

**JOB DEMANDS AND JOB RESOURCES AS
PREDICTORS OF DISPOSITIONAL EMPLOYABILITY OF
ACADEMICS IN SOUTH AFRICA**

by

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DECLARATION

I, Estée Roodt, declare that Disciplinary Enquiries in Terms of Schedule 8 of the Labour Relations Act 66 of 1995 is my own unaided work both in content and execution. All the resources I used in this study are cited and referred to in the reference list by means of a comprehensive referencing system. Apart from the normal guidance from my study leaders, I have received no assistance, except as stated in the acknowledgements.

I declare that the content of this thesis has never been used before for any qualification at any tertiary institution.

I, Estée Roodt, declare that the language in this thesis was edited by Ms Katherine Nicole Groenewald (BA Languages, UP).

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Date: 16 October 2012

Signature

ABSTRACT

Background and Aim

The South African higher education sector has undergone numerous changes over the past years due to external factors such as globalisation, managerialism and neo-liberalism (Ntshoe, Higgs, Higgs & Wolhuter, 2008). Furthermore De Villiers and Steyn (2009) add that state funding of higher education in South Africa has been decreased to such an extent that higher education institutions (HEI's) have been unable to parallel the increase in the number of students enrolled per year. As mentioned by Mouton (2010) universities in sub-Saharan Africa continue to operate under conditions which are seriously under-resourced, which poses significant challenges for the scholars concerned. The changes in the Higher Education Institutional environment have forced HEI's to increase their level of output in terms of: enrollments, qualifications awarded, research output and institution size and number of disadvantaged students (De Villiers & Steyn, 2009) in order to remain competitive.

The number of changes in performance outputs as well as the growing market for competitive higher education (HE) has greatly impacted the job demands of academics in South Africa. The environment in which academics in South Africa function now demands more of them than in previous years. For example the employment relationship has changed (i.e. teacher-driven to student-driven), altering the type of work that people do, when they work and how much they do (Barkhuizen, Rothmann & Van de Vijver, in press). Accordingly, it appears that the job demands of academics have escalated, whilst the levels of support and other resources have declined. The objective of this study was to investigate whether job demands and resources are significant predictors of dispositional employability of academics in South Africa.

Method

A cross-sectional research design was followed. The Job Characteristics Scale developed by Barkhuizen and Rothman (2005) and the Dispositional Measure of Employability (Fugate & Kinicki, 2008) were used as measures in this study. A total of 360 questionnaires were sent out to the sample, of which 158 completed questionnaires were received, but only 146 of these responses could be used for data analyses. This represents a 40.55% response rate.

Results

The results showed that there is a significant relationship between job demands and the change identity of the academics and that job demands do act as a predictor of the dispositional employability of academics in terms of their change identity. No significant relationship between the job resources and the dispositional employability of the academics were found, however all of the dimensions of DE had a positive relationship with job resources. A significant relationship between job demands and the ethnicity, home language, age, the respondent's job level and the number of hours they work was found. However, no statistically significant differences were found within gender, qualifications, job categories, years in service and the number of years in current positions. According to the results the white ethnic group experiences higher job demands than the black ethnic group. Furthermore respondents speaking either Afrikaans or English experience higher job demands than respondents speaking indigenous languages. In relation to this, the age group 50 to 59 experience higher job demands compared to that of the age group 20-29. Associate professors experience higher job demands than junior lecturers.

No significant relationship between the academics' perception of their job resources and their demographic characteristics was found. There are significant differences between the DE of the academics and their ethnicity, home language, job category, years in service and hours of work. No statistically significant differences were found within gender, age, qualifications, job level or years in the current position. The Black ethnic group indicates higher levels of resilience and motivation compared to the other ethnic groups, and indigenous languages have higher levels of resilience compared to the other two language groups. Academics that function as both researchers and lecturers have higher levels of career proactivity compared to the academics that function only as a researcher or lecturer. Respondents that have been in the industry for between zero to 10 years have a higher level of resilience compared to the respondents who have served for longer. The working hours of group four (between 31 to 40 hours) show higher levels of resilience compared to the other groups.

Keywords: *job demands, job resources, dispositional employability, higher education, higher education institutions, quantitative research, descriptive statistics, South Africa.*

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JOB DEMANDS AND JOB RESOURCES AS PREDICTORS OF DISPOSITIONAL EMPLOYABILITY OF ACADEMICS IN SOUTH AFRICA

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 BACKGROUND

The South African higher education sector has undergone numerous changes over the past years due to external factors such as globalisation, managerialism and neo-liberalism (Ntshoe, Higgs, Higgs & Wolhuter, 2008). Furthermore De Villiers and Steyn (2009) add that state funding of higher education in South Africa has been decreased to such an extent that higher education institutions (HEI's) have been unable to parallel the increase in the number of students enrolled per year. As mentioned by Mouton (2010) universities in sub-Saharan Africa continue to operate under conditions which are seriously under-resourced, which poses significant challenges for the scholars concerned. The changes in the Higher Education Institutional environment have forced HEI's to increase their level of output in terms of: enrollments, qualifications awarded, research output and institution size and number of disadvantaged students (De Villiers & Steyn, 2009) in order to remain competitive.

The number of changes in performance outputs as well as the growing market for competitive higher education (HE) has greatly impacted the job demands of academics in South Africa. The environment in which academics in South Africa function now demands more of them than in previous years. For example the employment relationship has changed (i.e. teacher-driven to student-driven), altering the type of work that people do, when they work and how much they do (Barkhuizen, Rothmann & Van de Vijver, in press). Accordingly, it appears that the job demands of academics have escalated, whilst the levels of support and other resources have declined.

According to Demerouti et al (2001) burnout develops when job demands are high and job resources are limited. This is usually linked to the turnover of employees. Demerouti et al. state that negative working conditions lead to energy depletion and undermine employee motivation. In occupations that are not service related, employees may experience

burnout in the form of two symptoms, namely exhaustion due to high job demands, and disengagement due to limited job resources (Demerouti et al., 2001).

Job demands refer to physical, psychological, social or organisational aspects of the job that require continued physical or psychological effort and are consequently associated with physiological and/or psychological cost (Demerouti et al., 2001). Job resources are the physical, psycho-social or organisational elements that are necessary for an individual, and consequently the organisation to reach their goals, reduce job demands, and encourage development (Fourie, Rothmann and Van de Vijver, 2008). The relationship between the job-demands and job-resources has an immediate effect on job performance of employees and proves an elementary trigger that can have substantial consequences in the motivation of employees.

According to Bakker and Demerouti (2008) employability can be described as a psycho-social concept that represents individual characteristics that cultivate adaptive reasoning, and other cognitive behaviour, and affect and improve the individual work-interface. Therefore employability represents a very broad and high order attribute that facilitates proactive adaptability to work environment and situations (Bakker & Demerouti, 2008). Bakker and Demerouti acknowledge the fact that, in order for an employee to fit in and survive in an organisation, they must be able to respond to their changing working environment, reactively adapt to known demands, and prepare in advance for specific or known threats and changes (perpetual readiness for change).

Being adaptable requires an individual to be optimistic, possess adaptive schemas and the ability to meet demands (Bakker & Demerouti, 2008). Kinicki and Fugate (2008) define dispositional employability as differences that can be grouped and influence the adaptability of individuals in their work and careers. Fugate and Kinicki explain that dispositional employability can be described in terms of an individual's openness to changes at work, work and career resilience, work and career proactivity, career motivation and work integrity.

A country's international competitiveness and growth of the knowledge community, depends on its population having a strong and sustainable higher educational sector

(Barkhuizen, 2010). Without well-qualified and committed academic staff, no academic institution can ensure sustainability and quality over the long term (Pienaar & Bester, 2008). According to Demerouti et al (2001) high job demands can only be naturalised through high job resources to ensure employability of employees. Providing high job resources can contribute to work engagement even with extreme demands (Maslach & Schaufeli as cited by Fourie, Rothmann & Van de Vijver, 2008). It would seem that adaptability to meet demands plays a significant role in the higher education sector and it therefore makes sense for HEI's to understand the dispositional employability of their employees. Therefore a study of the relationship between job demands and resources and dispositional employability of academics is imperative from a research point of view.

1.2 PROBLEM STATEMENT

According to Demerouti et al (2001) burnout develops in the presence of high job demands and low resource availability contributing to negative working environments that demotivate employees and deplete their energy. Coping with these job-demands and job-resources has an impact on the employability of individuals. The purpose of this study is to determine what impact the relationship between job demands and job resources has on the employability of academics in South Africa. This study will evaluate the employees' openness to change, work and career resilience, work and career proactivity, career motivation and work identity in relation to their job-demand job-resource model. Furthermore this study will aim to determine whether the job-demands job-resources model predicts dispositional employability within academics in South Africa.

1.3 RESEARCH OBJECTIVES

This study will be guided by the following research objectives:

Main objective

- To investigate whether job demands and resources are significant predictors of dispositional employability of academics in South Africa.

Secondary objectives

- To determine the current job demands experienced by academics in South Africa.

- To determine the current job resources experienced by academics in South Africa.
- To determine the current dispositional employability of academics in South Africa.
- To determine whether job demands is a statistically significant predictor of dispositional employability of academics in South Africa.
- To determine whether job resources is a statistically significant predictor of dispositional employability of academics in South Africa.
- To determine whether there are any significant differences in the academics' perceptions of the current job demands based on their demographic characteristics?
- To determine whether there are any significant differences in the academics' perceptions of the current job resources based on their demographic characteristics?
- To determine whether there any significant differences in the academics' levels of dispositional employability based on their demographic characteristics?

1.4 RESEARCH QUESTION

These research objectives include answering the following research questions:

- What is the current level of job demands experienced by academics in South African Higher Education Institutions?
- What is the current level of job resources experienced by academics in South African Higher Education Institutions?
- What is the current level of dispositional employability of academics in South African Higher Education Institutions?
- What is the relationship between job demands and dispositional employability of academics in South African Higher Education Institutions?
- What is the relationship between job resources and dispositional employability of academics in South African Higher Education Institutions?
- Are there any significant differences in the academics' perceptions of the current job demands based on their demographic characteristics?
- Are there any significant differences in the academics' perceptions of the current job resources based on their demographic characteristics?

- Are there any significant differences in the academics' levels of dispositional employability based on their demographic characteristics?

1.5 ACADEMIC VALUE AND INTENDED CONTRIBUTION OF THE PROPOSED STUDY

The 21st century is characterised by its rapidly changing technology, globalisation and competitive businesses. According to Kinicki and Fugate (n. d) these characteristics have made a dispositional approach to understanding how employees adapt in their working life extremely relevant. The dispositional employability questionnaire is relatively new and has never been applied in a South African context. It has therefore also never been applied to academics in South Africa.

This study will aim to make a theoretical contribution to dispositional employability in terms of the academics in South Africa, a context that has not been considered before. It will make a substantial contribution to the academic literature on dispositional employability as there is no literature available in this specific context. This study aims to contribute to the academic value of the dispositional employability, by broadening the fields to which it has been applied and contributing to the depth of knowledge to which this construct can be applied. Furthermore this study will make a practical contribution to academics in South Africa by providing them with quantitative data on how the relationship of the job demands and resources in their industry firstly impacts their employability and secondly predicts employability. It will provide the employers with a dispositional perspective of employees' adaptability toward their work environments and careers (Kinicki and Fugate, n/d).

1.6 ASSUMPTIONS

This study is based on the following assumptions:

- All participants have a minimum highest qualification of Grade 12 and completed some form of tertiary education as they are, or have been in the employ of higher education institutions;

- All respondents are employed at one of the designated job levels in higher education, or were employed as such at the time of the study;
- All respondents are computer literate and have access to a computer and the internet;
- That the anonymity and confidentiality of the survey will urge respondents to answer the survey truthfully;
- That allowing the respondents to volunteer for the survey and be granted the right to withdraw at any time will provide responses that are committed to providing information that is fair and accurate with full concentration and reasoning; and
- Providing a lenient time frame to complete the survey will enable respondents to schedule their participation according to a time best suited to them and consequently increase the number of responses received.

1.7 DEFINITION OF KEY TERMS

The study will evaluate a number of key aspects of academics in South Africa which will include the following key terms defined below.

Employability: A psycho-social concept that represents the individual characteristics that enable adaptive cognition (thought and reasoning), behaviour and effect, and enhance the individual-work interface (Fugate, 2004).

Dispositional Employability: The collection of individual differences that influence and enable individuals to proactively adapt to situations specific to work and career (Fugate, 2008).

Adaptability: The ability and capacity to respond to challenges with resilience (O'Connell et al, 2008).

Job Demands: Inherent duties and responsibilities of an employee in the working environment.

Job Resources: Tools, processes, procedures, support and other functions and materials necessary to complete work tasks.

Higher education institutions: Universities, Universities of Technology and any other institution seen as functioning on an NQF level 5 or more.

Table 1.1: Abbreviations used in this document

Term / Abbreviation	Meaning
KSAs	Knowledge, Skills and Abilities
DE	Dispositional Employability
DME	Dispositional Measure of Employability
JD-R	Job Demands Resources
HE	Higher Education
HEI	Higher Education Institution

1.8 CHAPTER OUTLINE OF THE STUDY

The discussion of the study as well as the results and conclusions will be spread out over a total of six chapters. Each chapter will aim to summarise the key aspects of the research and provide a satisfactory explanation of each phase of the study. The following section will provide a brief outline of each chapter:

Chapter 1: Introduction

In chapter one the researcher explains the background of the study. Within this chapter the problem statement of the study as well as the research objectives are highlighted and explained. Furthermore the researcher explains the academic value and intention of the study, as well as the assumptions made regarding the environment and target group. Chapter one also defines all the key terms that will be used throughout the document.

Chapter 2: Literature review

The second chapter is dedicated to an in-depth look at the previous body of knowledge related to this specific research study. The existing literature with regard to employability, dispositional employability, higher education as well as the link between job demands and job resources is discussed.

Chapter 3: Research design and methodology

Chapter three gives a detailed description of the research design and methodology used in this study. Within this chapter, seven key issues regarding research design and methodology are explained and described. These issues include a detailed description of the strategy of inquiry used in the study, the sampling methods used to extract data from the population, the data collection methods used to collect data, the data analysis process, assessing and demonstrating quality and rigour throughout the study and the research ethics involved in survey research and also ethics relevant to this specific study.

Chapter 4: Presentation of results

The fourth chapter is dedicated to the complete presentation of all the results obtained through statistical analysis. In this chapter the hypotheses of the study are stated. It is divided into three phases namely: the biographical results of the study, the results pertaining to the instruments, and results pertaining to the hypotheses via Manova, Anova and regression analysis.

Chapter 5: Analysis and interpretation

In chapter five the researcher analyses and interprets the results according to the stated hypotheses so as to provide a meaningful whole of all the information received. In this chapter the hypotheses are either accepted or rejected based on the results of the study.

Chapter 6: Conclusion, limitations and recommendations

Lastly, chapter six provides the reader with the conclusions that the researcher has drawn from all the information obtained and analysed. In this chapter the researcher highlights the limitations of the study and also provides the reader with recommendations for future studies.

CHAPTER 2: LITERATURE REVIEW

The literature review devoted to chapter 2 is a summary of the existing body of knowledge with regard to this research topic. The following section explains the background to higher education and higher education institutions in South Africa, the job demands-job resources model, employability, dispositional employability as well as linking the JD-R model to dispositional employability.

2.1 SECTION 1: HIGHER EDUCATION AND HIGHER EDUCATION INSTITUTIONS IN SOUTH AFRICA

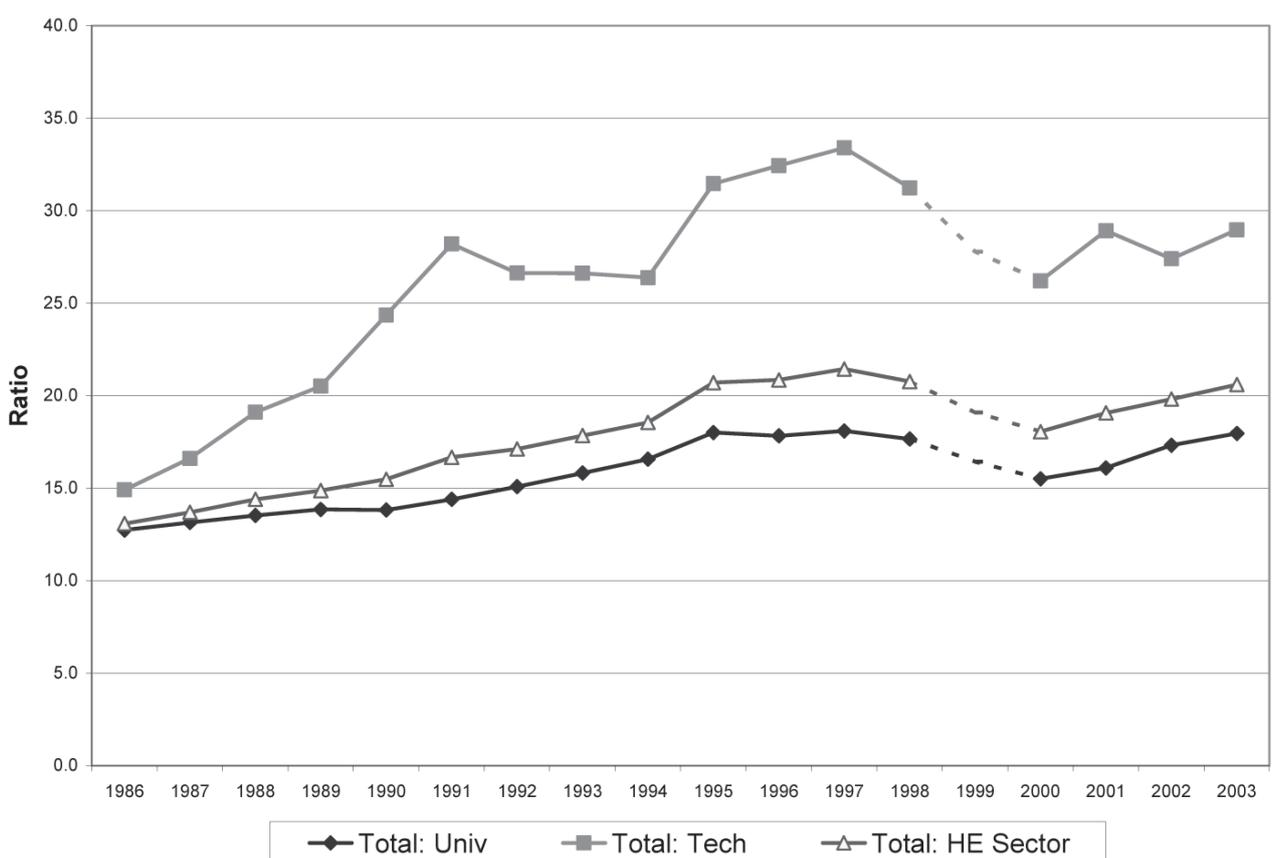
The human race has always placed a great value on knowledge. The educated have long been portrayed in an aristocratic manner and seen as the paramount of society. As a reflection of this perception, higher education institutions have also strived for excellence and have competed against each other to be seen as the most exclusive road to set individuals apart from others. “The primary purpose of HE institutions is to provide graduates with the skills that the economy requires” (De Villiers & Steyn, 2009, p. 50).

South Africa places a high value on tertiary education and has been competing on international standards for years. Mouton (as cited by Geber, 2009) states that the South African doctoral completion rate and the rate at which we add research to the existing body of knowledge are congruent to international development. In 2004 numerous mergers and changes in the HE environment in South Africa decreased the number of HEI’s from 36 institutions to 23 (De Villiers & Steyn, 2009). Ntshoe et al. (2008) state that the HE sector has experienced significant changes due to factors such as globalisation, managerialism and neo-liberalism. According to Ntshoe et al. these changes have become prevalent through increases in student enrolment, increases in entrepreneurship, changes in funding and accountability, increased importance of performance-based incentives and increased emphasis on the efficiency of HE staff. Furthermore post-apartheid legislative and procedural changes have also influenced HEI’s in their identities, staff balance, student populations, policies and procedures (Portnoi, 2009). As with any organisational change, implementing transformational policies and procedures have presented great challenges to the structures of the HEI’s (Portnoi, 2009). In addition to

these changes and transformations, De Villiers and Steyn (2009) state that state funding of higher education (HE) in South Africa has decreased substantially over the past two decades, forcing HEI's to generate funds through alternative routes. These alternative routes included increasing tuition fees and generating a third income through earmarked research allocations, contract research and philanthropic contributions (De Villiers & Steyn, 2009). De Villiers and Steyn state that, due to the decrease in state funding, the increase of academic staff in HE was not equivalent to the increase in the number of students enrolling per year. In contrast to these findings, De Bruin and Taylor (2005) state that funding is not an obstacle in South Africa.

Figure 1 portrays the increase in the number of full-time university students per full-time instruction and/or research staff members for technikons and universities during 1986 to 2003 in South Africa (De Villiers & Steyn, 2009).

Figure 1: WFTES per FTE instruction/research staff members for technikons and universities during 1986 to 2003 (De Villiers & Steyn, 2009, p. 50)



As can be seen from Figure 1 the number of students per instruction/research staff member has increased significantly. This has placed increased pressure on the staff members to perform. According to Ntshoe et al. (2008) academics have in many cases found it necessary to abandon their initial core business functions in order to give attention to miscellaneous tasks given to them. In addition to the increase in the number of students per staff member, the funding models of HE in South Africa imply that HEI's would receive subsidies based on the number of full-time students enrolled per year, the number of qualifications issued to students per year and the research submitted per year (De Villiers & Steyn, 2009).

In addition and in concurrence with globalisation and growing competitiveness, academics have been obstructed by the complexities of university work and the distortion of roles all of which in many cases lead to low morale (Ntshoe et al, 2008). Le Grange (2008) adds that in addition to increases in pressure to perform, there is also a growing awareness and requirement of HEI's to be at the forefront of creating sustainable education or environmental footprints (Le Grange, 2008). As an outflow of this responsibility Le Grange argues that HEI's have an increased pressure upon them to host both national and international conventions and/or seminars to emphasise the principles and actions of environmental education. Furthermore, Kaniki et al (2008) state that the National Research Foundation (NRF) of South Africa rates researchers according to peer reviews and the impact of the work. According to literature there is therefore an increased pressure on academics to perform with both the outputs of the students enrolled at the institution and their individual goals of publishing research. In contrast to the opinion that the pressures placed on academics have a negative influence, De Villiers and Steyn (2009) however highlight that these challenges have lead to increased efficiency within the academic field.

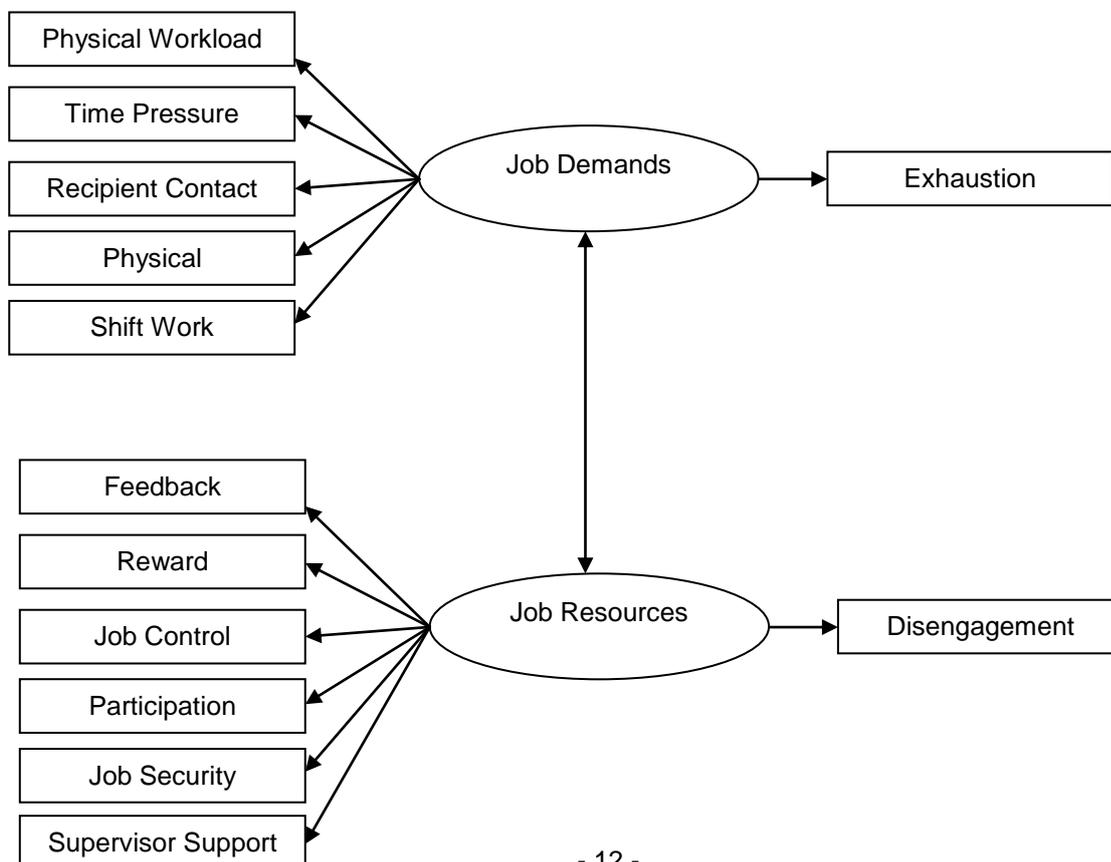
Higher education is a crucial part of any country's competitiveness, development and sustainability. Studies indicate that HE has both private and social benefits, and that it is profitable for both individuals and the government to invest in education (De Villiers & Steyn, 2009). While the impact of increased job demands remains debated, there is no doubt that there has been an increase in the job demands of academics and that in many cases these increases have not been coupled with an increase in job resources. One

proposed method to assist academics, especially in their early entry years, is the institutionalisation of coaching and mentoring programmes (Geber, 2009). The University of the Witwatersrand has already taken measures to aid their academics and increase productivity of research through a “Research Success and Structured Support” programme (Gerber, 2009, p 680) that assists academics with their career development expectations, expectations regarding establishing a publication record and other personal development expectations.

2.2 JOB DEMAND-JOB RESOURCES MODEL

The foundation of the JD-R model is that working conditions can be divided or categorised into two areas, namely job demands and job resources. According to Demerouti et al (2001) these two areas are related to specific human components. They explain that according to the JD-R model Job demands are predominantly related to the exhaustion component of burnout and Job Resources, or rather the lack thereof, are related to disengagement. The Job Demands – Resources model can be seen in Figure 2 below.

Figure 2: The job demands-resources model of burnout



Although this model has been mostly applied to the service industry the principles remain the same in any industry, due to human nature. This model therefore assumes that burnout can develop irrespective of the specific industry or type of occupation (Demerouti et al, 2001). The fundamental principle of the model is that when job demands are high and job resources are low (meaning few resources or not appropriate to the demand) employees exert excessive energy to cope, which has a negative effect on motivation. Consequently burnout and/or disengagement are valid concerns.

Other research indicates that increasing work demands stretch the coping skills of an individual to such an extent that it reduces the personal adaptability of the individual (O'Connell, McNeely and Hall, 2008). O'Connell et al. tested the hypothesis that work demands will negatively relate to personal adaptability. Their study indicated that work demands did not relate to personal adaptability, but that managerial support showed a strong correlation. This study found that helpful interaction on the job, from supervisors and peers, plays a positive role in personal adaptability (O'Connell, 2008). Furthermore this study indicated that employees should be provided with the resources necessary to follow the organisational vision, and facilitate coping.

2.2.1 Job demands in higher education

As with any other sector, higher education demands quite a lot from its employees. As previously discussed, job demands include the following factors: physical workload, time pressure, recipient contact, physical environment and shift work. A study by Jackson, Rothmann and Van de Vijver (2006) found that job demands and job resources forego burnout and work engagement in individuals who were employed in the education sector. More relevantly, a study by Rothmann, Barkhuizen and Tytherleigh (2008) concluded that increased job demands of academics result in exhaustion. It therefore seems as if the job demands of academics have indeed increased over the years.

The physical environment of any employee includes the office space, temperature, noise, lighting, ventilation, office furniture, hygiene and over-all climate of the workspace. According to De Bruin and Taylor (2005) a South African Study by Shadwell, Schlebush and Van Niekerk found that in many cases employees who worked in physical

environments that were not optimal would develop general symptoms related to the known 'sick building syndrome' or SBS.

Higher education institutions are required to produce a certain number of graduates, especially post-graduates per year, which places time pressure on every academic to perform. Although higher education is not governed by shift work, academics regularly research after hours in order to complete their research within a reasonable time.

The physical workload of academics in South Africa has increased due to the factors discussed in Section 2.1 as well as the restructuring of HE to reduce the number of HEI's (De Bruin & Taylor, 2005). Mostert, Rothmann, Mostert and Nell (2008) found that academics experienced unmanageable workloads that lead to work stress and weakened commitment to their work (Mostert et al., 2008). According to Bezuidenhout and Cilliers (2010) academics in South Africa are hard-pressed to increase their research output, manage larger classes as lecturers as well as supervise postgraduate students. A high physical workload is aggravated by unclear roles and responsibilities. According to Beehr (as cited by De Bruin & Taylor, 2005) role ambiguity is experienced when a single person is required to fulfil more than one key role in the organisation. In many cases academic personnel have to fulfil the dual role of both researcher and lecturer. Although many academics would consider themselves to be essentially researchers, they are obligated to perform as lecturers as well, which results in numerous complications (De Bruin & Taylor, 2005). Due to the fact that teaching does not come naturally to everyone, the compulsory lecturer causes additional strain on many academics (Taris et al. as cited by De Bruin & Taylor, 2005).

2.2.1 Job resources in higher education

No demand can be met without the relevant resources to achieve it. As previously mentioned, high demands without the appropriate resources to meet them result in stress. According to the JD-R model job resources include: appropriate and timeous feedback, adequate rewards, job control, participation, job security and supervision support. According to Barkhuizen and Rothmann (2008) previous studies have highlighted the following elements as stressors common to academic staff: work overload, time

constraints, lack of promotional opportunities, insufficient recognition, inadequate salaries, changing job roles, insufficient management, a lack of participation in management, inadequate job resources as well as inadequate funding, job insecurity, inequality in systems and a lack of regular feedback. In concurrence Jackson, Rothmann and Van de Vijver (2006) state that job resources are not only linked to burnout, but also decreased commitment of academics. Mostert et al. (2008) found that the job resources available to academics inhibit them to achieve their targets and perform their work optimally. Literature therefore confirms that academics in many cases experience a lack of adequate resources.

Academics have been envied for the benefits they receive in their work such as flexi-time, free tertiary education for their children, overseas trips for conferences and seminars, and the benefit of higher education holiday schedules. Barkhuizen and Rothmann (2008) are however of the opinion that these benefits are on the decline and that the academic sector has become increasingly stressful. Although many academics agree that their salaries could be improved at other institutions, their current benefits still counter the lack of comparative salaries (Netswera et al. 2005).

According to Winefield, Gillespie, Stough, Dua and Hapuararchi (2002, as cited by Barkhuizen & Rothmann, 2006) job autonomy results in higher commitment by the academics in HE. Mostert et al. describe in their study that academics that experienced a lack of job control or autonomy had greater stress that resulted in decreased commitment and even disengagement. Another source of work stress can be brought about by job security, or rather the lack thereof. Sudden fluctuation in the number of students registered at universities or mergers can be troubling for academic staff (Netswera et al., 2005). According to De Bruin and Taylor (2005), the number of mergers and changes in the HE environment has become an enormous worry for many of the academic staff. The moment that no-one can assure job security, employees automatically become less motivated to be engaged in the organisation.

Having a support system to rely on in trying times is a great part of persistence and success. A lack of supervision support increases the level of stress and individual experiences (De Bruin & Taylor, 2005). Netswera et al. (2005) found that academic staff

require the full support of all departments in the HEI in order to facilitate high quality learning. They explain that a holistic approach to quality education needs to be taken. This includes: being properly trained to develop appropriate learning programmes, course counselling, an adequate IT infrastructure and administrative support throughout. Increased workloads in the absence of increased support results in a lot more time and effort from the academics to meet the demands of their work (Bezuidenhout & Cilliers, 2010). Mostert et al. (2008) found that in many cases the feedback given to academics causes increased frustration that in return results in increased withdrawal (Mostert et al., 2008).

Quick and Quick (as cited by De Bruin and Taylor, 2005) state that within working relationships, employees can also experience interpersonal demands from co-workers including: differences in status, a lack of personal workspace, abrasive personalities, different leadership styles and pressure to conform to social norms. All HEI's should address the core competencies and human characteristics that are required for successful careers, responsible citizenship and a good life for academic staff (Chickering & Stewart as cited in Netswera et al., 2005). In order for a HEI in South Africa to retain academic staff they are required to not only address core business activities and required competencies, but also respond to the national imperatives for redress, for example employment equity and skills development initiatives (Netswera et al., 2005). Netswera et al. (2005) found that academics are forced to work on administrative tasks that prevent them from focussing on research. Netswera et al. emphasise that academics require stimulating opportunities for growth and development to prevent them from seeking alternative opportunities.

2.2.2 Job Demands and Resources and Biographical variables

The academic sector consists of various groups of people who contribute to higher education. This includes individuals of different genders, ages, ethnicities, languages, job levels etcetera. This section would like to highlight a few opinions regarding job demands and job resources within these different biographical groups. In a study conducted by Doyle and Hind (as cited by De Bruin & Taylor, 2005) results indicated that female academics experienced higher levels of stress than their male counterparts. In another

study, Bezuidenhout and Cilliers (2010) found that lower academic levels, which are predominantly filled by female employees, experience more stress. According to Bezuidenhout and Cilliers, female academics in many cases not only receive fewer rewards for their work done, but are also less likely to be recognised for their contributions. In addition to this, Bezuidenhout and Cilliers found that, based on an increase of personal guidance needed by students due to the larger class sizes, female academics have reverted to a state of 'personal detachment' in order to guard themselves against feeling depleted. In contrast, Barkhuizen and Rothmann (2008) found that there is no significant difference between the occupational stress experienced by men and women.

Barkhuizen and Rothmann (2008) have done extensive research as to the background variables of academics in relation to their occupational stress. The results of their study have provided the most relevant conclusions pertaining to the biographical variables of this study. Their study indicates that in the academic sector older academics experience greater workload and consequently greater pressure, but have developed sufficient coping mechanisms that allow them to be less stressed than their younger counterparts. Winefield et al. (as cited by Barkhuizen & Rothmann, 2008) found that academics' hours of work increased with their job level. In alignment with the general characteristic differences between men and woman, Cross and Carroll as well as Dua (as cited by Barkhuizen and Rothmann, 2008) found that females experience a greater threat to functioning from factors such as job insecurity, a lack of internal recognition and segregation, whereas their male counterparts experience greater pressure from their workload, salary and public recognition. Furthermore, working mothers experience additional conflict within their work-life balance.

2.3 EMPLOYABILITY

The most basic level of employability can be defined as the knowledge, skills and abilities (KSAs) (Fugate, 2008) an individual possesses in order to fulfil a particular role or responsibility in a working context. Thijssen, Van der Heijd and Rocco (2008) simply described it as the possibility of an individual to survive in the internal and external labour market. Fugate describes that employability is furthermore the specific characteristic that enables an individual to bridge the gap between their individual reality and their

environment. When an individual is employable they retain the ability to overcome any obstacles in the gap between their life and environment. Thijssen et al. elaborate that employability places the focus on a number of characteristics such as skill and competence, physical and cognitive suitability, flexibility, adaptability and many other characteristics that all refer to employment as the outcome.

Thijssen et al (2008) believe that employability encompasses three perspectives namely: the society, the company and the individual worker. According to this theory employability can mean three different things: on a societal level employability means a low unemployment rate and high economy (there are jobs available), on an organisational level it means that the organisations have work to offer in exchange for compensation and do so, and lastly on an individual level it indicates an ability to procure and retain an attractive job in the external and internal labour markets. This perspective is interesting in that it recognises that employability is not a one-dimensional concept, only applicable to the individual, but also a broad concept that includes the business world and its functions.

The concept of employability embraces the assumption that employees should take initiative, and self-manage their careers and skills in order to be able to cope in the modern world (Thijssen et al, 2008). This point of view has led to a shift in the definition of the responsibility of career planning (Thijssen et al, 2008). Literature indicates that researchers have a wide variety of definitions for employability, depending on the conceptual framework to which it is applied. Many researchers support a concrete definition whilst others argue a broader definition to prevent limitation, and also to include specific personal competencies.

2.3.1 DISPOSITIONAL EMPLOYABILITY

Researchers agree on the fact that it is essential for employees to adapt and change with their working environment in order to survive (Fugate, 2008). Employees need to remain relevant to their working environment and this requires them to take initiative and proactively adapt to their environment. Dispositional employability (DE) is described as the collection of individual differences in an individual's character, which influences and enables them to proactively adapt to situations specific to work and career (Fugate, 2008).

Fugate (2008) explains that dispositional employability possesses both proactive and reactive characteristics. Reactive characteristics enable an individual to react to known demands and meet the known demands of the environment, whilst proactive readiness for change attributes an individual with a “perceptual readiness for change” (Fugate, 2008, p. 5). This proactive readiness for change encourages individuals to prepare in advance for likely threats and changes in their environment (Aspinwall and Taylor, 1997 as cited by Fugate, 2008). Proactive readiness for changes is synonymous with an awareness of one’s environment that allows individuals to create and exploit opportunities (Fugate, 2008).

According to research (Crant, 1995 and Siebert, Kramer and Crant, 2001 as cited by Fugate, 2008) proactivity has a positive effect on job performance and job satisfaction. It is therefore obvious that a dispositional employability not only meets the current needs of the environment, but it also proactively contributes to the constructive evolution of that environment. Individuals with dispositional employability help an environment to grow through constructive and proactive behaviour that is engaging.

Fugate and Kinicki (2008) state that dispositional employability can be described in terms of an individual’s openness to changes at work, work and career resilience, work and career proactivity, career motivation and work integrity. The developers of the Dispositional Measure of Employability (DME), Fugate and Kinicki, acknowledge that there are many potential characteristics in the human composition that foster success, but have deemed the abovementioned dimensions as critical in dispositional employability. They have further refined these dimensions since their early work in 2004. The elements and attributes of each dimension are described as follows:

- ***Openness to changes at work***

Individuals are receptive and willing to change and/or to feel that changes are generally positive when they occur.

- ***Work and career resilience***

Individuals are either (a) optimistic about their career opportunities and work (b) feel they have control over the destiny of their careers (c) feel they are able to make

genuinely valuable contributions at work or (d) some combination of the above-mentioned.

- **Work and career proactivity**

Tendencies and actions of individuals to gain information potentially affecting their jobs and career opportunities, both within and outside their current employer.

- **Career motivation**

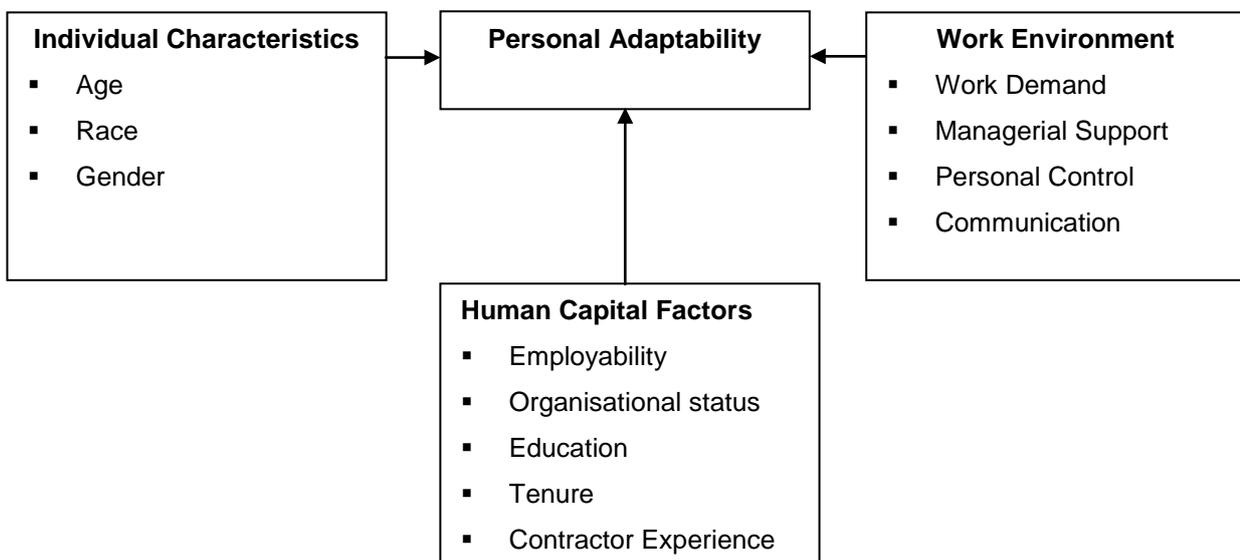
Making specific career plans and strategies. Being in control of their own career management, and setting career goals.

- **Work Identity**

The degree to which individuals define themselves in terms of a particular organisation, job, profession or industry. A genuine interest in what one does, how well it is done and the impressions of others.

Another point of view in terms of individual adaptability is that of O’Connell, McNeely and Hall (2008). They describe adaptability as the capacity to change together with the motivation to do so. O’Connell et al. explain that although many believe adaptability to be an innate personality attribute or characteristic (a disposition); others view it as a malleable attribute that can be enhanced. They argue that adaptability is however dependent on a number of internal and external elements. Figure 3 depicts a conceptual model of antecedents of personal adaptability (O’Connell et al, 2008).

Figure 3: A conceptual model of antecedents of personal adaptability (O’Connell et al, 2008).



As illustrated in Figure 3 O'Connell et al (2008) recognise a number of internal and external factors as role-players in personal adaptability. They firstly argue that individual characteristics including age, race and gender play a role in personal adaptability because it may affect the expectations in terms of social norms, preferences to the workplace etcetera. Secondly, they argue that human capital factors including employability, occupational status, education, tenure and contract based-work experiences influence personal adaptability. Lastly, an individual's work environment including work demand, managerial support, personal control and communication may increase or decrease the adaptability of an individual. In terms of this study it is my aim to evaluate the role the work environment plays on the adaptability/employability of an individual.

2.3.1 Dispositional employability in higher education and background variables

Little literature is available on dispositional employability in higher education. Perhaps without even knowing it, some researchers have in fact touched on aspects of DE as secondary products of their research. The duties and responsibilities of academics vary quite significantly between different departments, different individuals as well as at different time slots at a higher education institution (Parsons & Slabbert, 2001). It can therefore be assumed that the personal adaptability of the individual employees will also vary quite significantly. Mostert et al. (2008, p. 121) state that factors such as job resources, job control, communication and relationships at work have a direct impact on the engagement (commitment) of academics which in return could influence the employee turnover as well as their "discretionary effort" at work. A lack of "discretionary effort" could indicate a lack of proactive and reactive behaviour and therefore a decrease in dispositional employability. According to Arnold (2005, as cited by Mostert et al., 2008) low organisational commitment could have an impact on the performance of the employees.

In a study done by Wolhuter, Vander Walt, Higgs and Higgs (2007) they found that despite an ever-changing and transforming environment, academics did not perceive this as a grave obstacle for themselves. This could indicate a positive openness to change. Furthermore Wolhuter et al. found that despite the fact that academics did not indicate that their work environment became more difficult, they were not willing to produce more

research or perform other academic services. In return this could indicate a low proactivity or even career motivation.

To date very limited research exists on how individuals differ in terms of dispositional employability. A recent study by Barkhuizen and Botha (2011) for example found no significant differences between Human Resource Practitioners and their Dispositional Employability. As mentioned earlier, a study conducted by Doyle and Hind (as cited by De Bruin & Taylor, 2005) indicated that female academics experienced higher levels of stress than their male counterparts. Both male and female academics in the UK experience their priorities and tasks as the same (Doyle & Hind, as cited by De Bruin & Taylor, 2005). In another study, Bezuidenhout and Cilliers (2010) found that lower academic levels, which are predominantly filled by female employees, experience more stress. According to Bezuidenhout and Cilliers female academics in many cases not only receive fewer rewards for their work done, but are also less likely to be recognised for their contributions. In addition to this, Bezuidenhout and Cilliers found that, based on an increase in personal guidance needed by students due to the larger class sizes, female academics have reverted to a state of 'personal detachment' in order to guard themselves against feeling depleted. The factors mentioned above will have an impact on the resilience, proactivity and motivation of female academics. According to Osipow et al. (as cited by Barkhuizen and Rothmann) older academics carry a greater workload but have developed greater methods of coping compared to younger academics and therefore show greater resilience.

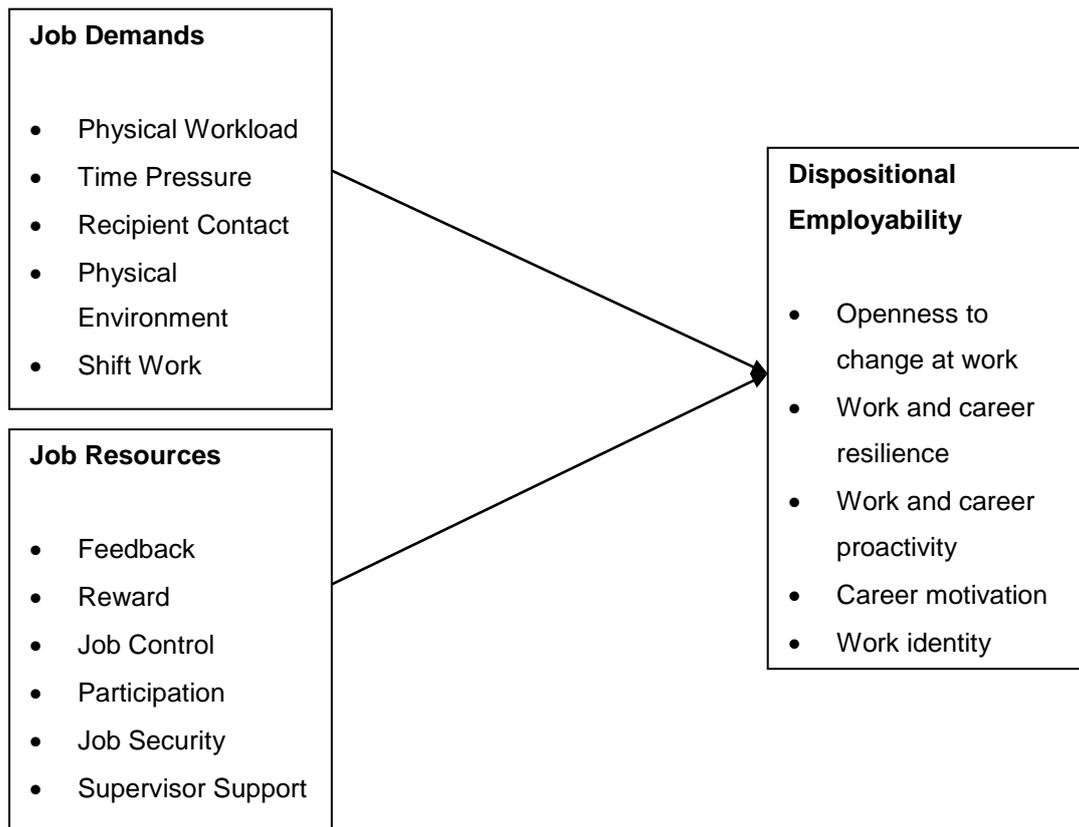
2.4 LINKING JD-R TO DISPOSITIONAL EMPLOYABILITY

The main concept of DE is the adaptability of the individual in both life and work environments. When linking the JD-R and DME models it forms a logical concept; linking what is required of the employee with the way in which the individual adapts and handles these requirements. The significance of the combined model can be anticipated by similar studies evaluating different aspects of DE. In a study done by De Cuyper, Mauno, Kinnunen and Makikangas (2011) results showed that the relationship between perceived employability and turnover was higher when job resources were limited. Based on literature, HEIs have been experiencing numerous fundamental changes that have placed them and their employees under enormous pressure to perform. From literature it would

seem as if the increase in job demands are not always accompanied by an increase in job resources which then directly impact DE.

Figure 4 below illustrates the link between job demands and job resources as factors influencing dispositional employability and will be applied to HEIs in order to answer the research question.

Figure 4: A JD-R and DE model



In analysing the different dimensions of job demands and DE as well as job resources and DE one can immediately identify certain relationships based on basic psychology. A scenario where high job demands are present with inadequate resources will result in decreased motivation, proactivity and resilience of the employee. Similarly, when individuals feel overwhelmed by workload and/or other job demands they might not be as open to new changes in their work environment, especially if it means that their load will be increased. In contrast, adequate resources will alleviate negative DE even in the face of high job demands. In an environment where individuals feel assured of their role and position, regularly get constructive and supportive feedback, have autonomy (especially in qualified positions), have the necessary support to face the challenge and are adequately

rewarded for all their effort, these individuals will be inclined to be more productive, more engaging, more resilient and more open to changes at work and in their industry.

In scenarios where high job demands were not equaled with adequate resources Jackson, Rothmann and Van de Vijver (2006) describe that burnout and disengagement will be present. Rothmann, Barkhuizen and Tytherleigh (2008) add that increased job demands of academics result in exhaustion. Mostert et al. (2008, p. 121) have used terms such as a lack of “discretionary effort” in the event of inadequate job resources, job control, communication and relationships at work. The link between job demands and job resources therefore has an impact on the DE in terms of the level of engagement (commitment) of employees as well as the level of their productivity/performance.

2.5 CONCLUSION

The existing body of literature regarding employability, dispositional employability, higher education and higher education institutions was discussed in this chapter. The literature discussed in this chapter provides a broad background of the key concepts that form the basis of this research study. The chapters to follow will delve into the detail regarding the manner in which the literature was applied to the specific research objectives of this study.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This section provides a detailed description of the research philosophy as well as the inquiry strategy, sampling, method of data collection, data analysis and assessment of rigour of the research design used.

3.2 RESEARCH PARADIGM / PHILOSOPHY

Carson, Gilmore, Perry and Gronhaug (2001) explain the purpose of a research philosophy as simply the philosophy on which the choices of that specific environment are made. Maree (2010, p. 47) defines a paradigm as:

A set of assumptions or beliefs about fundamental aspects of reality which gives rise to a particular world-view – it addresses fundamental assumptions taken on faith, such as beliefs about the nature of reality (ontology), the relationship between knower and known (epistemology) and assumptions about methodologies.

According to Carson et al. (2001) ontology defines the reality of a study, whereas epistemology describes the relationship of the ontology and the researcher, and methodology in return describes the techniques the researcher applies in order to discover the reality. The research paradigm for this study takes on a positivistic philosophy. The positivist epistemology is based on objective facts that can be translated into a tangible form (Maree, 2010). Johnson and Duberley (2000) explain that positivism has become more dominant and argue that even individuals who maintain that they do not use a positivist approach, still utilise certain of its elements. Table 3.1 describes a broad definition and explanation of positivism, ontology and epistemology (Carson et al, 2001).

Table 3.1: Broad definition and explanation of positivism, ontology and epistemology (Carson et al, 2001).

	Positivism
Ontology <ul style="list-style-type: none"> • Nature of 'being' or the nature of the world • Reality 	<ul style="list-style-type: none"> • Have direct access to the real world • Single external reality
Epistemology <ul style="list-style-type: none"> • "Grounds" of knowledge or the relationship between reality and research 	<ul style="list-style-type: none"> • Possible to obtain hard, secure objective knowledge, • Research focuses on generalisation and abstraction • Thought governed by hypotheses and stated theories

From an ontological point of view the study takes a realist position whereby the social reality can be understood from an external point of view (Maree, 2010). The human race has always placed a great value on knowledge. The educated have long been portrayed in an aristocratic manner and seen as the paramount of society. As a reflection of this perception, higher education institutions have also strived for excellence and have competed against each other to be seen as the most exclusive road to set individuals apart from others. In accordance with this notion increasing pressure has been placed on academia to provide top quality work in large numbers.

3.3 DESCRIPTION OF INQUIRY STRATEGY AND BROAD RESEARCH DESIGN

Quantitative research is known for its ability to incorporate causal paths and identify the joint strengths of multiple variables (Creswell, 2010). This study used survey research as its main research design. This survey aspired to obtain generalisable information regarding the JD-R and dispositional employability of academics in South Africa by asking them questions and tabulating their answers (Leedy & Omrod, 2010). The main objective of quantitative research and a survey design is to gather information in a way that is generalisable from the sample to the whole population (Babbie, 1990 as cited by Creswell,

2010). This is also one of the main advantages of using this specific research strategy and design. Through survey research a study is able to numerically describe the attitudes, opinions and insight of the population in a quantitative way (Creswell, 2010) as was the case with this research study.

A cross-sectional research design whereby data is collected only once at a single point in time, over a short period was used (Payne & Payne, 2004). The research was done at a single point in time by administering two self-administered questionnaires. The self-administered questionnaires included the Job Characteristics Scale developed by Barkhuizen and Rothman (2005) as well as the Dispositional Measure of Employability (Fugate & Kinicki, 2008). The nature of a survey design captures information that is accurate at the specific time of the survey. Therefore the survey demanded critical insight from the researcher in order to generalise the results to the whole population whilst taking into account that the results might not be generalisable to all future points in time.

3.3.1 An overview of survey research

According to Marsden and Wright (2010) surveys are one of the most important methods for research in the social sciences. It creates useful knowledge that can be applied to the work environment (Marsden & Wright, 2010). McMillan and Schumacher (2001, as cited by Maree, 2010) define survey research as a method that assesses the current standing of a situation through the gathering of information regarding the opinions, beliefs and attitudes of the target population. Survey research can include questionnaires, interviews, telephone calls and observation as methods of obtaining information (Maree, 2010). According to Mertens and McLaughlin (1995) a main advantage of survey research is that it allows the researcher to collect information from large populations that otherwise could not be obtained. Maree (2010) adds that another advantage is that it allows for the testing of multiple variables and hypotheses.

Survey research is a systematic and standardised approach to obtaining information, and can have either a basic or applied function (Marsden & Wright, 2010). According to Fowler (2009) the purpose of the survey is to obtain quantitative or numerical descriptions regarding specific aspects of a population. This survey had a descriptive purpose of

monitoring the extent of the JD-R model on the dispositional employability of academics in South Africa as a prelude to possible intervention (Marsden & Wright, 2010).

3.3.2 An overview of quantitative research

Oishi (2003) defines quantitative research methods as techniques of analysing findings through the use of statistical methods. Lewis-Beck, Bryman and Liao (n.d) describe that a quantitative research study is applied when a researcher seeks to draw conclusions concerning a large population that cannot be analysed individually. Quantitative research is therefore the process of statistically analysing a sample of a large population in order to draw conclusions concerning the population. In concurrence Maree (2010) adds that quantitative research is defined by three elements namely, objectivity, numerical data and generalisability.

3.4 SAMPLING

Sampling is defined by Babbie (2008) as the process of selecting observations. It can also be defined as “any procedure for selecting units of observation” (Babbie, 2008, p200). It is neither feasible nor efficient to include the whole population in the research sample of this study, or any quantitative study for that matter. Due to the fact that the population of this study is rather large, the researcher will make use of sampling. The goal of any sample is to learn about a population through evaluating a smaller representative group of the same population (Maree, 2010) thereby generalising results of the sample to the population. The emphasis of sampling falls on the representativeness thereof.

3.4.1 Units of analysis

Maree (2010) affirms that with every quantitative study that is undertaken, data is gathered through specific units. These units may comprise of anything that holds information relevant to the research topic. The units of analysis are therefore the individuals (or topic) that is being measured. The units of analysis in this research study comprised of the individuals employed by universities that form part of academia.

3.4.2 Target population

The target group is linked to the specified units of analysis (Maree, 2010). The target population for this study was academics in South Africa. More specifically the target population (academics) included junior lecturers, lecturers, senior lecturers, associate professors and professors from all the universities in South Africa.

3.4.3 Sampling method

The research was conducted among 12 Higher Education Institutions in South Africa. A purposive convenience sampling method was used to gather the data from the respondents. This method of sampling involved selecting units from the population that were easy to obtain and conveniently available (Maree, 2010). Participation in this research study was not compulsory for the academics of South Africa; therefore the researcher relied on convenience sampling based on the willingness of academics to partake in this survey. Convenience sampling is the most feasible approach to sampling in a study of this size and nature.

3.4.4 Sampling size

According to Maree (2010) the main concern with a sample size is to ensure that the sample size is large enough to represent the whole population. The degree to which the sample size represents the sub groups of the population has a direct impact on the validity of the study. Although there is no generic specification regarding sample size, Maree (2010) explains that the type of statistical analyses planned, the accuracy of the results required and the characteristics of the population play a fundamental role in determining the sample size of any research study. Marsden and Wright (2010) explain that the sensitivity of a study, that is; the precision of the statistics and the accuracy of the generalisations, is increased by the size of the sample.

A large sample therefore decreases sampling errors. A total of 360 questionnaires were sent out to the sample of which 158 completed questionnaires were received, but only 146

of these responses were usable for data analyses. This represents a 40.55% response rate.

3.5 DATA COLLECTION

3.5.1 Data collection approach

This study forms part of the South African Netherland Project for Alternatives in Development (SANPAD) research project with the Vrije University in the Netherlands. Permission for the project was first obtained from the Head of Skills Development of Higher Education South Africa. The questionnaires for the research project were distributed via the skills development facilitators in hard copy to a stratified random sample of academics in the identified Higher Education Institutions. Permission to use the questionnaires was obtained from the relevant developers and subjected to an ethical clearance process. Questionnaires were treated anonymously to protect the identity of the respondents. The questionnaires were distributed to twelve South African Higher Education Institutions. Respondents were given two weeks to complete the questionnaire.

3.5.2 Possible obstacles in data collection

A great threat to the external validity of this study was the use of convenience sampling. The risk associated with convenience sampling is that the researcher's sample is, to a great extent, at the mercy of the respondents. In order to oppose this risk, a large sample was taken to create the maximum opportunity for a representative sample and therefore increase external validity. According to Greenstein (2006) one of the limitations of quantitative research includes the fact that quantitative research is a structured approach to collecting information. The limitation thereof lies in that the researcher is confronted by the risk of omitting any information that is not specifically collected by the instruments used. Secondly, the use of mailed questionnaires limited the researcher to individuals who firstly, have valid email addresses (Greenstein, 2006), and secondly regularly use their email. On the other hand, written questionnaires possess a limitation due to fluency of the target population (Greenstein, 2006). A great obstacle in this research was the respondents' lack of willingness to complete the questionnaires.

3.5.3 Data collection Instruments

The study made use of two questionnaires:

- The Job Characteristics Scale (JCS) and
- Dispositional Measure of Employability (DME)

3.5.3.1 *The Job Characteristics Scale (JCS)*

The Job Characteristics Scale (Barkhuizen & Rothmann, 2005) was used to measure the job demands and the job resources of the participants. The JCS consists of 41 items. The questions are rated on a four-point scale ranging from 1 (Never) to 4 (Always). The dimensions of the JCS include pace and amount of work, mental load, emotional load, work variety, opportunities to learn, work independence, relationships with colleagues, relationships with supervisors, ambiguities of work, information, communication, participation, contact possibilities, remuneration and career possibilities. Acceptable Cronbach Alpha Coefficients were obtained from the above scale in South African studies (Barkhuizen & Rothmann, 2005).

3.5.3.2 *Dispositional Measure of Employability (DME)*

The DME is a 25-item questionnaire which measures the DE of individuals. It was developed by Fugate and Kinicki (2008) after extensive analysis with regard to construct and predictive validity. The instrument measures six (6) constructs underlining DE as shown in Table 3.2 together with the number of individual items for each construct or factor.

Table 3.2: Construct measured in the DME

Construct / Factor	Number of items
Openness to change at work	5
Work and Career productivity	3
Career Motivation	3
Work and Career resilience	5

Optimism at work	3
Work Identity	6

Participants were asked to indicate to what extent each of those attributes describes them. Their responses were indicated on a five (5) point Likert-type scale anchored from 1 (Strongly disagree) to 5 (Strongly Agree). An acceptable internal consistency was obtained for the overall scale of Dispositional Employability in a South African study among HRM practitioners (Barkhuizen & Botha, 2011).

3.6 DATA ANALYSIS

Bryman and Cramer (2011) explain data analysis to be the process wherein the units of the study are described in terms of the variables derived from the study. As mentioned previously, data was collected via a cross-sectional approach and therefore represents thoughts and attitudes at a specific point in time. Bryman and Cramer (2011, 244) explain multivariate analysis as an interest “in the effect of two variables on a third, particularly if we believe the two variables may influence one another”. With this study the researcher was interested in the role of the relationship between the variables of job demands and job resources on predicting the dispositional employability of the academics in South Africa.

3.6.1 Recording, storage and coding of the data gathered

All data received from participants was analysed using the same tool, namely the statistical analysis program SPSS. In order to use SPSS the computer must be able to recognise the data collected (Babbie, 2008), therefore before data could be analysed all questionnaire responses were given numeric codes. According to Babbie (2008) the main purpose of the coding process is to reduce the variety of eccentric response into a reduced list of attributes. On the advice of Marsden and Wright (2010, 715), the following elements were kept in mind while coding the data; identification variables, code categories, preserving the original format, verification with an independent coder and the series of responses. All responses were then captured directly into a SPSS matrix according to the established coding system.

All responses, technical documents; including the codebook that lists the assignment of codes and describes the location of variables (Babbie, 2008), related publications and data collection instruments (Marsden & Wright, 2010) were archived into a locked file for storage to which only the researcher and supervisor have access.

3.6.2 Preparation of data for analysis

According to Sapsford and Jupp (2006) preparing data for analysis involves the examination of the key qualities and structure of the data. In preparation of the data analysis phase some important factors were taken into consideration namely, addressing any possible risks of disclosure before entering data; determining the file formats before entering data; and archiving all related publications (Bryman & Cramer, 2011). During this phase the researcher started viewing the data as a whole in order to start identifying the possibilities of the data (Sapsford & Jupp, 2006). According to Sapsford and Jupp (2006, 162) the preparation phase involves devising a framework into which the data gathered can be reproduced in order to firstly, provide a summary of what has been studied and secondly, be readily analysed to answer the researcher's question.

3.6.3 Data analysis techniques

Statistical analysis was carried out using the SPSS Program (SPSS, 2012). The reliability and validity of the JCS and DME were determined by means of Cronbach alpha coefficients, as well as exploratory factor analysis. Pearson product-moment correlation coefficient was used to specify the relationship between barriers-to-change and work engagement. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients. Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between the levels of barriers-to-change and work engagement of demographic groups. When an effect is significant in MANOVA, ANOVA is used to discover which dependent variables are affected. In terms of statistical significance, a value at a 95% confidence interval level ($p \leq 0,05$) is set. Effect sizes (Steyn, 1999) were used to decide on the practical significance of the findings.

3.7 DEVELOPMENT OF RESEARCH HYPOTHESES

For purposes of this study five research hypotheses were developed:

H₁: There is a negative relationship between job demands and dispositional employability of academic staff.

H₂: There is a positive relationship between job resources and dispositional employability of academic staff in South African Higher Education Institutions.

H₃: There is a significant difference between the academics' perceptions of the current job demands based on their demographic characteristics.

H₄: There is a significant difference between the academics' perceptions of the current job resources based on their demographic characteristics.

H₅: There is no significant difference between the academics' levels of dispositional employability based on their demographic characteristics.

Rationales:

To date very limited research exists on how individuals differ in terms of dispositional employability. Even less research is available on the specific dispositional employability in higher education. We understand from literature that academics in South Africa are experiencing an increase in job demands and that this increase is not necessarily met by an equivalent increase in job resources. Rothmann, Barkhuizen and Tytherleigh (2008) concluded that increased job demands of academics are resulting in exhaustion. Mostert, Rothmann, Mostert and Nell (2008) found that academics are experiencing increasingly unmanageable workloads that lead to work stress and weakened commitment to their work (Mostert et al., 2008). In relation to these statements from literature, this study would therefore like to specifically investigate the relationship between job demands, job resources, dispositional employability and the perceptions of current academics regarding these dimensions.

3.8 ASSESSING AND DEMONSTRATING THE QUALITY AND RIGOUR THE PROPOSED RESEARCH DESIGN

3.8.1 Bias and Errors in Survey Research

Babbie (2008, p. 277) defines bias as: “the quality of a measurement device that tends to result in a misrepresentation, in a particular direction, of what is being measured”. In addition to this definition, Babbie identifies bias (in the context of questionnaires) as any form of encouragement to respondents to answer in a particular manner. Bias can occur in the form of objectivity, predisposition to the research, prejudice, sampling or the viewpoint of the researcher. The instruments used in this study have been designed to alleviate as much bias as possible in order to gather data that is reliable and valid.

According to Babbie (2008) survey research shows weaknesses in that its rigidity limits its ability to gain an in-depth sense of social processes. According to Fink (2003) measurement errors in surveys could be caused by the survey instrument itself when the instrument is too difficult or poorly administered. Forza (2002) identifies four main sources of error in survey research. These sources include: sampling error, measurement error, statistical conclusion error and internal validity error. Forza provides the following description of these errors:

- Sampling error: A sample that is not representative of the whole population, and therefore limits the generalisability thereof;
- Measurement error: Gathering data from instruments that are not reliable;
- Statistical conclusion error: deriving and accepting conclusions from the statistical tests that are not true;
- Internal validity: when observations noted in the study are not as reasonable as observations given by others, rendering the conclusions erroneous.

It was the aim of the researcher and developers of the instruments to minimise the above-mentioned errors to its maximum extent in order to draw conclusions that are reliable and valid.

3.8.2 Reliability

According to Fink (2003) the reliability of a survey is indicated by its ability to be consistent in that which it measures. The consistency of the information gathered has a direct impact on the results obtained and therefore the reliability of the conclusions drawn. Fink states that a reliable survey is reasonably free of measurement errors. When a survey is reliable, the researcher can trust that the results of the survey will be consistent across the target population. According to Litwin (2003) two ways in which reliability can be measured are by means of a test-retesting the survey, or using different wording to measure the same attributes.

3.8.3 Validity

In contrast to reliability indicating consistency, validity indicates accuracy (Fink, 2003). Validity of a study can be divided into two sections namely, external validity and internal validity. According to Kalaian and Kasim (n.d), external validity refers to the degree to which the findings of the sample are generalisable to the population as a whole. The external validity is therefore directly influenced by the representativeness of the sample to the group. A sample that is not representative of the group can therefore cause an error known as a non-response error or coverage error (Kalaian & Kasim, n.d). In terms of this study the researcher aimed to collect a sample that included information for every level of academia included in the target population. A great threat to the external validity of this study was the use of convenience sampling. The risk associated with convenience sampling is that the researcher's sample is, to a great extent, at the mercy of the respondents. In order to oppose this risk, a large sample was taken to create the maximum opportunity for a representative sample and therefore increase external validity.

Babbie (2008) identifies the following as sources that might negatively influence the internal validity of a study: testing and retesting, instrumentation, statistical regression, selection biases, and demoralisation. This survey study was conducted at a single point in time rendering the possibility of a test-retest error not applicable. The DEM developers, Fugate and Kinicki (2008), found evidence for the validity of the scale, both in terms of construct and predictive validity.

3.9 RESEARCH ETHICS

Many ethical issues must be considered in conducting a survey, especially of this magnitude. On a first level consideration the researcher ensured the following:

- Written permission from the organisation to conduct the study on their employees;
- Written permission from every employee choosing to voluntarily participate in the study; and
- Maintaining full confidentiality of participants.

Babbie (2008) mentions the possibility of psychological injury in survey research. According to his definition, the act of forcing a participant to review a personal situation, in this case their position and functioning in the work environment, may be a negative experience for some. The researcher increased efforts to avoid a negative experience where possible through increased communication regarding the purpose of the survey, and emphasising voluntary participation.

The nature of academic work attracts individuals from numerous cultures, both locally and internationally. The researcher took into account how the cultural backgrounds of the participants may have influenced their responses. In order to ensure ethical execution of this study the researcher took care to adhere to all ethical codes of conduct both in research, but also industry specific codes of ethics of the HEI's (Creswell, 2009). Participants were chosen solely on their willingness to participate. No individual willing to participate was excluded and no participant wishing not to participate was forced or pestered to participate. Participants were informed that they could withdraw from the survey at any time. All responses were handled in full confidentiality. Participant questionnaires were numbered in order to protect their names. The list of names and numbers were saved in a protected file and will only be seen by the researcher and supervisor. In writing the report, no mention was made of any individual or group that could indirectly reveal any participant's identity.

3.10 CONCLUSION

In order to increase the validity and reliability of the study the researcher made every attempt to use the most appropriate research design and methodology in order to meet the research objectives. The chapter discussed the specific research paradigm and philosophy of the study, the specific strategy of inquiry used, as well as the methods for sampling, data collection and analysis of the study. Further mention was made of the quality and rigour followed before embarking on the research, as well as the research ethics applied and considered throughout. Based on these fundamental design and methodological principles, the remainder of this document serves to discuss the results and conclusions of the survey research itself.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 INTRODUCTION

This chapter is dedicated to the presentation of statistical results obtained through factor analysis and descriptive statistics using SPSS.

4.2 PHASE 1: BIOGRAPHICAL INFORMATION OF SAMPLE

The biographical information of the sample is based on the primary data gathered through the survey. Biographical information included the respondent's age, gender, language, ethnicity, marital status, highest qualification, job category, job level, the number of years' experience at a HEI, the number of years' in their current position and the total number of hours worked per average work week. The biographical information will assist the researcher to create a context for interpretation of working in a HEI and will enable a better understanding of academics' perceptions regarding the impact of job demands and job resources on the predictability of their dispositional employability.

The sample of this research consisted of academics in South African Higher Education Institutions. From the 360 questionnaires that were sent out to the sample, 158 completed questionnaires were received with only 146 usable for data analyses. This represents a response rate of 41%. The demographic breakdowns of the sample are discussed next.

4.2.1 Sample Age Representation

The data analyses described that the majority of the respondents were between the ages of 40 and 49 and made up 33.8% of the data. The remainder of the 142 respondents was represented by 25.4% between the age of 30 and 39, 24.6% between the ages of 50 to 59, 11.3% between the ages of 20 to 29 and lastly, 7% over the age of 60 years. Table 4.1 indicates the age distribution of the respondents.

Table 4.1: Age distribution

Age group	Frequency	Valid Percent	Cumulative Percent
20-29	16	11.3	11.3
30-39	36	25.4	36.6
40-49	48	33.8	70.4
50-59	35	24.6	95.1
60 plus	7	4.9	100.0
Total	142	100.0	

4.2.2 Gender Representation

According to the data gender distribution was equal. From the 144 respondents 50.0% were male and the other 50.0% were female. Table 4.2 indicates the gender distribution as per data received.

Table 4.2: Gender distribution

Gender	Frequency	Valid Percent	Cumulative Percent
Male	72	50.0	50.0
Female	72	50.0	100.0
Total	144	100.0	

4.2.3 Language Representation

The languages spoken by the respondents were divided into three groups, namely Afrikaans, English and Indigenous languages. From the total number of 143 respondents 37.1% indicated English as their home language and 28.7% of the respondents indicated Afrikaans as their home language. The remainder of the responses was made up of 34.3% of the respondents indicating that their home language was one of the other nine official languages in South Africa. Table 4.3 indicates the language distribution of the data received.

Table 4.3: Language distribution

Language	Frequency	Valid Percent	Cumulative Percent
Afrikaans	41	28.7	28.7
English	53	37.1	65.7
Indigenous	49	34.3	100.0
Total	143	100.0	

4.2.4 Ethnicity Representation

The data analysis revealed a total of 142 ethnic representations. The data revealed the respondents were predominantly located within the White (44.4%) and Black (40.1%) ethnic groups. The remainder of the data was made up of a 9.2% Asian and 6.3% Coloured ethnic representation. Table 4.4 indicates the ethnic distribution as per data received.

Table 4.4: Ethnic distribution

Ethnicity	Frequency	Valid Percent	Cumulative Percent
Black	57	40.1	40.1
Coloured	9	6.3	46.5
Asian	13	9.2	55.6
White	63	44.4	100.0
Total	142	100.0	

4.2.5 Representation of Marital Status

The data analyses revealed that nearly three quarters of the respondents were married (65%) and 21.7% of the respondents were either single, widows or widowers. Eleven of the respondents (7.7%) were divorced, seven respondents (4.9%) were engaged or in a relationship and one respondent (0.7%) was separated. Table 4.5 indicates the distribution of the marital status of the respondents.

Table 4.5: Distribution of marital status

Marital Status	Frequency	Valid Percent	Cumulative Percent
Single / Widow / Widower	31	21.7	21.7
Engaged / In a relationship	7	4.9	26.6
Married	93	65.0	91.6
Divorced	11	7.7	99.3
Separated	1	.7	100.0
Total	143	100.0	

4.2.6 Representation of Highest Qualifications

As part of the biographical information 146 respondents indicated their highest qualifications. From the data analyses most respondents had achieved either a Masters Degree (40.1%) or a Doctoral Degree (40.4%). Twenty-one respondents had obtained either a four year Degree or an Honours Degree (14.4%) and six respondents had obtained a Bachelor's Degree (4.1%). Table 4.6 indicates the distribution of the highest qualifications achieved by the respondents.

Table 4.6: Distribution of Highest Qualifications

Highest qualifications	Frequency	Valid Percent	Cumulative Percent
Bachelor's Degree	6	4.1	4.1
4 year Degree or Honours Degree	21	14.4	18.5
Masters Degree	60	41.1	59.6
Doctoral Degree	59	40.4	100.0
Total	146	100.0	

4.2.7 Representation of Job Category

The data analyses indicated that nearly three quarters of the respondents (66.4%) perform work as both a researcher and a lecturer. Thirty-three respondents (23.1%) work exclusively as lecturers, whilst 15 respondents (10.5%) focus only on academic research. Table 4.7 indicates the distribution of respondents within the job categories of the HEI.

Table 4.7: Distribution of Job Categories

Job Category	Frequency	Valid Percent	Cumulative Percent
Academic Researcher	15	10.5	10.5
Academic Lecturer	33	23.1	33.6
Both Researcher and Lecturer	95	66.4	100.0
Total	143	100.0	

4.2.8 Representation of Job Level

As part of the biographical data respondents were also asked to state their current job level. The data reflected that of the 146 respondents the majority were Lecturers (41.1%). Furthermore, 25.5% were Senior Lecturers, 15.1% were Professors and 10.3% were Associate Professors. Twelve of the respondents (8.2%) were Junior Lecturers. Table 4.8 indicates the distribution within the job levels of the respondents.

Table 4.8: Distribution within job level

Job Level	Frequency	Valid Percent	Cumulative Percent
Junior Lecturer	12	8.2	8.2
Lecturer	60	41.1	49.3
Senior Lecturer	37	25.3	74.7
Associate Professor	15	10.3	84.9
Professor	22	15.1	100.0
Total	146	100.0	

4.2.9 Representation of the number of years at HEI's

The study required participants to indicate the total number of years that they had been serving at HEI's. From the data over half of the respondents (60.4%) had been working in the industry for a period of between a few months to ten years. Forty-four of the respondents (29.5%) had been working at HEI's for a period of between 11 to 20 years. Eleven of the respondents (7.4%) had been working at HEI's for a period of between 21 to 30 years, and only four respondents (2.7%) had been in the industry for 31 years or more. Table 4.9 indicates the distribution of the years of service at HEI's.

Table 4.9: Distribution of years of service

Years of Service	Frequency	Valid Percent	Cumulative Percent
0-10	90	60.4	60.4
11-20	44	29.5	89.9
21-30	11	7.4	97.3
31 or more	4	2.7	100.0
Total	149	100.0	

4.2.10 Representation of the number of years in current position

The data revealed that of the 143 responses to the question of the number of years that they had been in their current position, 88.8% indicated that they had been in that particular position for 0 to 10 years. Fifteen respondents (10.5%) had been in their position for 11 to 20 years, and only one respondent (0.7%) had been in their current position for 20 to 30 years. Table 4.10 indicates the distribution of the total number of years spent in the respondents' current positions.

Table 4.10: Distribution of number of years in current position

Years Current Job	Frequency	Valid Percent	Cumulative Percent
0-10	127	88.8	88.8
11-20	15	10.5	99.3
20 -30	1	0.7	100.0

Total	143	100.0
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4.2.11 Representation of the number of hours worked in a week

As a fundamental part of the study, respondents were also asked to state the number of hours they worked in an average working week. Based on the responses of 145 individuals, 38.6% of the respondents work between 41 and 50 hours per week. Thirty-nine respondents (26.9%) work between 31 to 40 hours per week and thirty seven respondents (25.5%) indicated that they work 51 or more hours per week. Five respondents (3.4%) stated that they work between 11 to 20 hours per week, and likewise another five respondents (3.4%) stated that they work between 21 and 30 hour per week. Three respondents (2.1%) indicated that they work less than 10 hours per week. Table 4.11 indicates the distribution of the number of hours respondents work per week.

Table 4.11: Distribution of number of hours worked per week

Hours Work	Frequency	Valid Percent	Cumulative Percent
Up to 10	3	2.1	2.1
11-20	5	3.4	5.5
21-30	5	3.4	9.0
31-40	39	26.9	35.9
41-50	56	38.6	74.5
51 or more	37	25.5	100.0
Total	145	100.0	

4.3 PHASE 2: RESULTS PERTAINING TO THE INSTRUMENTS

Phase two of the results stage is dedicated to the representation regarding key results pertaining to the instruments used in this study.

4.3.1 Introduction

Two measures were used in this study namely, the Job Demands-Resource (JDR) model and the Dispositional Measure for Employability (DME) model. The following section is dedicated to the discussion of the results pertaining to these instruments' adequacy for analysis, factor analyses, reliability and descriptive statistics of the subscales.

4.3.2 Results: Job Characteristics Inventory

The Job Characteristics Scale was used to determine the job demands and job resources of academics in South African Higher Education Institutions. The results are presented in the section that follows. The following section indicates these results.

4.3.3 Sample adequacy and Sphericity

The first step in analyses was to analyse the intercorrelation between variables. In order for the correlation analyses to be reliable, the sample adequacy must also be considered. In order to determine the sample adequacy and the sphericity of the correlations, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were applied. The results of the KMO can be seen in Table 4.12.

Table 4.12: KMO and Bartlett's test of inter-item correlation

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.849
Bartlett's Test of	Approx. Chi-Square	3279.665
Sphericity	df	703
	Sig.	0.000

From Table 4.12 it can be seen that the KMO (0.849) is close to a maximum value of one and indicates a great value. This high KMO value indicates that the pattern of correlation is compact and therefore factor analysis should yield distinct and reliable factors (Field, 2009, 647). Bartlett's test of sphericity which assesses whether the dependent measures are correlated (Bryman & Cramer, 2011, 265) was significant. The implication thereof is that the correlations between variables are significantly different from zero (Field, 2009). The combination of an adequate sample and significant sphericity proves the data suitable for further analysis by means of factor analysis.

4.3.4 Factor Analysis

Exploratory factor analysis using Principal Component Analysis was done on the 45 items of the JCI. The eigen values initially showed that nine factors can be extracted. However, closer inspection of the pattern matrix showed that the items loaded onto three factors. A Principal Component Analysis was conducted again using Direct Oblimin Rotation to specify the three factors. Seven items were excluded from the analyses due to low and problematic factor loadings. The three factors were labelled Job Resources (Factor 1), Workload (Factor 2), and Remuneration (Factor 3). These three factors explain 46.207% of the variance. The complete list of initial Eigenvalues, Extractions and Rotation can be seen in Table 4.13 and Table 4.14.

Table 4.13: Total Variance for JCI explained

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	10.590	27.868	27.868	10.590	27.868	27.868	10.453
2	4.155	10.934	38.802	4.155	10.934	38.802	4.203
3	2.814	7.405	46.207	2.814	7.405	46.207	3.646
4	1.803	4.744	50.951				
5	1.688	4.442	55.393				
6	1.534	4.037	59.430				
7	1.308	3.442	62.872				
8	1.224	3.222	66.094				

9	1.200	3.158	69.252				
10	.949	2.498	71.750				
11	.901	2.371	74.121				
12	.772	2.031	76.152				
13	.691	1.819	77.971				
14	.671	1.766	79.737				
15	.670	1.762	81.499				
16	.613	1.613	83.112				
17	.542	1.425	84.538				
18	.525	1.382	85.920				
19	.454	1.194	87.113				
20	.433	1.140	88.254				
21	.421	1.107	89.361				
22	.395	1.039	90.400				
23	.372	.980	91.380				
24	.338	.889	92.268				
25	.325	.856	93.124				
26	.305	.802	93.926				
27	.295	.777	94.703				
28	.249	.656	95.359				
29	.240	.632	95.991				
30	.236	.622	96.613				
31	.208	.548	97.162				
32	.191	.502	97.663				
33	.181	.476	98.139				
34	.165	.435	98.575				
35	.162	.427	99.001				
36	.147	.388	99.389				
37	.124	.327	99.716				
38	.108	.284	100.000				

Table 4.14: Pattern Matrix^a for JCS

	Component		
	Job Resources	Job Demands	Remuneration
JCI1	-.017	.709	-.135
JCI2	-.050	.769	-.098
JCI4	-.014	.771	.096
JCI5	.078	.575	.046

JCI6	.074	.737	-.034
JCI7	-.010	.717	.009
JCI8	.014	.455	-.054
JCI9	-.185	.632	-.051
JCI12	.493	.260	.106
JCI13	.466	.100	.287
JCI14	.466	.119	.256
JCI15	.656	.078	.083
JCI16	.673	.004	-.255
JCI17	.626	-.033	-.225
JCI18	.641	-.087	-.213
JCI19	.577	-.201	.127
JCI20	.498	-.232	.117
JCI21	.549	-.175	-.051
JCI22	.655	-.223	.049
JCI23	.727	-.122	-.024
JCI24	.735	-.166	.015
JCI25	.608	-.013	.018
JCI26	.482	-.125	-.112
JCI27	.724	.066	-.055
JCI28	.743	-.029	-.018
JCI29	.678	.103	.017
JCI30	.659	.186	.035
JCI31	.608	.116	.040
JCI32	.655	.076	.130
JCI33	.597	.033	.139
JCI34	.740	-.051	.040
JCI35	.813	.039	-.053
JCI36	.529	.192	.110
JCI37	.367	.114	.221
JCI40	-.022	-.101	.803
JCI41	-.094	.027	.836
JCI42	.093	-.137	.827
JCI43	.038	-.104	.722

4.3.5 Second Order Factor Analysis

A second order factor analysis was performed using the Principal Component Analysis extraction method on the three components identified in the primary factor analysis. The purpose of this analysis was to specify the job demands and job resources more clearly. Although the eigen values showed that one factor could be specified, the pattern matrix showed that Job Resources and Remuneration loaded onto one factor and Job Demands onto the second factor. The first factor was labelled Job Resources and the second factor Job Demands. The two factors explained 75.219% of the variance and extraction data can be seen in Table 4.15 and Table 4.16 below.

Table 4.15: Total Variance Explained for JCS

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	1.304	43.455	43.455	1.304	43.455	43.455	1.266
2	.953	31.764	75.219	.953	31.764	75.219	1.017
3	.743	24.781	100.000				

Table 4.16: Pattern Matrix^a for Second Order Factor Analysis

	Component	
	1	2
Job Demands	-.001	.997
JobResources1	.809	.062
JobResources2	.775	-.065

4.3.6 Descriptive Statistics and reliabilities of the JCS

Descriptive statistics were used to describe the data obtained. A total number of 149 valid responses were analysed. The response mean indicated that the respondents perceive Job Demands (3.0621) to be slightly higher than their Job Resources (2.9320). Standard

Deviation ranged from 0.47902 (Job Resources) to 0.53659 (Job Demands), which are both relatively small compared to the mean. Skewness scores range from -0.367 (Job Resources) to -0.2 (Job Demands) indicating that frequent scores were clustered at the higher ends of the distribution. Negative values for Kurtosis indicate that the values are flat and the distribution is light-tailed (Field, 2009). In both cases the z-scores for skewness was smaller than 1.96 indicating that it was not significant (Field, 2009).

The Cronbach's Alpha was 0.833 and 0.930 respectively, indicating good reliability. According to Bryman and Cramer (2011) an alpha coefficient larger than 0.7 is indicative of a reliable measure. Table 4.17 indicates the descriptive statistics for the study. The mean scores also showed that academics experienced a slightly higher level of job Demands than Job Resources. The Job Demands experienced by academics were quite high in the research.

Table 4.17: Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis		Cronbach's Alpha
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
JobDemands	149	3.0621	.53659	-.200	.199	-.801	.395	.833
JobResources	149	2.9320	.47902	-.367	.199	-.172	.395	.930
Valid N (list wise)	149							

4.3.7 Summary Of Results

In conclusion of the statistical analysis of the Job Characteristics (Job Demands and Job Resources), the results can be summarised as follows:

- A KMO value of 0.849 indicates a great value of sample adequacy, and therefore factor analysis should yield distinct and reliable factors. Bartlett's test of sphericity was significant.

- Principal Component Analysis and Oblimin Rotation with Kaiser Normalization were applied to analyse the data. After extraction three factors remained from the original 38, and these three factors explain 46.207% of the variance.
- The second order factor analyses indicated two factors explaining 75.219% of the variance.
- Skewness scores range from -0.367 (Job Resources) to -0.2 (Job Demands) indicating that frequent scores were clustered at the higher ends of the distribution. In both cases the z-scores for skewness was smaller than 1.96 indicating that it was not significant (Field, 2009).
- Negative values for Kurtosis indicate that the values are flat and the distribution is light-tailed.
- The Cronbach's Alpha was 0.833 and 0.930 respectively, indicating good reliability.

4.3.8 Results: Dispositional Measure of Employability

The Dispositional Measure of Employability (DME) was used to determine the work identity, change identity, work and career proactivity, optimism, career motivation and career resilience of academics in South African Higher Education Institutions. The results are presented in the section that follows.

4.3.9 Sample adequacy and Sphericity

Again, the first step in analyses was to analyse the intercorrelation between variables. The reliability of the correlation analyses was measured against the sample adequacy and sphericity of the correlations. The KMO measure of sampling adequacy and Bartlett's test of sphericity were applied and the results can be seen in Table 4.18.

Table 4.18: KMO and Bartlett's test of inter-item correlation

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.811
Bartlett's Test of Sphericity	Approx. Chi-Square	1246.693
	df	210
	Sig.	0.000

Table 4.18 indicates that the KMO of 0.811 is close to a maximum value of one and is therefore satisfactory. This high KMO value indicates that the pattern of correlation is compact and therefore factor analysis should yield distinct and reliable factors (Field, 2009, 647). Bartlett's test of sphericity was significant indicating that the correlations between variables are significantly different from zero (Field, 2009). The combination of an adequate sample and significant sphericity again proved the data to be suitable for further analysis by means of factor analysis.

4.3.10 Factor Analysis

Exploratory factor analysis using Principal Component Analysis was done on the 21 items of the DME. The eigen values initially showed that five factors can be extracted. However, the pattern matrix showed that the items loaded onto three factors. A Principal Component Analyses was conducted, again using Direct Oblimin Rotation to specify the three factors. Five items were excluded from the analyses due to low and problematic factor loadings. The three factors were labelled Change Identity (Factor 1), Proactivity-Optimism (Factor 2), and Resilience-Motivation (Factor 3). These three factors explain 49.025% of the variance. The complete list of initial Eigen values, Extractions and Rotation can be seen in Table 4.19 and Table 4.20.

Table 4.19: Total Variance for DME explained

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.556	31.217	31.217	6.556	31.217	31.217	4.945
2	2.245	10.690	41.907	2.245	10.690	41.907	4.475
3	1.495	7.118	49.025	1.495	7.118	49.025	3.556
4	1.316	6.266	55.291				
5	1.110	5.287	60.579				
6	.977	4.655	65.233				
7	.947	4.511	69.744				
8	.829	3.946	73.690				
9	.774	3.686	77.376				

10	.676	3.220	80.595				
11	.597	2.844	83.439				
12	.552	2.630	86.069				
13	.496	2.364	88.433				
14	.438	2.085	90.518				
15	.384	1.827	92.345				
16	.360	1.715	94.060				
17	.332	1.580	95.641				
18	.262	1.249	96.889				
19	.250	1.189	98.078				
20	.211	1.003	99.081				
21	.193	.919	100.000				

Table 4.20: Pattern Matrix^a for DME

	Component		
	1	2	3
Work Identity	.672	.023	.189
Change	.723	-.068	.147
Work Identity	.556	.249	-.281
Change	.605	-.105	-.219
Work Identity	.619	.118	-.210
Work and Career Proactivity	.257	.147	-.690
Optimism	.015	-.312	-.546
Work and Career Proactivity	-.048	-.190	-.789
Career Motivation	.053	-.630	-.091
Career Resilience	.005	-.599	-.037
Career Resilience	-.063	-.880	.037
Career Resilience	-.037	-.763	-.077
Career Motivation	.313	-.554	.100
Career Resilience	.212	-.467	-.194
Work and Career Proactivity	-.073	-.195	-.712
Work Identity	.372	-.086	-.124
Change	.611	-.051	-.185
Work Identity	.607	-.081	.178
Change	.643	-.173	-.059
Work Identity	.543	-.206	-.130
Career Resilience	.035	-.579	-.046

4.3.11 Descriptive Statistics and reliabilities of the DME

Descriptive statistics were used to describe the data obtained. A total number of 146 valid responses were analysed. The response mean indicated that the respondents perceive Change Identity (5.1282) slightly higher than Proactivity-Optimism (4.8827) and Resilience-Motivation (4.7847). Standard Deviation ranged from 0.49649 (Change Identity) to 0.70304 (Proactivity-Optimism) to 0.72509 (Resilience-Motivation) which were all relatively small deviations compared to the mean values. Skewness range from -0.624 (Resilience-Motivation) to -0.719 (Change Identity) to -0.779 (Proactivity-Optimism). Negative skewness values indicate a build-up of high scores (Field, 2009). Positive values for Kurtosis indicate a pointy and heavy tailed distribution (Field, 2009, 139). Relevant Z-scores for skewness are larger than 1.96 indicating that it is significant.

The Cronbach's Alpha was 0.768, 0.812 and 0.819 indicating a reliable measure (Bryman & Cramer, 2011). Table 4.21 indicates the descriptive statistics for the study. The mean scores also showed that academics experienced a slightly higher level of change identity than resilience-motivation or proactivity-optimism.

Table 4.21: Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis		Cronbach's Alpha
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
ChangeIdentity	149	5.1282	.49649	-.719	.199	2.116	.395	.819
Resilience_Motivation	148	4.7847	.72509	-.624	.199	.867	.396	.812
Proactivity_Optimism	147	4.8827	.70304	-.779	.200	1.449	.397	.768
Valid N (listwise)	146							

4.3.12 Summary Of Results

In conclusion of the statistical analysis of the DME, the results can be summarised as follows:

- A KMO of 0.811 is satisfactory and indicates that the pattern of correlation is compact and therefore factor analysis should yield distinct and reliable factors (Field, 2009, 647). Bartlett's test of sphericity was significant.
- Exploratory factor analysis using Principal Component Analysis was done on the 21 items of the DME. The pattern matrix showed that the items loaded onto three factors. A Principal Component Analyses was conducted again using Direct Oblimin Rotation to specify the three factors. Five items were excluded in the final factor analyses due to problematic factor loadings. The remaining three factors explain 49.025% of the variance.
- Standard Deviation ranged from 0.49649 to 0.72509 which were all relatively small deviations compared to the mean values.
- Skewness range from -0.624 to 0.779. Relevant Z-scores for skewness are larger than 1.96 indicating that it is significant.
- The Cronbach's Alpha was 0.768, 0.812 and 0.819 indicating a reliable measure.

4.4 PHASE 3: HYPOTHESES TESTING

Phase three consists of the presentation of results pertaining to the differences across the dependant variables. The analysis includes the results obtained from a multivariate test (MANOVA) followed by a univariate test (ANOVA) and can be seen in the sections below. In order to answer the research questions stated in this study, five hypotheses were formulated. These hypotheses are:

H₁: There is a negative relationship between job demands and dispositional employability of academic staff.

H₂: There is a positive relationship between job resources and dispositional employability of academic staff in South African Higher Education Institutions.

H₃: There is a significant difference between the academics' perceptions of the current job demands based on their demographic characteristics.

H₄: There is a significant difference between the academics' perceptions of the current job resources based on their demographic characteristics.

H₅: There is no significant difference between the academics' levels of dispositional employability based on their demographic characteristics.

4.4.1 Testing of hypotheses

The results pertaining to these hypotheses through Manova and Anova are discussed below.

4.4.1.1 *Hypothesis 1*

H₁: There is a negative relationship between job demands and dispositional employability of academic staff.

Linear regression was applied to determine the relationship between job demands and the dispositional employability of the academic staff. Table 4.22 lists the results obtained.

Table 4.22: Regression Analysis between Job Demands and Dispositional Employability

Model	Un-standardised Coefficients		Standardised Coefficients	t	P (Sig)	R	R ²	ΔR ²
	B	SE	Beta					
Job Demands and Change-Identity						.168a	0.028	0.022
(Constant)	4.652	0.234		19.894				
Job Demands	0.156	0.075	0.168	2.067	0.04			
Job Demands and Proactivity-Optimism						.045a	0.002	-0.005
(Constant)	4.699	0.341		13.789				
Job Demands	0.06	0.11	0.045	0.548	0.585			
Job Demands and Resilience-Motivation						.082 ^a	.007	.000
(Constant)	5.122	.345		14.834				
Job Demands	-.110	.111	-.082	-.992	.323			

From Table 4.22 the relationship between job demands and DE was interpreted by reviewing the p, Beta and R² values for significance. The table indicates the following results:

- There is a significant positive relationship between Job Demands and Change Identity. The effect was very small.
- There is no significant relationship between the job demands and proactivity-optimism or the resilience-motivation of the academics.

Based on the above results Hypothesis 1 is partially accepted.

4.4.1.2 Hypothesis 2

H₂: There is a positive relationship between job resources and dispositional employability of academic staff in South African Higher Education Institutions

Linear regression was applied to determine the relationship between job resources and the dispositional employability of the academic staff. Table 4.23 lists the results obtained.

Table 4.23: Regression Analysis between Job Resources and Dispositional Employability

Model	Un-standardised Coefficients		Standardised Coefficients	t	P (Sig)	R	R ²	ΔR ²
	B	SE	Beta					
Job Resources and Change-Identity						.097a	0.009	0.003
(Constant)	4.832	0.253		19.119				
Job Resources	0.101	0.085	0.097	1.187	0.237			
Job Resources and Proactivity-Optimism						.323a	0.104	0.098
(Constant)	3.494	0.342		10.206				
Job Resources	0.475	0.115	0.323	4.112	0.00			
Job Resources and Resilience-Motivation						.501 ^a	.251	.246
(Constant)	2.558	.322		7.940	.			
Job Resources	.760	.109	.501	7.001	.000			

From Table 4.23 the relationship between job resources and DE was interpreted by reviewing the p, Beta and R² values for significance. The table indicates the following results:

- There is no significant relationship between Job resources and Change-Identity.
- There is a significant positive relationship between Job resources and Proactivity-Optimism.
- There is a significant positive relationship between Job resources and Resilience-Motivation

Based on the above results Hypothesis 2 is partially accepted.

4.4.1.3 Hypothesis 3 and 4

H₃: There is a significant difference between the academics' perceptions of the current job demands based on their demographic characteristics.

H₄: There is a significant difference between the academics' perceptions of the current job resources based on their demographic characteristics.

Manova tests were run to investigate biographical differences in the JCI results for job demands. Table 4.24 represents the results obtained.

Table 4.24: Results of MANOVA Job Characteristics Inventory results for Job Demands and Job Resources

Biographical Variable	Wilks' Lambda Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	.975	1.828 ^b	2.000	141.000	.165	.025
Ethnicity	.913	2.117 ^b	6.000	274.000	.052	.044
Home Language	.871	4.957 ^b	4.000	278.000	.001	.067
Age	.886	2.129 ^b	8.000	272.000	.033	.059
Qualifications	.931	1.719 ^b	6.000	282.000	.117	.035
Job Level	.872	2.480 ^b	8.000	280.000	.013	.066
Job Category	.984	.562 ^b	4.000	278.000	.691	.008
Years Service	.928	1.838 ^b	6.000	288.000	.092	.037
Years Job	.981	.660 ^b	4.000	278.000	.620	.009
Hours Work	.824	2.801 ^b	10.000	276.000	.003	.092

Table 4.24 shows that statistical significant differences exist only between job demands and ethnicity, home language, age, the respondent's job level and the number of hours they work. No statistically significant differences were found within gender, qualifications, job categories, years in service and the number of years in current positions. Using Wilks's statistic, the results of the statistically significant differences are described below:

- The Wilks's Lambda value (Λ) for ethnicity indicated that there was a significant difference between ethnicity and the dimensions of JCI; $\Lambda = 0.913$, $F(6, 274) = 2.12$, $p > 0.05$. Posthoc tests revealed a significant difference between the job demands

and ethnicity of the respondents. According to the partial eta squared ($\eta^2 = 0.081$) the white ethnic group experiences higher job demands than the black ethnic group.

- The Wilks's Lambda value for home language indicated that there was a significant difference between home language and the dimensions of JCI; $\Lambda = 0.871$, $F(4, 278) = 4.96$, $p < 0.05$. Posthoc results show partial eta squared as $\eta^2 = 0.117$. According to the results, respondents speaking either Afrikaans or English experience higher job demands than respondents speaking indigenous languages.
- The Wilks's Lambda value for age indicated that there was a significant difference between the respondents' age and the dimensions of JCI; $\Lambda = 0.886$, $F(8, 272) = 2.13$, $p < 0.05$. The partial eta squared value ($\eta^2 = 0.097$) indicates a significant relationship between the age of the respondents and their job demands. The average scores for the age group 50 to 59 are higher than that of the age group 20 to 29 with regard to their job demands. Therefore based on a significant effect size of $p = 0.031$ the age group 50 to 59 experience higher job demands compared to that of the age group 20-29.
- The Wilks's Lambda value for job level indicated that there was a significant difference between the job levels of the respondents and the dimensions of JCI; $\Lambda = 0.872$, $F(8, 280) = 2.48$, $p < 0.05$. Analysis of each dependent variable showed that the job level groups differed in terms of their job demands: $p < 0.05$, partial $\eta^2 = 0.066$. Posthoc results indicate a partial eta square of $\eta^2 = 0.088$ and $p = 0.011$. According to these results associate professors experience higher job demands than junior lecturers.
- The Wilks's Lambda value for hours of work indicated that there was a significant difference between the working hours of the respondents and the dimensions of JCI; $\Lambda = 0.824$, $F(10, 276) = 2.801$, $p < 0.05$. According to the posthoc results there is a significant difference ($p = 0.002$) between the job demands and the hours worked. Posthoc results indicate a partial eta square of $\eta^2 = 0.127$. According to the results there are more respondents working either between 41 to 50 or more than 51 hours compared to respondents who work between 31 to 40 hours.

Statistical results indicate that there was no significant relationship between the academics' perception of their job resources and their demographic characteristics.

Based on the above results Hypothesis 3 is partially accepted. Hypothesis 4 is rejected.

4.4.1.4 Hypothesis 5

H₅: There is no significant difference between the academics' levels of dispositional employability based on their demographic characteristics.

Manova tests were also run to investigate biographical differences in the DME results. Table 4.25 represents the results obtained.

Table 4.25: Results of MANOVA Dispositional Measure of Employability results

Biographical Variable	Wilks' Lambda Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	.975	1.177 ^b	3.000	138.000	.321	.025
Ethnicity	.839	2.693	9.000	323.838	.005	.057
Home Language	.907	2.252 ^b	6.000	270.000	.039	.048
Age	.898	1.211	12.000	349.531	.273	.035
Qualifications	.938	.987	9.000	333.573	.450	.021
Job Level	.892	1.324	12.000	360.114	.202	.037
Job Category	.894	2.593 ^b	6.000	270.000	.018	.054
Years Service	.867	2.288	9.000	340.874	.017	.046
Years Job	.953	1.087 ^b	6.000	270.000	.371	.024
Hours Work	.815	1.900	15.000	370.316	.022	.066

As indicated by Table 4.25 statistically significant differences only exist between ethnicity, home language, job category, years in service, and hours of work. No statistically significant differences were found within gender, age, qualifications, job level or years in the current position. Using Wilks's statistic, the results of the statistically significant differences are described below:

- The Wilks's Lambda value (Λ) for ethnicity indicated that there was a significant difference between ethnicity and the dimensions of DME; $\Lambda = 0.839$, $F(9, 323.8) = 2.7$, $p < 0.05$. Posthoc results indicate a partial eta squared of $\eta^2 = 0.57$ and a significant difference of $p = 0.005$ between ethnicity and the resilience and

motivation of the respondents. According to the results the black ethnic group indicates higher levels of resilience and motivation compared to the other ethnic groups.

- The Wilks's Lambda value for home language indicated that there was a significant difference between home language and the dimensions of DME; $\Lambda = 0.907$, $F(6, 270) = 2.25$, $P < 0.05$. Posthoc results indicate a partial eta squared of $\eta^2 = 0.048$ and a significant difference of $p = 0.007$. According to the results language group three (indigenous languages) have higher levels of resilience compared to the other two language groups.
- The Wilks's Lambda value for job category indicated that there was a significant difference between the job categories of the respondents and the dimensions of DME; $\Lambda = 0.894$, $F(6, 270) = 2.6$, $P < 0.05$. Posthoc results indicate a partial eta squared value of $\eta^2 = 0.054$ with a significant difference of $p = 0.018$. According to the results there are no further significant differences to change identity. Job category three which includes academics that function as both researchers and lecturers, have higher levels of career proactivity compared to the academics that function only as a researcher or lecturer.
- The Wilks's Lambda value for years in service indicated that there was a significant difference between the years of service and the dimensions of DME; $\Lambda = 0.867$, $F(9, 340.87) = 2.29$, $p < 0.05$. Posthoc results of $\eta^2 = 0.046$ and $p = 0.017$ indicate that respondents that have been in the industry for between zero to 10 years have a higher level of resilience compared to the respondents who have served for longer.
- The Wilks's Lambda value for hours of work indicated that there was a significant difference between the number of hours the respondents work and the dimensions of DME; $\Lambda = 0.815$, $F(15, 370.32) = 1.9$, $p < 0.05$. Posthoc results indicate a partial eta squared value of $\eta^2 = 0.066$ and a significant difference of $p = 0.022$. According to the results the working hours of group four (between 31 to 40 hours) show higher levels of resilience compared to the other groups.

Based on the above results Hypothesis 5 is partially accepted.

CHAPTER 5: ANALYSIS AND INTERPRETATION

For the purposes of this study five hypotheses were formulated to analyse the relationship between job demands, job resources and dispositional employability. Chapter 5 is dedicated to the analysis and interpretation of the results depicted in Chapter 4. An interpretation of the results for each hypothesis will now be discussed.

5.1.1.1 *There is a negative relationship between job demands and dispositional employability of academic staff*

Field (2009) states that in order to determine the significance of a regression analysis and determine the predicting value of a relationship, one must consider two principles: firstly in order for a relationship to be seen as significant the p value must be equal to or smaller than 0.05, secondly, the combination of a large t-value and a small p-value identifies the predictability of the relationship. In a study by Mostert et al. (2008) they found that academics experienced unmanageable workloads that lead to work stress and weakened commitment to their work. In a study done by Wolhuter, Vander Walt, Higgs and Higgs (2007), however, they found that, despite an ever-changing and transforming environment, academics did not perceive this to be a grave obstacle for them. This could indicate a positive openness to change. They were however not willing to produce more research or perform other academic services. In return this could indicate a low proactivity or even career motivation. According to De Bruin and Taylor (2005) the physical workload of academics in South Africa has increased due to factors that include the restructuring of HE to reduce the number of HEI's. Mostert, Rothmann, Mostert and Nell (2008) found that academics experienced unmanageable workloads that lead to work stress and weakened commitment to their work (Mostert et al., 2008). According to Bezuidenhout and Cilliers (2010) academics in South Africa are hard-pressed to increase their research output, manage larger classes as lecturers, as well as supervise postgraduate students.

From the results only the relationship between job demands and the change identity of the academics were significant ($p = 0.04$). Furthermore a t-value of 2.067 indicates that job demands do act as a predictor of the dispositional employability of academics in terms of their change identity. However the Beta coefficients indicated that only the relationship

between job demands and resilience-motivation was negative. It can therefore be said that the job demands of an individual can have a negative impact on the resilience and motivation of an academic employee.

Based on this the H₁ hypothesis (*There is a negative relationship between job demands and dispositional employability of academic staff*) is partially rejected.

5.1.1.2 *There is a positive relationship between job resources and dispositional employability of academic staff in South African Higher Education Institutions*

Barkhuizen and Rothmann (2008) state that previous studies have highlighted that a lack of the necessary resources such as: promotional opportunities, recognition, adequate salaries, specific job roles, sufficient management, participation in management, as well as inadequate funding, job insecurity, inequality in systems, and regular feedback may induce stress in academic employees. These stressors may influence the DE of academics. Mostert et al. (2008) found that current job resources available to academics inhibit them from achieving their targets and performing their work optimally. Mostert et al. describes in their study that academics that experienced a lack of job control or autonomy had greater stress that resulted in decreased commitment and even disengagement. Mostert et al. (2008) found that in many cases the feedback given to academics causes increased frustration that in return results in increased withdrawal (Mostert et al., 2008). Netswera et al. (2005) found that academics are forced to work on administrative tasks that prevent them from focussing on research. Netswera et al. emphasise that academics require stimulating opportunities for growth and development to prevent them from seeking alternative opportunities.

From the regression analysis there was no significant relationship between the job resources and the dispositional employability of the academics. All of the dimensions of DE had a positive relationship with job resources. Although the dimensions of DE had a positive relationship with job resources the results were not significant.

Based on this the H₂ hypothesis (*There is a positive relationship between job resources and dispositional employability of academic staff in South African Higher Education Institutions*) is rejected.

5.1.1.3 *Hypotheses 3 and 4: There is a significant difference between the academics' perceptions of the current job demands based on their demographic characteristics, and, there is a significant difference between the academics' perceptions of the current job resources based on their demographic characteristics*

The academic sector includes individuals of different genders, ages, ethnicities, languages, job levels etcetera. In a study conducted by Doyle and Hind (as cited by De Bruin & Taylor, 2005) results indicated that female academics experienced higher levels of stress than their male counterparts. In another study, Bezuidenhout and Cilliers (2010) found that lower academic levels, which are predominantly filled by female employees, experience more stress. According to Bezuidenhout and Cilliers, female academics have reverted to 'personal detachment' in order to guard themselves against feeling depleted. In contrast Barkhuizen and Rothmann (2008) found that there is no significant difference between the occupational stress experienced by men and women.

With regard to hypotheses 3 (there is a significant difference between the academics' perceptions of the current job demands based on their demographic characteristics) Manova tests indicated that there was a statistically significant relationship between job demands and the ethnicity ($p = 0.052$), home language ($p = 0.001$), age ($p = 0.033$), the respondent's job level ($p = 0.013$) and the number of hours they work ($p = 0.003$). No statistically significant differences were found within gender, qualifications, job categories, years in service and the number of years in current positions. Further tests showed that according to the partial eta squared ($\eta^2 = 0.081$) the white ethnic group experiences higher job demands than the black ethnic group. According to the results, respondents speaking either Afrikaans or English experience higher job demands than respondents speaking indigenous languages. A significant effect size of $p = 0.031$ indicated that the age group 50 to 59 experience higher job demands compared to that of the age group 20-29. Associate professors experience higher job demands than junior lecturers ($\eta^2 = 0.088$, $p =$

0.011). According to the results there are more respondents working either between 41 to 50 or more than 51 hours compared to respondents who work between 31 to 40 hours. According to the statistical research, previous literature concurs with the fact that there is a significant relationship between job demands, age, job level and the number of hours they work. In contrast to the statement of Doyle and Hind (as cited by De Bruin & Taylor, 2005) female academics experience higher levels of stress than their male counterparts, the study showed no significant relationship between job demands and gender.

Based on this the H₃ hypothesis (*There is a significant difference between the academics' perceptions of the current job demands based on their demographic characteristics*) is partially accepted.

With regard to hypotheses 4 (there is a significant difference between the academics' perceptions of the current job resources based on their demographic characteristics) Manova tests revealed that there was no significant relationship between the academics' perception of their job resources and their demographic characteristics.

Based on this the H₄ hypothesis (*There is a significant difference between the academics' perceptions of the current job resources based on their demographic characteristics*) is rejected.

5.1.1.4 *There is no significant difference between the academics' levels of dispositional employability based on their demographic characteristics*

Barkhuizen and Rothmann (2008) state that in the academic sector older academics experience greater workload and consequently greater pressure, but have developed more coping mechanisms that allow them to be less stressed than their younger counterparts. Winefield et al. (as cited by Barkhuizen & Rothmann, 2008) found that academics' working hours increased with their job level. Mostert et al. (2008, p. 121) state that factors such as job resources, job control, communication and relationships at work have a direct impact on the engagement (commitment) of academics, which in return could influence the employee turnover as well as their "discretionary effort" at work. A lack of "discretionary effort" could indicate a lack of proactive and reactive behaviour and

therefore a decrease in dispositional employability. According to Arnold (2005, as cited by Mostert et al., 2008) low organisational commitment could have an impact on the performance of the employees. In a study done by Wolhuter, Vander Walt, Higgs and Higgs (2007) they found that despite an ever-changing and transforming environment, academics did not perceive this to be a grave obstacle for them. This could indicate a positive openness to change. Furthermore Wolhuter et al. found that despite the fact that academics did not indicate that their work environment became more difficult, they were not willing to produce more research or perform other academic services. In return this could indicate a low proactivity or even career motivation. Bezuidenhout and Cilliers (2010) found that, based on an increase of personal guidance needed by students due to the larger class sizes, female academics have reverted to a state of 'personal detachment' in order to guard themselves against feeling depleted.

Manova tests revealed that statistically significant differences only exist between the DE of the academics and their ethnicity ($p = 0.005$), home language ($p = 0.039$), job category ($p = 0.018$), years in service ($p = 0.017$), and hours of work ($p = 0.022$). No statistically significant differences were found within gender, age, qualifications, job level or years in the current position. Furthermore results revealed that the black ethnic group indicates higher levels of resilience and motivation compared to the other ethnic groups, and indigenous languages have higher levels of resilience compared to the other two language groups. Academics that function as both researchers and lecturers have higher levels of career proactivity, compared to the academics that function only as a researcher or lecturer. Respondents that have been in the industry for between zero to 10 years have a higher level of resilience compared to the respondents who have served for longer. The working hours of group four (between 31 to 40 hours) show higher levels of resilience compared to the other groups.

Based on this the H_5 hypothesis (*There is no significant difference between the academics' levels of dispositional employability based on their demographic characteristics*) is partially rejected.

5.2 CONCLUSION

In this section the hypothesis statements outlined in this study were either rejected or accepted based on the results obtained through statistical analysis. Based on these hypotheses certain conclusions can be made regarding the study and will be discussed in Chapter 6.

CHAPTER 6: CONCLUSION, LIMITATIONS, AND RECOMMENDATIONS

6.1 INTRODUCTION

In conclusion to this research study, chapter 6 is dedicated to an inclusive summary of the results as well as highlighting the most significant findings of the study. Furthermore the limitations of the study will be discussed and recommendations for future research will be identified.

6.2 OVERVIEW OF THE STUDY

The following section provides an overview of the study as a whole. The purpose of the study, initial research objectives and research question are reiterated before being drawn together with an overview of the content of the study.

6.2.1 Purpose of the Study

The purpose of this study is to determine what impact the relationship between job demands and job resources has on the employability of academics in South Africa.

6.2.2 Research Objectives

This study was guided by the following research objectives:

Main objective

- To investigate whether job demands and resources are significant predictors of dispositional employability of academics in South Africa.

Secondary objectives

- To determine the current job demands experienced by academics in South Africa.
- To determine the current job resources experienced by academics in South Africa.
- To determine the current dispositional employability of academics in South Africa.

- To determine whether job demands are a statistically significant predictor of dispositional employability of academics in South Africa.
- To determine whether job resources are a statistically significant predictor of dispositional employability of academics in South Africa.
- To determine whether there are any significant differences in the academics' perceptions of the current job demands based on their demographic characteristics?
- To determine whether there are any significant differences in the academics' perceptions of the current job resources based on their demographic characteristics?
- To determine whether there any significant differences in the academics' levels of dispositional employability based on their demographic characteristics?

6.3 RESEARCH QUESTION

These research objectives included answering the following research questions:

- What is the current level of job demands experienced by academics in South African Higher Education Institutions?
- What is the current level of job resources experienced by academics in South African Higher Education Institutions?
- What is the current level of dispositional employability of academics in South African Higher Education Institutions?
- What is the relationship between job demands and dispositional employability of academics in South African Higher Education Institutions?
- What is the relationship between job resources and dispositional employability of academics in South African Higher Education Institutions?
- Are there any significant differences in the academics' perceptions of the current job demands based on their demographic characteristics?
- Are there any significant differences in the academics' perceptions of the current job resources based on their demographic characteristics?
- Are there any significant differences in the academics' levels of dispositional employability based on their demographic characteristics?

6.3.1 Content of the Study

The complete content of the research study was discussed in six separate chapters dedicated to a specific function and/or phase in the research process. The following section provides a brief summary of each chapter and its purpose.

Chapter 1: Introduction

In chapter one the researcher explained the background of the study. In this chapter the problem statement of the study as well as the research objectives were highlighted and explained. Furthermore the researcher explained the academic value and intention of the study as well as the assumptions made regarding the environment and target group. Chapter one defined all the key terms that were used throughout the document.

Chapter 2: Literature review

The second chapter was dedicated to an in-depth review of the existing body of knowledge related to this specific research study. The existing literature with regard to employability, dispositional employability, higher education as well as the link between job demands and job resources was discussed.

Chapter 3: Research design and methodology

Chapter three provided a detailed description of the research design and methodology used in this study. Within this chapter, seven key issues regarding research design and methodology were explained and described. These issues included a detailed description of the strategy of inquiry used in the study, the sampling methods used to extract data from the population, the data collection methods used to collect data, the data analysis process, assessing and demonstrating quality and rigour throughout the study and the research ethics involved in survey research and relevant to this specific study.

Chapter 4: Presentation of results

The fourth chapter was dedicated to the complete presentation of all the results obtained through statistical analysis. The chapter is divided into three phases namely: the biographical results of the study, the results pertaining to the instruments, results

pertaining to the MANOVA and ANOVA tests run, as well as the results pertaining to the hypotheses testing.

Chapter 5: Analysis and interpretation

In chapter five the researcher analysed and interpreted the results according to the stated hypotheses so as to provide a meaningful whole of all the information received. In this chapter the hypotheses were either accepted or rejected based on the results of the study.

Chapter 6: Conclusion, limitations and recommendations

Lastly chapter six provided the reader with the conclusions that the researcher has drawn from all the information obtained and analysed. In this chapter the researcher highlights the limitations of the study and also provides the reader with recommendations for future studies.

6.4 CONCLUSIONS DRAWN FROM THE STUDY

The following section provides an overview of the conclusions drawn from the study. This includes conclusions regarding the existing body of knowledge as well as the results from statistical analyses.

6.4.1 Conclusions from the Literature

The following conclusions can be drawn from the existing literature:

- Working conditions can be categorised into two areas namely; job demands and job resources. According to Demerouti et al (2001) these two areas are related to specific human characteristics. According to the JD-R model, job demands are predominantly correlated to exhaustion (burnout) and job resources, or rather the lack thereof, is correlated to disengagement. According to the JD-R model; when job demands are high and job resources are low, employees exert excessive energy to cope, which has a negative effect on motivation. Consequently burnout and/or disengagement are valid concerns.

- Increased work demands stretch the coping skills of an individual to such an extent that it reduces the personal adaptability of the individual (O’Connell, McNeely and Hall, 2008). O’Connell et al (2008) show in their study that work demands do not relate to personal adaptability, but that managerial support shows a strong correlation. According to this study helpful interaction on the job, from supervisors and peers, plays a positive role in personal adaptability (O’Connell, 2008). Furthermore this study indicates that employees should be provided with the resources necessary to follow the organisational vision, and facilitate coping.
- The most basic level of employability can be defined as the knowledge, skills and abilities (KSAs) (Fugate, 2008) an individual possesses in order to fulfil a particular role in a working context. Thijssen, Van der Heijd and Rocco (2008) simply describe it as the ability of an individual to survive in the internal and external labour market. Fugate (2008) describes that employability is furthermore the specific characteristic that enables an individual to bridge the gap between their individual reality, and their environment. When an individual is employable they retain the ability to overcome any obstacles in the gap between their life and environment. Thijssen et al (2008) elaborates that employability places focus on a number of characteristics such as skill and competence, physical and cognitive suitability, flexibility, adaptability and many other characteristics that all refer to employment as the outcome.
- The concept of employability embraces the assumption that employees should take initiative, and self-manage their careers and skills in order to be able to cope in the modern world (Thijssen et al, 2008). Researchers agree on the fact that it is essential for employees to adapt and change with their working environment in order to survive (Fugate, 2008).
- Dispositional employability (DE) is described as the collection of individual differences in an individual’s character, which influences and enables them to proactively adapt to situations specific to work and career (Fugate, 2008). Fugate (2008) explains that dispositional employability possesses both proactive and reactive characteristics. O’Connell, McNeely and Hall (2008) describe adaptability as the capacity to change together with the motivation to do so. O’Connell et al (2008) explain that, although

many believe adaptability to be an innate personality attribute or characteristic (a disposition), others view it as a malleable attribute that can be enhanced. They argue that adaptability is however dependent on a number of internal and external elements.

- Fugate and Kinicki (2008) state that dispositional employability can be described in terms of an individual's openness to changes at work , work and career resilience, work and career proactivity, career motivation and work integrity The developers of the Dispositional Measure of Employability (DME) , Fugate and Kinicki, acknowledge that there are many potential characteristics in the human composition that foster success, but have deemed the abovementioned dimensions as critical in dispositional employability. They have further refined these dimensions since their early work in 2004. The elements and attributes of each dimension are described as follows:
- When linking the JD-R and DME models it forms a logical concept; linking what is required of the employee with the way in which the individual adapts and handles these requirements. The significance of the combined model can be anticipated by similar studies evaluating different aspects of DE. In a study done by De Cuyper, Mauno, Kinnunen and Makikangas (2011) results showed that the relationship between perceived employability and turnover was higher when job resources were limited.
- Mouton (2007, as cited by Geber, 2009) states that the South African doctoral completion rate and the rate at which we add research to the existing body of knowledge are congruent with international development.
- In 2004 numerous mergers and changes in the HE environment in South Africa decreased the number of HEI's from 36 institutions to 23 (De Villiers & Steyn, 2009). Ntshoe et al. (2008) state that the HE sector has experienced significant changes due to factors such as globalisation, managerialism and neo-liberalism. According to Ntshoe et al. these changes have become prevalent through increases in student enrolment, increases in entrepreneurship, changes in funding and accountability, increased importance of performance-based incentives and increased emphasis on the efficiency of HE staff. Furthermore post-apartheid legislative and procedural changes

have also influenced HEI's in their identities, staff balance, student populations, policies and procedures (Portnoi, 2009).

- De Villiers and Steyn (2009) state that state funding of higher education (HE) in South Africa has decreased substantially over the past two decades, forcing HEI's to generate funds through alternative routes. These alternative routes include increasing tuition fees and generating a third income through earmarked research allocations, contract research and philanthropic contributions (De Villiers & Steyn, 2009). De Villiers and Steyn (2009) state that due to the decrease in state funding, the increase of academic staff in HE was not equivalent to the increase in the number of students enrolling per year.
- The number of students per instruction/research staff member has increased significantly. According to Ntshoe et al. (2008) academics have in many cases found it necessary to abandon their initial core business functions in order to give attention to miscellaneous tasks given to them which have increased the pressure on them to perform (Ntshoe et al., 2008, De Villiers & Steyn, 2009). In addition and in concurrence with globalisation and growing competitiveness, academics have been obstructed by the complexities of university work and the distortion of roles, all of which in many cases lead to low morale (Ntshoe et al, 2008). Le Grange (2008) adds that in addition to increases in pressure to perform, there is also a growing awareness and requirement of HEI's to be at the forefront of creating sustainable education or environmental footprints (Le Grange, 2008). As an outflow of this responsibility Le Grange argues that HEI's have an increased pressure upon them to host both national and international conventions and/or seminars to emphasise the principles and actions of environmental education. Furthermore, Kaniki et al (2008) state that the National Research Foundation (NRF) of South Africa rates researchers according to peer reviews and the impact of the work. According to literature, there is therefore an increased pressure on academics to perform with both the outputs of the students enrolled at the institution and their individual goals of publishing research. In contrast to the opinion that the pressures placed on academics have a negative influence, De Villiers and Steyn (2009) however, highlight that these challenges have lead to increased efficiency within the academic field.

- One proposed method to assist academics, especially in their early entry years, is the institutionalisation of coaching and mentoring programmes (Geber, 2009). The University of the Witwatersrand has already taken measures to aid their academics and increase productivity of research through a “Research Success and Structured Support” programme (Gerber, 2009, p 680) that assists academics with their career development expectations, expectations regarding establishing a publication record and other personal development expectations.
- Based on literature HEI’s have been experiencing numerous fundamental changes that have placed them and their employees under enormous pressure to perform. From literature it would seem as if the increase in job demands is not always accompanied by an increase in job resources.

6.4.2 Conclusions from Statistical Analysis

Statistical analysis of the data obtained revealed the following results:

- There is a significant relationship between job demands and the change identity of the academics ($p = 0.04$). A t-value of 2.067 indicates that job demands do act as a predictor of the dispositional employability of academics in terms of their change identity.
- There is no significant relationship between the job resources and the dispositional employability of the academics. All of the dimensions of DE had a positive relationship with job resources.
- There is a significant relationship between job demands and the ethnicity ($p = 0.052$), home language ($p = 0.001$), age ($p = 0.033$), the respondent’s job level ($p = 0.013$) and the number of hours they work ($p = 0.003$). No statistically significant differences were found within gender, qualifications, job categories, years in service and the number of years in current positions.

- According to the partial eta squared ($\eta^2 = 0.081$) the white ethnic group experiences higher job demands than the black ethnic group. Furthermore respondents speaking either Afrikaans or English experience higher job demands than respondents speaking indigenous languages.
- A significant effect size of $p = 0.031$ indicated that the age group 50 to 59 experience higher job demands compared to that of the age group 20-29.
- Associate professors experience higher job demands than junior lecturers ($\eta^2 = 0.088$, $p = 0.011$).
- There is no significant relationship between the academics' perception of their job resources and their demographic characteristics.
- There is a significant differences between the DE of the academics and their ethnicity ($p = 0.005$), home language ($p = 0.039$), job category ($p = 0.018$), years in service ($p = 0.017$), and hours of work ($p = 0.022$). No statistically significant differences were found within gender, age, qualifications, job level or years in the current position.
- The Black ethnic group indicates higher levels of resilience and motivation compared to the other ethnic groups, and indigenous languages have higher levels of resilience compared to the other two language groups.
- Academics that function as both researchers and lecturers have higher levels of career proactivity compared to the academics that function only as a researcher or lecturer.
- Respondents that have been in the industry for between zero to 10 years have a higher level of resilience compared to the respondents who have served for longer. The working hours of group four (between 31 to 40 hours) show higher levels of resilience compared to the other groups.

6.5 LIMITATIONS

The following section discussed the limitations of the study below.

6.5.1 Limitations as A Result of the Research Design

This quantitative study used cross-sectional survey research to obtain data from the population. According to Greenstein (2006) one of the limitations of quantitative research includes the fact that quantitative research is a structured approach to collecting information. The limitation thereof lies in that the researcher is confronted by the risk of omitting any information that is not specifically collected by the instruments used.

Two self-administered questionnaires were issued at a single point of time and over a short period of time. This study therefore has only a photograph image of the job demands and job resources of academics, as well as their dispositional employability. In order to establish a pattern, this survey will have to be run at random future intervals in order to prove the results as a consequent occurrence in the industry. Based on literature, the HE sector has experienced numerous exigent challenges including globalisation, managerialism, neo-liberalism as well as transformational policies and procedures (Portnoi, 2009, Ntshoe et al., 2008). Based on these transformations and challenges, research on the subject of job demands-job resources and dispositional employability of academics in South Africa will need to keep the possible influence of these external factors on the results of the study in mind. The extended nature of a longitudinal study (Babbie, 2008) might eradicate the effects of external influences on the core research question and increase the validity of the study.

6.5.2 Limitations as A Result of the Data Collection Method

Two self-administered questionnaires were distributed to the target group. The use of mailed questionnaires limited the researcher to individuals who firstly have valid email addresses (Greenstein, 2006), and secondly regularly use their email. On the other hand, written questionnaires possess a limitation due to fluency of the target population (Greenstein, 2006). All members of the population had easy access to a computer and the internet and therefore there were no immediate obstacles regarding the accessibility of the

population. The data collection instruments themselves did not hold significant limitations as the JCI had indicated acceptable Cronbach Alpha Coefficients in South African studies (Barkhuizen & Rothmann, 2005). Furthermore the DME was developed by Fugate and Kinicki (2008) after extensive analysis with regard to construct and predictive validity.

6.5.3 Limitations as A Result of the Sampling Method

Due to the large size of this group, convenience sampling was used to sample the units for analysis. This method of sampling involved selecting units from the population that were easy to obtain and conveniently available (Maree, 2010). Convenience sampling is the most feasible approach to sampling in a study of this size and nature. Participation in this research study was not compulsory for the academics of South Africa; therefore the researcher relied on convenience sampling based on the willingness of academics to partake in this survey. A great threat to the external validity of this study was the use of convenience sampling. The main obstacle proved to be the willingness of employees to participate in the study. The target group was given a time frame of two weeks to complete the questionnaires and email the responses back to the researcher.

6.5.4 Limitations as A Result of the Sample Size and Characteristics

According to Maree (2010) the main concern with a sample size is to ensure that the sample size is large enough to represent the whole population. The degree to which the sample size represents the sub groups of the population has a direct impact on the validity of the study. Marsden and Wright (2010) explain that the sensitivity of a study, that is; the precision of the statistics and the accuracy of the generalisations, is increased by the size of the sample. A large sample therefore decreases sampling errors. A total of 360 questionnaires were sent out to the sample of which 158 completed questionnaires were received but only 146 of these responses were usable for data analyses. These results indicate that less than half of the requests for participation in the survey returned their survey. Given the size of the academic field, an increased sample size would have increased the validity of the study.

6.6 RECOMMENDATIONS FOR FUTURE RESEARCH

The results of this study have identified a few key concepts that will need additional elucidating research. Given the limited research on the dispositional employability of academics in South Africa, further specific research must be done in order to validate the DE of academics in South Africa. In order to enrich the topic, research on the relationships within biographical variables, DE and JD-R must also be expanded. Steps can be taken to encourage a greater sample size to improve validity.

6.7 CLOSING REMARKS

Great progress has been made in terms of creating awareness of the true job demands and job resources of academics, and more specifically academics in South Africa. However, research must still be done to establish the exact relationship between dispositional employability and the JD-R model, as well as the relationship between individual biographical variables, DE and JD-R. The diversity of the South African population creates an ideal environment for expanding on this topic and developing sustainable interventions.

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APPENDIX A

- 1st draft of data collection instrument(-s) -

Dispositional Measure of Employability

Dear Participant,

Thank you for taking the time to voluntarily participate in the following questionnaire. Your response will remain completely anonymous and will adhere to the terms specified in the consent form. Biographical information is for documenting purposes only and will be handle as such.

The entire questionnaire should not take longer than 10 minutes to complete. Please answer all the questions and answer as honestly and truthfully as possible.

Thank you!

Kind Regards,
Estee Roodt

Questionnaire

A: Biographical information:

Gender	
Highest level of education	
Home Language	
Current Job Title	
Current Job Level	
Period employed in current position	
Previous experience in HE industry (Time, position and level)	

B: Dispositional Employability Questionnaire

We are interested in how you feel about your job your job opportunities and your career in general. Please indicate to what extend each of the following describes you.

Meaning of the scale:

- 1: Strongly disagree

- 2: Disagree
- 3: Neutral
- 4: Agree
- 5: Strongly Agree

Please indicate your response by placing a **cross** in the applicable block next to the statement as is shown in the example question with regard to the meaning of the scale given above.

NR	Statement	1	2	3	4	5
Example						
ex	I generally feel happy with what I do					X
Start of Questionnaire						
1	I feel changes at work generally have positive implications.					
2	I feel that I am generally accepting of changes at work.					
3	I would consider myself open to changes at work.					
4	I can handle job and organizational changes effectively.					
5	I am able to adapt to changing circumstances at work.					
6	I stay abreast of developments in my company.					
7	I stay abreast of developments in my industry.					
8	I stay abreast of developments relating to my type of job.					
9	I have participated in training or schooling that will help me reach my career goals.					
10	I have a specific plan for achieving my career goals.					
11	I have sought job assignments that will help me obtain my career goals.					
12	I am optimistic about my future career opportunities.					
13	I feel I am a valuable employee at work.					
14	I have control over my career opportunities.					
15	My past career experiences have been generally positive.					
16	I take a positive attitude toward my work.					
17	In uncertain times at work, I usually expect the best.					
18	I always look on the bright side of things at work.					
19	I am a believer that "every cloud has a silver lining" at work.					
20	I define myself by the work I do.					
21	I am involved in my work.					
22	It is important to me that other think highly of my job.					
23	It is important to me that I am successful in my job.					
24	The type of work I do is important to me.					
25	It is important to me that I am acknowledged for my successes on the job.					

APPENDIX B
- Informed consent form -



Informed consent for participation in an academic research study

Dept. of Human Resources Management

JOB DEMANDS AND JOB RESOURCES AS PREDICTORS OF DISPOSITIONAL EMPLOYABILITY OF ACADEMICS IN SOUTH AFRICA

Research conducted by:

Ms E. Roodt (23009897)
Cell: 076 832 5226

Dear Respondent

You are invited to participate in an academic research study conducted by Estee Roodt, a Masters student from the Department Human Resources Management at the University of Pretoria.

The purpose of the study is to evaluate and determine whether the combination of job demands and job resources in the Higher Education Institutions in South Africa can influence and/or predict the employability of academics in higher education.

Please note the following:

- This study involves an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
- Your participation in this study is very important to us. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer the questions in the attached questionnaire as completely and honestly as possible. This should not take more than 20 minutes of your time
- The results of the study will be used for academic purposes only and may be published in an academic journal. We will provide you with a summary of our findings on request.
- Please contact my supervisor, Dr. Nicolene Barkhuizen on 082 456 9352 or email nbarkhuizen@gmail.com if you have any questions or comments regarding the study.

Please sign the form to indicate that:

- You have read and understand the information provided above.
- You give your consent to participate in the study on a voluntary basis.

Respondent's signature

Date