11*, 189-203.
- Coetzee, S. E., & Rothmann, S. (2005). Work engagement of employees at a higher education institution in South Africa. *Southern African Business Review, 9*, 23-34.
- Coetzer, C. F., & Rothmann, S. (2009). Job demands, Job resources and work engagement of employees in a manufacturing organisation. *Southern African Business Review, 11*, 17-32.
- Cohen, J. (1988). *Statistical power analysis for behavioural sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum & Associates.
- Cohen, A. (2007). Commitment before and after: An evaluation and reconceptualization of organizational commitment. *Human Resource Management Review, 17*, 336-354.
- Cohen, M. (2010). *Bloomberg*. Retrieved January 2, 2011, from <http://www.bloomberg.com>.
- Crawford, E. R., LePine, J. A., & Rich, L. B. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology, 95*, 834-848.

- Demerouti, E., Bakker, A. B., De Jonge, A. B., Janssen, J., & Schaufeli, W. B. (2001). Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work, Environment and Health, 27*, 279-286.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*, 499-512.
- Gonzalez-Roma, V., Schaufeli, W. B., Bakker, A. B., & Lloret, S. (2002). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behaviour, 68*, 165-174.
- Gregory, R. J. (2007). *Psychological testing: history, principles and applications* (5th ed.). Boston: Pearson.
- Hakanen, J. J., Bakker, A. B., & Demerouti, E. (2005). How dentists cope with their job demands and stay engaged: The moderating role of job resources. *European Journal of Oral Sciences, 113*, 479-487.
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*, 495-513.
- Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008). The job demands-resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work and Stress, 22*, 224-241.
- Hallberg, U., & Schaufeli, W. B. (2006). "Same same" but different?: Can work engagement be discriminated from job involvement and organizational commitment? *European Psychologist, 11*, 119-127.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*, 268-279.

- Houkes, I., Janssen, P., de Jonge, J., & Nijhuis, F. (2001). Specific relationships between work characteristics and intrinsic work motivation, burnout and turnover intention: A multi-sample analysis. *European Journal of Work and Organizational Psychology, 10*, 1-23.
- Howell, D. C. (1995). *Fundamental statistics for the behavioural sciences*. London: Duxbury Press.
- Huysamen, G. K. (1994). *Methodology for the social and behavioural sciences*. Pretoria: Southern Book Publishers.
- Jackson, L., & Rothmann, S. (2005a). Work-related well-being of educators in a district of the North-West Province. *Perspectives in Education, 23*, 107-122.
- Jackson, L., & Rothmann, S. (2005b). An adapted model of burnout for educators in South Africa. *South African Journal of Education, 25*, 100-108.
- Jackson, T. B., Rothmann, S., & van de Vijver, F. (2006). A model of work-related well-being for educators in South Africa. *Stress and Health, 22*, 263-274.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*, 692-724.
- Klusmann, U., Kunter, M., Trautwein, U., Ludtke, O., & Baumert, J. (2008). Engagement and emotional exhaustion in teachers: Does school context make a difference? *International Association of Applied Psychology, 57*, 127-151.
- Kwela, S. M. (2001). *Organisational commitment and job satisfaction of non-academic personnel at a tertiary institution*. Unpublished masters thesis, Potchefstroom University, Vanderbijlpark, South Africa.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisals and coping*. New York: Springer.
- Lee, R. T., & Ashford, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81*, 121-133.

- Leiter, M. P. (1993). Burnout as a developmental process: Consideration of models. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional Burnout: Recent Developments in Theory and Practice* (pp. 237-250). Washington, DC: Taylor and Francis.
- Leiter, M. P., & Maslach, C. (1998). Burnout. In H. Friedman (Ed.), *Encyclopedia of Mental Health*, (pp. 202-215). New York: Academic Press.
- Liou, S. (2008). An analysis of the concept of organizational commitment. *Nursing Forum*, *43*, 116-125.
- Llorens, S., Bakker, A. B., Schaufeli, W. B., & Salanova, M. (2006). Brief report: Testing the robustness of the job demands-resources model. *International Journal of Stress Management*, *13*, 378-391.
- Llorens, S., Schaufeli, W., Bakker, A., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behaviour*, *23*, 825-841.
- Lok, P., & Crawford, J. (2001). Antecedents of organizational commitment and the mediating role of job satisfaction. *Journal of Managerial Psychology*, *16*, 594-613.
- Luthans, F. (2002). Positive organisational behaviour: Developing and managing psychological strengths. *Academy of Management Executive*, *16*, 57-75.
- Luthans, F., & Youssef, C. M. (2007). The need for and meaning of positive organizational behaviour. *Journal of Management*, *33*, 321-349.
- Maddux, J. E. (2008). Positive psychology and the illness ideology. *Applied Psychology: An International Review*, *57*, 54-70.
- Makhubu, N. (2011). *Dispatch Online*. Retrieved February 7, 2011, from <http://www.dispatch.co.za/news/article/535>
- Maslach, C., & Jackson, S. E. (1986). *Maslach burnout inventory* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

- Maslach, C., & Leiter, M. P. (1997). *The truth about burnout: How organizations cause personal stress and what to do about it*. San Francisco, CA: Jossey-Bass.
- Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology, 93*, 498-512.
- Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behaviour, 70*, 149-171.
- May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology, 77*, 11-37.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*, 61-89.
- Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage Publications.
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organisations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology, 78*, 538-551.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behaviour, 14*, 224-247.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist, 55*, 56-67.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

- Porters, L. W., Steers, R. M., Mowday, R. T., & Boulin, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology, 59*, 603-609.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behaviour Research Methods, Instruments and Computers, 36*, 717-731.
- Robbins, S. P. (1998). *Organizational behaviour: Concepts, controversies and applications*. Upper Saddle River, NJ: Prentice Hall.
- Rothmann, S. (2003). Burnout and engagement: A South African perspective. *South African Journal of Industrial Psychology, 29*, 16-25.
- Rothmann, S., & Jordaan, G. (2006). Job demands, job resources and work engagement of academic staff in South African higher education institutions. *South African Journal of Industrial Psychology, 32*, 87-96.
- Rothmann, S., & Joubert, J. (2007). Job demands, job resources, burnout and work engagement of managers at a platinum mine in the North West Province. *South African Journal of Business Management, 38*, 49-61.
- Rothmann, S., Mostert, K., & Strydom, M. (2006). A psychometric evaluation of the job demands-resources scale in South Africa. *South African Journal of Industrial Psychology, 32*, 76-86.
- Rugg, J. S. (2002). *Psychological empowerment within a university*. Unpublished masters thesis, Potchefstroom University, Vanderbijlpark, South Africa.
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology, 21*, 600-619.

- Salanova, M., & Schaufeli, W. B. (2008). A cross-national study of work engagement as a mediator between job resources and proactive behaviour. *The International Journal of Human Resource Management*, *19*, 116-131.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behaviour*, *25*, 293-315.
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, *66*, 701-716.
- Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, *3*, 71-92.
- Schaufeli, W. B., Taris, T., Le Blanc, P., Peeters, M., Bakker, A. B., & De Jonge, J. (2001). *Does work cure? In search of an engaged worker*. Utrecht: Utrecht University.
- Sekaran, U. (2000). *Research methods for business: A skill-building approach* (3rd ed.). United States: John Wiley & Sons.
- Seligman, M. (2008). Positive health. *Applied Psychology: An International Review*, *57*, 3-18.
- Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*, 5-14.
- Seppälä, P., Mauno, S., Feldt, T., Hakanen, J., Kinnunen, U., Tolvanen, A., & Schaufeli, W. (2009). The construct validity of the Utrecht work engagement scale: Multisample and longitudinal evidence. *Journal of Happiness Studies*, *10*, 459-481.
- Shaughnessy, J. J., & Zechmeister, E. B. (1997). *Research methods in psychology* (4th ed.). New York: McGraw-Hill.

- Shuck, M. B. (2010). *Employee engagement: An examination of antecedent and outcome variables*. Unpublished doctoral dissertation, Florida International University, Florida, United States of America.
- Solinger, O. N., van Olffen, W., & Roe, R. A. (2008). Beyond the three-component model of organizational commitment. *Journal of Applied Psychology, 93*, 70-83.
- SPSS. (2003). *SPSS 12.0 for Windows*. Chicago, IL.
- Stander, M. W., & Rothmann, S. (2010). The relationship between leadership, job satisfaction and organisational commitment. *South African Journal of Human Resource Management, 7*, 7-13.
- Steenland, K., Johnson, J., & Nowlin, S. (1997). A follow-up study of job strain and heart disease among males in the NHANES1 population. *American Journal of Industrial Medicine, 31*, 256-260.
- Steyn, H. S. (2002). Practical significant relationships between two variables. *South African Journal of Industrial Psychology, 28*, 10-15.
- Storm, K., & Rothmann, I. (2003). A psychometric analysis of the Utrecht work engagement scale in the South African police service. *South African Journal of Industrial Psychology, 29*, 62-70.
- Suliman, A. M., & Iles, P. A. (2000). The multi-dimensional nature of organisational commitment in a non-western context. *Journal of Managerial Psychology, 19*, 1-7.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Boston, M.A.: Allyn & Bacon.
- van den Berg, H., Manias, D., & Burger, S. (2008). The influence of job-related factors on work engagement of staff at the university of the Free State. *Acta Academia, 40*, 85-114.

- Verbruggen, A. (2009). *Extending the job demands-resources model: The relationship between job demands and work engagement, and the moderating role of job resources*. Unpublished masters thesis, University of Utrecht, Utrecht, Netherlands.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources and work engagement. *Journal of Vocational Behavior*, 74, 235-244.

Appendix 1: Demographic Questionnaire

SECTION 1

BIOGRAPHICAL DATA SHEET

INSTRUCTIONS:

Please answer the following questions by marking the appropriate boxes.

1. GENDER

Male Female

2. AGE GROUP

24 years and younger 25 – 35 years
 36 – 45 years 46 – 55 years
 56 years and older

3. MARITAL STATUS

Single Divorced
 Widowed Married
 Living with a spouse

4. YEARS WORKING WITHIN THIS ORGANISATION

Less than 5 years 6 – 10 years
 11 – 20 years More than 20 years

5. HIGHEST ATTAINED QUALIFICATION

Matric Certificate Diploma
 Degree Postgraduate Degree

Appendix 2: Utrecht Work Engagement Scale (UWES)

SECTION 2

UTRECHT WORK ENGAGEMENT SCALE

INSTRUCTIONS:

The purpose of this survey is to assess how you view your job and what your reactions are to your work. The following are statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you never had this feeling, circle "1" (zero) next to the statement. If you had this feeling, indicate how often you feel it by circling the number (from 2-7) that best describes how frequently you feel such.

	Never	A few times a year or less	Once a month	A few times a month	Once a week	A few times a week	Everyday
1. I am bursting with energy in my work.	1	2	3	4	5	6	7
2. I find my work full of meaning and purpose.	1	2	3	4	5	6	7
3. Time flies when I'm working	1	2	3	4	5	6	7
4. I feel strong and vigorous in my job.	1	2	3	4	5	6	7
5. I am enthusiastic about my job.	1	2	3	4	5	6	7
6. When I am working, I forget everything else around me.	1	2	3	4	5	6	7
7. My job inspires me.	1	2	3	4	5	6	7
8. When I get up in the morning, I feel like going to work.	1	2	3	4	5	6	7
9. I feel happy when I am engrossed in my work.	1	2	3	4	5	6	7
10. I am proud of the work that I do.	1	2	3	4	5	6	7
11. I am immersed in my work.	1	2	3	4	5	6	7
12. In my job, I can continue working for very long periods at a time.	1	2	3	4	5	6	7
13. To me, my work is challenging.	1	2	3	4	5	6	7
14. I get carried away by my work.	1	2	3	4	5	6	7
15. I am very resilient, mentally, in my job.	1	2	3	4	5	6	7
16. It is difficult to detach myself from my job.	1	2	3	4	5	6	7
17. I always persevere at work, even when things do not go well.	1	2	3	4	5	6	7

Appendix 3: Organisational Commitment Questionnaire (OCQ)

SECTION 3

ORGANISATIONAL COMMITMENT QUESTIONNAIRE

INSTRUCTIONS:

Please rate the extent to which you agree/disagree with the following statements by circling the appropriate number on the 1 to 5 point scale supplied.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I would be very happy to spend the rest of my career in this organisation.	1	2	3	4	5
2. It would be very hard for me to leave the organisation right now, even if I wanted to.	1	2	3	4	5
3. I do not feel any obligation to remain with my current employer.	1	2	3	4	5
4. I really feel as if this organisation's problems are my own.	1	2	3	4	5
5. Too much of my life would be disrupted if I decided I wanted to leave my organisation right now.	1	2	3	4	5
6. Even if it were to my advantage, I do not feel it would be right to leave my organisation right now.	1	2	3	4	5
7. I do not feel like "part of the family" at my organisation	1	2	3	4	5
8. Right now, staying with my organisation is a matter of necessity as much as desire.	1	2	3	4	5
9. I would feel guilty if I leave my organisation right now.	1	2	3	4	5
10. I do not feel emotionally "attached" to this organisation.	1	2	3	4	5
11. One of the few negative consequences of leaving this organisation would be scarcity of available resources.	1	2	3	4	5
12. My organisation deserves my loyalty.	1	2	3	4	5
13. This organisation has a great deal of personal meaning for me.	1	2	3	4	5
14. I feel that I have too few options to consider leaving this organisation	1	2	3	4	5
15. I would not leave my organisation right now because I have a sense of obligation to the people in it.	1	2	3	4	5
16. I do not feel a strong sense of belonging to my organisation.	1	2	3	4	5
17. If I had not already put so much of myself into this organisation, I might consider working elsewhere.	1	2	3	4	5
18. I owe a great deal to my organisation.	1	2	3	4	5

Appendix 4: The Job Demands-Resources Scale (JDRS)

SECTION 4

JOB DEMANDS-RESOURCES SCALE

INSTRUCTIONS:

Please rate the extent to which you agree with the following statements by circling the appropriate number on the 1 to 4 point scale supplied.

	Never	Sometimes	Mostly	Always
1. Do you have too much work to do?	1	2	3	4
2. Do you work under time pressure?	1	2	3	4
3. Do you have to be attentive to many things at the same time?	1	2	3	4
4. Do you have to give continuous attention to your work?	1	2	3	4
5. Do you have to remember many things in your work?	1	2	3	4
6. Are you confronted with things in your work that affect you personally?	1	2	3	4
7. Do you have contact with difficult people in your work?	1	2	3	4
8. Does your work put you in emotionally upsetting situations?	1	2	3	4
9. Do you have enough variety in your work?	1	2	3	4
10. Does your job offer you opportunities for personal growth and development?	1	2	3	4
11. Does your work give you the feeling that you can achieve something?	1	2	3	4
12. Does your job offer you the possibility of independent thought and action?	1	2	3	4
13. Do you have freedom in carrying out your work activities?	1	2	3	4
14. Do you have influence in the planning of your work activities?	1	2	3	4
15. Can you participate in the decision about when a piece of work must be completed?	1	2	3	4
16. Can you count on your colleagues when you come across difficulties in your work?	1	2	3	4
17. If necessary can you ask your colleagues for help?	1	2	3	4
18. Do you get on well with your colleagues?	1	2	3	4

19. Can you count on your supervisor when you come across difficulties in your work?	1	2	3	4
20. Do you get on well with your supervisor?	1	2	3	4
21. In your work, do you feel appreciated by your supervisor?	1	2	3	4
22. Do you know exactly what other people expect of you in your work?	1	2	3	4
23. Do you know exactly for what you are responsible?	1	2	3	4
24. Do you know exactly what your direct supervisor thinks of your performance?	1	2	3	4
25. Do you receive sufficient information on the purpose of your work?	1	2	3	4
26. Do you receive sufficient information of the results of your work?	1	2	3	4
27. Does your direct supervisor inform you about important issues within your department/organisation?	1	2	3	4
28. Are you kept adequately up-to-date about important issues within your organisation?	1	2	3	4
29. Is the decision-making process in your organisation clear to you?	1	2	3	4
30. Is it clear to you whom you should address within the organisation for specific problems?	1	2	3	4
31. Can you discuss work problems with your direct supervisor?	1	2	3	4
32. Can you participate in decisions about the nature of your work?	1	2	3	4
33. Do you have a direct influence on your organisations decisions?	1	2	3	4
34. Do you need to be more secure that you will still be working in one year's time?	1	2	3	4
35. Do you need to be more secure that you will keep your current job in the next year?	1	2	3	4
36. Do you need to be more secure that next year you will keep the same function level as currently?	1	2	3	4
37. Do you think that your organisation pays good salaries?	1	2	3	4
38. Can you live comfortably on your pay?	1	2	3	4
39. Do you think you are paid enough for the work you do?	1	2	3	4
40. Does your job offer you the possibility to progress financially?	1	2	3	4
41. Does your organisation give you opportunities to follow training courses?	1	2	3	4
42. Does your job give you the opportunity to be promoted?	1	2	3	4

Appendix 5: Gate-Keeper Permission Letter



Faculty of Humanities, Development and Social Sciences Department of Psychology

Dear Principle,

RE: Permission to Access School Premises in Order to Conduct Research

I am a Psychology Masters student at the University of KwaZulu-Natal and I am conducting a research study as part of my final research dissertation. The purpose of the research is to study the relationship between job demands, job resources, work engagement and organisational commitment of high school teachers in the Durban North area of KwaZulu-Natal. Therefore my research sample consists of high school teachers that teach in Durban North Schools. Insights gained from this study could lead to further understandings around the constituents of psychological wellbeing of high school teachers, as well as impact on, or increase high school teachers' satisfaction with their work lives.

The study will simply require the teachers, if they so wish to participate, to complete a self-administered questionnaire provided by the researcher. A time will then be arranged with the teachers as to when the completed questionnaire can be collected by the researcher. Participation is completely voluntary and the participants will be completely free to withdraw from this study at any stage and for any reason. Complete anonymity of all participants will be ensured. The questionnaires will all be kept for five years in accordance with University regulations and thereafter will be disposed of using a shredder.

In order for this study to take place, I would like to request for written permission for the researcher to access the school property in order to both distribute and collect questionnaires from any teachers that would be willing to participate in the study.

Your help with this matter would be greatly appreciated and will be invaluable to the research study that is going to be undertaken.

Please feel free to contact either myself, or my supervisor for any further clarification regarding this study.

Yours sincerely,

Lyndsay Field (Miss)

Contact Number: 079 151 4695
E-Mail: 207510955@ukzn.ac.za

Supervisor:
Prof. Johanna Hendrina Buitendach
E-mail: Buitendach@ukzn.ac.za

Appendix 6: Informed Consent Letter and Form



Faculty of Humanities, Development and Social Sciences

Department of Psychology

Dear Participant,

I am an Industrial Psychology Masters student at the University of KwaZulu-Natal and I am conducting this study for my final research dissertation. The purpose of this research is to study the relationship between job demands, job resources, work engagement and organisational commitment of teachers in former model C high schools in the Durban North area of KwaZulu-Natal. Insights gained from this study could lead to further understandings around the constituents of psychological wellbeing of high school teachers, as well as impact on, or increase high school teachers' satisfaction with their work lives and occupational wellbeing.

This study will require you to answer **THREE** questionnaires; the Utrecht Work Engagement Scale, the Organisational Commitment Questionnaire as well as the Job Demands-Resources Scale. It also entails the completion of a demographic questionnaire for statistical purposes. **Complete anonymity** of all participants will be ensured. The questionnaires will all be kept for five years in accordance with University regulations and thereafter will be disposed of using a shredder. **Participation is voluntary and you are completely free to withdraw from this study at any stage and for any reason.**

Your participation will be greatly appreciated and will not take longer than 20 minutes to complete. Please feel free to contact either myself, or my supervisor for any further clarification regarding this study.

Yours sincerely,

Lyndsay Field

A handwritten signature in cursive script that reads "Field".

E-Mail: 207510955@ukzn.ac.za

Contact No.: 079 151 4695

Supervisor:

Prof. Johanna Hendrina Buitendach (Joey)

E-mail: Buitendach@ukzn.ac.za

Contact No.: 031 2602407

INFORMED CONSENT FORM**Declaration:**

I, _____ (*full name*) hereby confirm that I understand the contents of this document and the nature of this research and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Signed at DURBAN on this _____ day of _____ 2011.

Signature _____