PERCEPTIONS OF JOB CHARACTERISTICS, JOB SATISFACTION AND ORGANISATIONAL COMMITMENT OF E-TUTORS AT A SOUTH AFRICAN ODL UNIVERSITY

by

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DECLARATION

Student number: 44195877

I declare that **PERCEPTIONS OF JOB CHARACTERISTICS, JOB SATISFACTION AND ORGANISATIONAL COMMITMENT OF E-TUTORS AT A SOUTH AFRICAN ODL UNIVERSITY** is my own work and that all sources which I have used or quoted have been indicated and acknowledged by means of complete references.

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Matumelo Dorothy Kola

October / 2018
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Date

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I cannot place a value on the amount of growth I have gained through the Graduate Development Programme. I remain indebted! Thanks to the anchors of the programme, Professor Annemarie Davis and Ms Bongiwe Hobololo. Moreover, my journey into research was initiated by the Institute for Open and Distance Learning (IODL) and has been truly illuminating! Once more, no price can be placed on the experience gained and the research knowledge shared through the searchlight workshops.

My mother is an amazing woman. She never went far with her education, but through her wisdom and faith in God, she persuaded me and my siblings to value education, and it worked! I feel overwhelmed and tearful! Thank you '*ma*' for your loving and caring spirit, something that my father and siblings can attest! Above all, thank you for raising me!

I believe these acknowledgements should have a dissertation of their own; if I have omitted anyone, please receive my apology.

Glory be to God!

ABSRACT

PERCEPTIONS OF JOB CHARACTERISTICS, JOB SATISFACTION AND ORGANISATIONAL COMMITMENT OF E-TUTORS AT A SOUTH AFRICAN ODL UNIVERSITY

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The general aim of this research was to investigate whether a relationship exists between the perceptions of job characteristics, job satisfaction (JS) and organisational commitment (OC) of e-tutors in a virtual work environment in an Open Distance Learning (ODL) university in South Africa. Considering the nature of the virtual work environment and the Job Characteristics Model (JCM), the design of e-tutors' jobs does not encompass some of the core dimensions. This creates certain distinctive issues in terms of how e-tutors work, relate and communicate with their supervisors and co-workers. This has the potential to negatively affect their levels of JS and OC and increase their intention to leave the organisation. Accordingly, a quantitative survey was conducted on a sample of 279 (n = 279) e-tutors serving contracts at an ODL institution in South Africa. An exploratory factor analysis in the absence of good fit revealed a three-factor model for job characteristics, a two-factor model for JS, and a three-factor model for OC. Moreover, a correlational analysis revealed a statistically significant relationship between perceptions of job characteristics, JS, and OC. A bivariate-partial correlation revealed that the relationship between job characteristics and JS is stronger than the relationship between

job characteristics and OC. Following these correlations, a regression analysis was done to test the influencing nature of job characteristics on JS and OC. Accordingly, the results revealed that 26% of the effect of JS on OC is mediated by job characteristics. Tests for statistically significant mean differences revealed no significant difference between male and female e-tutors, nor differences in terms of their job tenure. However, in terms of educational background, significant mean differences were found between e-tutors holding undergraduate degrees and those holding postgraduate degrees. In order to determine which colleges differ significantly, multiple comparison tests were done, but the results revealed no significant individual differences. These results are applicable to similar populations and may help to improve the work experiences of other virtual workers. In addition, it is envisioned that they may help to improve human resource management practices in virtual work environments.

KEY TERMS

academic telecommuting, job characteristics, job satisfaction, open distance learning institutions, organisational commitment, virtual work environment.

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CHAPTER 1

SCIENTIFIC BACKGROUND AND CONTEXTUALISATION OF THE RESEARCH STUDY

1.1 INTRODUCTION

This research focuses on the relationship between the perceptions of job characteristics and the levels of job satisfaction (JS) and organisational commitment (OC) of e-tutors at an Open Distance Learning (ODL) university within the context of a virtual work environment in South Africa. The evolution of technology-based education has led to the emergence of virtual working environments for faculty members delivering education through online instruction in higher education (Crawford-Ferre & Wiest, 2012).

Many of the technologies in these virtual work environments have greatly influenced the way in which people work and communicate and the way in which teaching and learning take place (Martin et al., 2011). This evolution is ongoing at the largest ODL university in South Africa, and therefore increased focus and research is required in this regard from human resource management (HRM) scholars.

This chapter outlines the scientific background and the motivation for the study based on the context of the research. It formulates the problem statement and research questions, and then states the general and specific objectives of the research. Finally, an overview of the research design and methodology that was used for the empirical study is given and the chapters in this research are outlined.

1.2 BACKGROUND AND MOTIVATION

This study examines the virtual work environment at an ODL university, in which technological innovations have reshaped distance education through the use of multimedia instruction and curricula (Dede, 1996).

In such an environment, the ongoing evolution of technology continues to influence communication in educational settings (Allen et al., 2004). As a result, pedagogy based on lecture models and books has had to change to a pedagogy that supports the building of an online community of learners through information flows on networks (Kop, Fournier, & Mak, 2011). Consequently, education technology has had a huge impact on the role of academics in terms of the design and implementation of course content in learning environments (Finch & Jacobs, 2012).

The introduction of a new pedagogy changed the teaching methods employed by academics such as professors, lecturers and e-tutors. The new methods and the accompanying instructional design are now suitable for the changing nature of this work/learning environment (Bolliger & Des Amier, 2013).

This research study will focus on the changing nature of the tutor's work environment. Therefore, the study will be restricted to e-tutors as content facilitators of their specific knowledge discipline inside virtual classrooms. The focus will fall specifically on investigating the relationship between the e-tutors' perceptions of job characteristics, JS and OC at the largest ODL university in South Africa.

An examination of the nature of the relationship between the perceptions of job characteristics and the levels of JS and OC is fundamental to the changing nature of work environments at ODL universities. As such, the application of the JCM may guide HRM practitioners to redesign jobs with a view to enhancing e-tutors' motivation, satisfaction and effectiveness (Smit, Cronje, Brevis, & Vrba, 2011).

Moreover, managers could use the research findings to predict employee attitudes and, particularly, the level at which the job relates to the satisfaction of the worker who performs it (the e-tutor), as well as his/her intention to stay with the organisation (Slattery, Selvarajan, Anderson, & Sardessai, 2010).

Thus, finding the potential relationship between the constructs may also play an important role of improving human resource approaches inside the virtual work environment at ODL universities.

This background serves to contextualise the study. This study is situated within a virtual work environment where e-tutors work remotely or telecommute (Nickson & Siddons, 2012; Waters, 2015). Accordingly, the contextual framework for the study is graphically depicted in Figure 1.1 below:
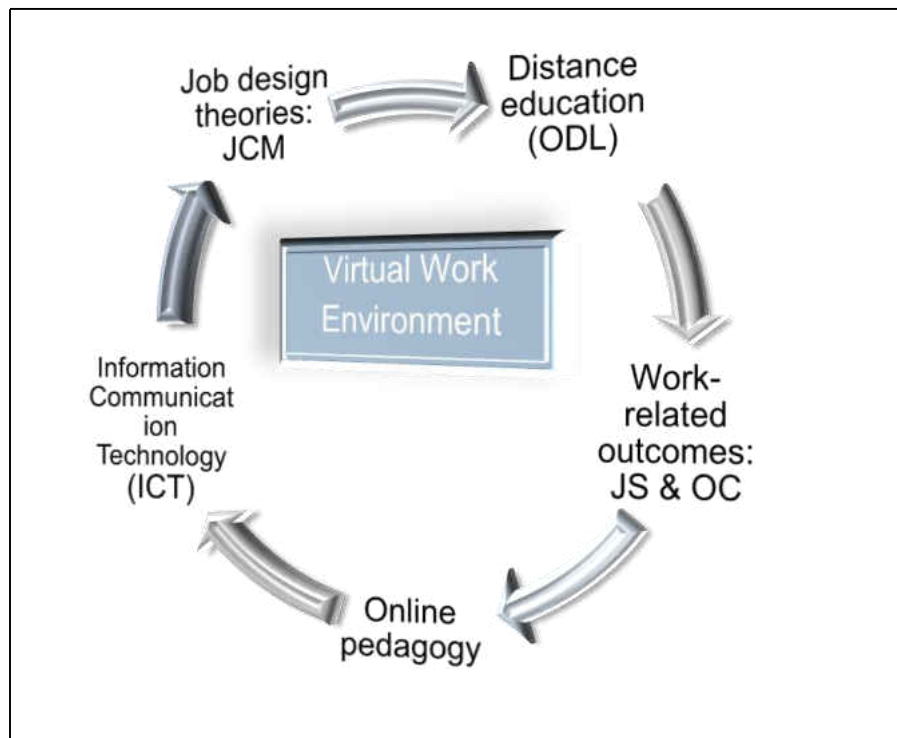
Figure 1.1. **Contextual Framework for the Study**

Telecommuting provides greater autonomy, including work-life benefits that affect organisationally related outcomes such as satisfaction and commitment (Dahlstrom, 2013; Gajendran, Harrison, & Delaney-Klinger, 2015). The practice emerged in the 1970s, and is also referred to as telework or remote working (Ye, 2012). Nilles, Carlson, Gray and Hanneman (1974) promoted the practice extensively and flexible work arrangements gained popularity in the 1990s (Waters, 2015).

Collins, Cartwright, and Hislop (2013) state that work-life balance initiatives such as telecommuting are increasingly being featured in HR policies to attract and retain high-quality individuals. Subsequently, it has become part of the orthodoxy of modern HRM practices for recruiting and retaining talented employees (Dahlstrom, 2013; Gajendran et al., 2015).

ODL universities have also progressed and offer flexible work arrangements such as telecommuting to both full-time and part-time faculty who are geographically dispersed (Ng, 2006). According to Tustin (2014), the potential benefits of introducing telecommuting practices at ODL institutions provide sound motivation for faculty members.

Masuda et al. (2012) state that as a result of greater freedom and the increased ability to self-manage, telecommuting increases positive affective reactions and perceptions of being valued by the organisation. Based on strategic HRM principles, this brings unique skills, knowledge and competencies that create a competitive advantage for the organisation (Beham, Baierl, & Poelmans, 2015).

The abovementioned telecommuting arrangements demonstrate that organisations care for teleworkers and that such arrangements promote greater OC with a lower tendency to quit (Donovan & Wright, 2013; Masuda et al., 2012). Thus, many higher education institutions offer work-life balance policies to eligible faculty members. These faculty members are no longer bound to the physical environment of their campus and are able to complete work-related functions at home and teach online (Waters, 2015).

1.3   PROBLEM STATEMENT

E-tutors work purely in the virtual work environment on a part-time basis. However, this arrangement is not voluntary as it was initiated by the university. In addition to telecommuting, the e-tutors' work arrangements make them part of contingent staff for the ODL university (Ng, 2006; Slattery et al., 2010).

Consequently, the work environment and employment conditions of e-tutors may also be regarded as having been subjected to several forms of flexibility. Contingent work is defined as "any job where an individual does not have an implicit or explicit contract for long-term employment, which for example, includes independent contractors" (Wilkin, 2013, p. 48). This working condition is applicable to e-tutors at the ODL university in South Africa (De Metz & Bezuidenhout, 2018).

However, contingent workers are located on the periphery of the primary labour market, where they experience unfavourable working conditions such as lower pay and lack of growth and development opportunities (Dawson et al., 2013 Wilkin; 2013). As a result, they develop perceptions of not being sufficiently valued compared to their permanent counterparts (Wilkin, 2013).

Similar to contingent work, telecommuting is a marginal practice, with telecommuters reporting feelings of just being forgotten; some of the main reasons for this dissatisfaction include a lack of practical regulations, direction and research (Hynes, 2014; Wheatley, 2012). Research studies have shown that the isolated nature of this work environment introduces distinctive issues regarding how e-tutors relate, work and communicate within their organisation (De Vries, Tummers, & Bekkers, 2018).

According to Slattery et al. (2010), there is a need for a better understanding of temporary employees' behaviour and attitudes by using models well established in the context of permanent employees. Despite having work environments that are comparable to their permanent counterparts, contingent workers may have dissimilar work-related attitudes and behaviour (Wilkin, 2013). This can negatively affect their psychological contract (Dawson et al., 2014; McDonald & Makin, 2000).

A psychological contract refers to individuals' beliefs regarding the exchange relationship that exists between themselves and the organisation (Rousseau, 2001). According to Brewster, Carey, Grobler, Holland, and Wärnich (2008), the psychological contract refers to what employees and employers want and expect from each other. If expectations are

clarified this adds to the clear message that needs to be sent in this respect. This contract specifies each person's role within the organisation and improves employee commitment (Bambacas & Patrickson, 2008).

Hornung, Rousseau, Glaser, Angerer, and Weigl (2010) and Morrow (2011) explain further in this regard, that the psychological contract involves something stronger than just expectations. It involves pledges and reciprocal obligations that are not included in the formal employment contract but are rather more subjective. According to Slattery et al. (2010), the norm of reciprocity means that contingent workers need to be placed in jobs that are high in the five core dimensions of the JCM, as they may then reciprocate by means of positive attitudes such as JS and OC, as well as increased intention to stay (Bae & Kim, 2016).

Against this background, Collins et al. (2013) explored the psychological contracts of telecommuters and determined that their expectations have a pivotal effect on the employer–employee relationship. Nickson and Siddons (2012) explain that the success or failure of a remote worker is determined right from the start of the contract. If the remote workers (e-tutors) feel ignored or unimportant at this point, then this attitude will infuse the whole relationship.

Irrevocably, the success of the relationship involved in the temporary contract depends on, among other things, the voluntary or involuntary nature of the contract and the institutional context (Dawson et al., 2014). A review of the job characteristics, JS and OC constructs indicates the following research problem:

- Taking into consideration the job characteristics model, the job content of e-tutors' is not designed to encompass some of the core dimensions of the model such as task identity and feedback. The core dimensions missing from the job content of e-tutors has the potential to negatively affect job satisfaction levels.

- In addition to the above, the isolated nature of the virtual work environment also introduces distinctive issues regarding how e-tutors relate, work and communicate with their co-workers and supervisors. Therefore, it would seem that human resource approaches implemented in this virtual work environment affect the commitment levels of e-tutors and increase their intention to leave their organisation. In turn, e-tutors' intensions to leave may have a negative effect on the students they support due to low commitment levels.

1.4   RESEARCH QUESTIONS

From the abovementioned problem statement, the following research questions were formulated in terms of the literature review and the empirical study:

1.4.1   Research questions relating to the literature review

Research question 1: How are the three constructs of job characteristics, job satisfaction, and organisational commitment, conceptualised and explained by theoretical models in the literature?

Research question 2: Does a theoretical relationship exist between job characteristics, job satisfaction and organisational commitment?

Sub-question 2.1: What is the theoretical relationship between job characteristics and job satisfaction?

Sub-question 2.2: What is the theoretical relationship between job satisfaction and organisational commitment?

Sub-question 2.3: What is the theoretical relationship between job characteristics and organisational commitment?

1.4.2   Research question relating to the empirical study

Research question 1: What is the statistical nature of the relationship between job characteristics, job satisfaction and organisational commitment in a virtual work environment?

Sub-question 2.1: What is the statistical nature of the relationship between job characteristics and job satisfaction?

Sub-question 2.2: What is the statistical nature of the relationship between job satisfaction and organisational commitment?

Sub-question 2.3: What is the statistical nature of the relationship between job characteristics and organisational commitment?

Research question 2: What are the differences that exist if any, between job characteristics, job satisfaction and organisational commitment in terms of biographical details (gender, educational background, job tenure and geographic location)?

1.4.3   Integration of the empirical study and the specific aims

The integration of the empirical study and the specific aims advances the following research question:

Research question 3: What recommendations can be made for further research on job design for virtual workers as well as for human resources approaches suitable for the virtual work environment of e-tutors?

1.5   RESEARCH OBJECTIVES/AIMS

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

1.5.1   General aim of the research

The general aim of this study is to examine the nature of the relationship between the job characteristics, job satisfaction and organisational commitment of e-tutors in their virtual work environment at an ODL institution.

1.5.2   Specific aims of the research (literature study)

Research aim 1: To conceptualise the three constructs, job characteristics, job satisfaction and organisational commitment, from a theoretical perspective.

Research aim 2: To conceptualise the nature of the relationship between the job characteristics and job satisfaction.

Research aim 3: To conceptualise the nature of the relationship between job satisfaction and organisational commitment.

Research aim 4: To conceptualise the nature of the relationship between the job characteristics and organisational commitment.

1.5.3   Specific aims of the research (empirical study)

Research aim 1: To investigate the statistical nature of the relationship between the job characteristics, job satisfaction and organisational commitment on a sample of participants working in the virtual environment in a South African ODL institution.

Research aim 2: To investigate what differences exist in the job characteristics, job satisfaction and organisational commitment in terms of biographical details (gender, educational background, job tenure and geographic location)?

1.5.4 Integration of the empirical study and the specific aims

Research aim 1: To make recommendations for further research on job design for virtual workers as well as human resources approaches suitable for the virtual work environment of e-tutors.

1.6   POTENTIAL VALUE ADD

Against the aforementioned background, this research study aims to extend research on the human resource approaches and practices that exist inside the virtual work environment in an ODL institution. Thus, the research seeks to investigate the nature of the relationship between perceived job characteristics, and the levels of JS and OC in virtual work environments for e-tutors. The aim is to contribute to the discipline of HRM, particularly with regard to practices inside the virtual work environment.

Advancements in technology have affected the structure of many organisations and have also led to the emergence of virtual work environments where workers can telecommute. This, in turn, has affected the way employees relate, work and communicate in the virtual organisation. Up to now, greater attention has been given to the development and work processes that take place through information communication technology and less attention has been given to the significant nature of concepts such as job design in the virtual organisation and their relation to work-related outcomes such as JS and OC. As such, little is known about the working experiences inside virtual work environments. This research study is therefore a starting point in seeking to ascertain the nature of the relationship between job characteristics, JS and OC in the e-tutors' virtual work environment.

This study may prove useful owing to the relationships found. In addition, the level of significance between variables may serve as a useful source of information for human resource practitioners in redesigning jobs and determining the best human resource approaches to enhance work-related outcomes such as JS and OC in the e-tutors' virtual work environment.

1.7   RESEARCH PARADIGM: POSITIVISM

This study will reflect the principles of positivism in terms of which the researcher will strive to remain objective. According to Leedy and Ormrod (2013), the best way to stay clear of any biases and to remain objective is for the researcher to identify a systematic way of measuring the phenomenon under study.

Accordingly, this enquiry paradigm used a deductive method of reasoning based on the theory. Theoretical logic was fundamental to the expansion of the research problem and contributed to articulating the nature of the relationship between variables (Ranasinghe & Fonseka, 2011). A deductive enquiry paradigm is therefore quantitatively oriented, enabling the development of objective and precise indicators, as well as measures that often use numbers to capture important features of the variables being studied (Ranasinghe & Fonseka, 2011).

As this study is explanatory it will follow a systematic process that will help to explain the phenomena that occur in the world through the use of quantitative data (Creswell, 2014). Furthermore, a deductive approach will be followed to explain possible relationships between the variables JCM, JS and OC within the virtual work environment of e-tutors.

1.7.1   Deductive approach

In order to build the aforementioned theoretical logic, the researcher conducted a literature review of job design strategies based on the JCM (Hackman & Oldham, 1976,

p. 1980), of JS from the Minnesota Satisfaction Survey (Weiss, Dawis, & England, 1967), and of OC using the three-component model (Allen & Meyer, 1990).

Following the logic of Oldham and Hackman (2010), the reasoning for this study is therefore stated as follows: 'If jobs are designed with positive attributes, they should stimulate motivation and increase job satisfaction and ultimately the jobholder's commitment to the organisation'. Accordingly, the deductive approach to reasoning in this study is based on the following conceptual framework:
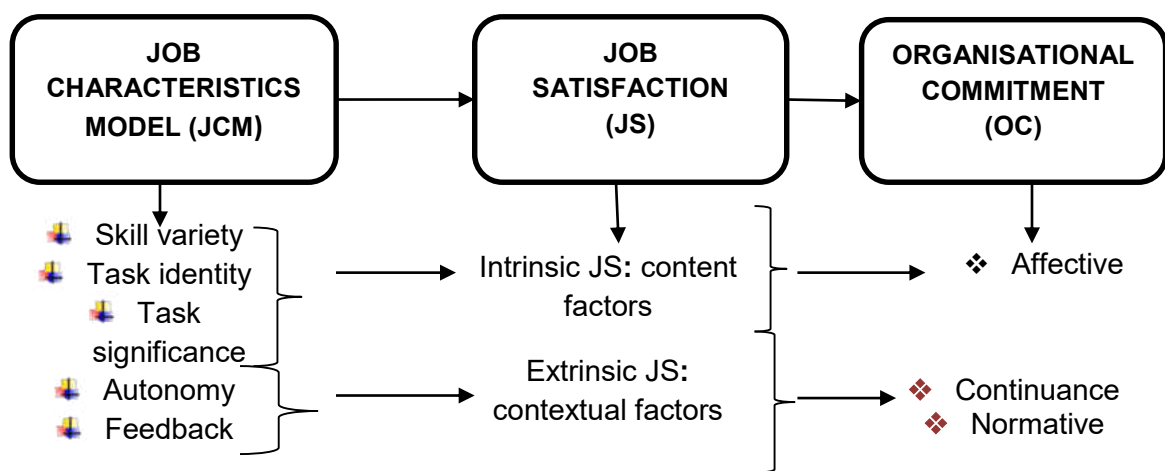
Figure 1.2. **Conceptual Framework for the Study**

1.7.2 Hypothesis

The conceptual framework was operationalised to test a scientific statement used to predict the current phenomena under study. Accordingly, the hypotheses for the current study were formulated as follows:

> $H_0 1$: *There is no statistically significant positive relationship between the job characteristics, job satisfaction and organisational commitment in a virtual working environment.*

H_a1: There is a statistically significant positive relationship between the job characteristics, job satisfaction and organisational commitment in a virtual environment.

$H_0$2: Differences do not exist in the job characteristics, job satisfaction and organisational in terms of demographic variables (gender, educational background, job tenure, geographical region).

H_a 2: Differences do exist in the job characteristics, job satisfaction and organisational commitment in terms of demographic variables (gender, educational background, job tenure, geographical region).

1.8   RESEARCH DESIGN

A research design was formulated to realise the research objectives/hypotheses. The researcher utilised a collection of quantitative data about a particular group of e-tutors working in a virtual work environment as the appropriate units of study. Accordingly, this research study followed a quantitative research method and used a self-report, correlational survey design strategy to answer the research questions and attain the objectives.

The statistical analysis comprised three main categories: descriptive analysis, reliability and validity analysis, and inferential analysis. The research variables under study entailed job characteristics as the independent variable and two dependent variables, JS and OC. Regression analysis was used to test the influence of the independent variable and the intervening nature of the job characteristics in a mediator role.

1.9   DELIMITATIONS

The study was limited to investigating the way in which the core dimensions of the JCM can influence the relationship between JS and OC in a different context such as the virtual work environment. The population of interest is tutors working part-time at an ODL university. However, by virtue of their virtual work environment, the study will focus on e-

tutors only. Other tutors, such as face-to-face tutors, as well as full-time academics, will be excluded from the study.

This research endeavour was undertaken to take a closer look at the job characteristics in a virtual work environment and ignored other job design factors that could influence JS and OC differently in ODL institutions. As such, the influence of chronological age, gender, educational background and job tenure were kept constant throughout the study. In testing the job content within the virtual context, the subsequent intrinsic and extrinsic satisfaction, followed by affective, continuance and normative commitment, came under scrutiny. The focus was, therefore, based on the plausible relationship between job characteristics, JS and OC within a virtual work environment.

1.10   ETHICAL CONSIDERATION

The research was conducted according to the University of South Africa's research ethics policy and all possible sources of harm were considered and prevented at all times. The ethics procedures of the institution were followed throughout the research process. Participation was voluntary and privacy was maintained at all times. In addition, the researcher gained informed consent from the participants. Ethical clearance was granted and permission to conduct the study was obtained.

1.11   OUTLINE OF THE STUDY

The study will consist of seven chapters, as outlined below:

Chapter 1: Scientific Background and Contextualisation of the Research Study

This, the first chapter of the dissertation, includes an introduction to the research study, as well as a discussion on the background to and the motivation for the research, the problem statement and the research questions, as well as the general and specific

objectives of the research. An overview of the research design and the methodology used for the empirical study is given and the various chapters are outlined.

Chapter 2: Job Design: Job Characteristics Model

This chapter articulates the construct of job design based on the definition, a historical overview and the nature of the construct. The multidimensionality of job design and relevant influential theoretical models will be discussed against the evolving perspectives of redesigning jobs where the JCM (Hackman & Oldham, 1976, 1980) resonates with the study.

A literature review relating to the JCM will be conducted, attempting to identify how the model is still a relevant attempt to redesign jobs within the virtual context. The presence of the five core job dimensions, critical psychological states, and the moderating effect of the growth need strength (GNS) will be discussed. Finally, the JCM will be extended into the virtual work design space.

Chapter 3: Job Satisfaction (JS)

This chapter on job satisfaction (JS) will articulate the construct based on the definition, a historical overview, and the nature of JS. The multidimensionality of JS and influential theoretical models will be discussed against the evolving perspectives of JS facets, indicating that intrinsic and extrinsic JS are well captured in the Minnesota Satisfaction Survey (Weiss et al., 1967). Alongside the different facets, the content and contextual factors will be discussed with specific relevance to the evolving facets of JS in the virtual work environment.

Chapter 4: Organisational Commitment (OC)

The literature review in Chapter 4 will follow the precedent set in Chapters 2 and 3. Accordingly, the definition, historical overview and nature of OC will be discussed. In

addition, the multidimensionality of the construct influenced by different theoretical models will be explicated.

The seminal work of Allen and Meyer (1990) will be used to measure the OC of e-tutors based on affective, continuance and normative commitment, with these dimensions being extended to the virtual work environment. In closing, an integration of a literature review on the three constructs will be provided, focusing on the established relationship between JCM, JS and OC.

Chapter 5: Research Design

With regard to the research design, this chapter will outline the purpose of the research, the research paradigm, the type of analysis, the research variables, methods used to maintain the validity and reliability of the research, unit analysis, delimitations and ethical considerations.

The research methodology will consist of two phases:

Phase 1: A critical literature review, which will form the foundation of the study.

Phase 2: An empirical study, which will include a determination and description of the population sample, the sampling technique used, the research instrument, the choice of and motivation for the survey, the administration and scoring of the survey, the formulation of research hypotheses, as well as the statistical processing of the data.

Chapter 6: Data Analysis Results

This chapter reports on the results obtained from the statistical analysis of the data. The results of the empirical research will be integrated into the findings of the literature reviews conducted in Chapters 2, 3, and 4.

Chapter 7: Conclusion and Recommendations

This, the final chapter, will discuss the research results and the limitations of the study. Recommendations will be made, and a summary of the conclusions will complete the dissertation.

1.12   CHAPTER SUMMARY

This chapter discussed the background to and motivation for the research, the problem statement, the objective of the study, the research design and research methodology, the central hypothesis as well as the delimitations to the study. The motivation for conducting the study is based on the fact that little is known about e-tutors' working experiences inside a virtual work environment.

The following chapters investigates the current literature on the relationships that exists among the job characteristics, JS and OC of e-tutors in the virtual work environment. This study could play an important role in human resource approaches in the virtual work environment at ODL universities. In particular, in this study the JCM will be used to examine the job content of e-tutors as content facilitators of their specific knowledge discipline within their virtual work environment.

CHAPTER 2
JOB DESIGN: JOB CHARACTERISTICS MODEL

2.1   INTRODUCTION

As technological innovations cause work environments to evolve, so too do the jobs and roles that form part of those environments evolve. In order to gain a competitive edge, organisations are introducing new ways of working, new processes and new technologies (Challenger, Leach, Stride, & Clegg, 2012). Educational settings and learning environments are similarly affected, as educational technology is changing the role of academics in terms of the design and implementation of course content (Bezuidenhout, 2015; Finch & Jacobs, 2012).

The changing nature of work calls for projects, in which jobs are redesigned using approaches that are in line with organisational practices (Challenger et al., 2012). According to Armstrong (2010), a best fit between the structure and the circumstances in which organisations operate is required. A structural evolution is contingent on the circumstances of the organisation. However, the conversion from a traditional design to an ideal web-based model is a complex transition (Bratton & Gold, 2012).

2.1.1   Definition of Job Design

"Job design refers to the actual structure of jobs that employees perform" (Oldham & Fried, 2016, p. 20). According to Morgeson and Humphrey (2006) and Parker (2014), job design encompasses the study, creation and modification of the content and organisation of one's job in terms of tasks, activities, relationships and responsibilities. Consequently, job redesign is a work strategy employed by organisations to solve problems related to productivity and employee alienation (Hackman & Oldham, 1976, 1980).

A work strategy concerns the individual who is doing the work, what is done at work, the interrelationship of different elements of the work, and the interplay of job and role enactment with the broader task in the social, physical and organisational context (Oldham & Fried, 2016). Accordingly, the way in which jobs and roles are enacted within a specific context causes certain behavioural outcomes (Parker, 2014).

2.2   HISTORICAL DEVELOPMENT

Job design focuses directly on work itself and the inherent characteristics. The process is central to the activities that employees complete for their organisations on a daily basis (Oldham & Fried, 2016). Hence, the job characteristics and job roles enacted within a specific context affect jobholders' behavioural outcomes (Parker, 2014). Consequently, the evolution of the content and the structure, within which jobs and roles are enacted, led organisations to consider different perspectives of creating efficient workplaces (Humphrey, Nahrgang, & Morgeson2007).

2.2.1   Old paradigm: Top-down approach

According to Taylor's (1914) perspective, job design requires the use of the right analytical tools to determine the standard time for the job and the fastest work pace for completing a job. Where performance exceeds the expected standards, there would be financial rewards. This perspective was modified by Gantt (1919), who improved the bonus system based on the notion that people are primarily motivated by money. This approach to job design entailed job simplification and the separation of responsibilities between management and labour. This resulted in direct and close supervision by management tied to scrutiny of the implemented methods (Taylor, 2014).

By contrast, Davis, Canter, and Hoffman (1955) maintained that Scientific Management imposed stringent measures, as designers attempted to reduce costs by minimising skills and underscoring job satisfaction in job design. However, the initial motive of simplifying jobs to the greatest extent to allow employees to hone their skills subsequently developed challenges (Oldham & Fried, 2016).

In their research, Roethlisberger and Dickson (1964) found that the work simplification approach had serious limitations that reduced the effectiveness of incentive pay schemes and close supervision. Accordingly, this approach, which focused on workers carrying out fewer tasks, did not thrive.

Instead it was found that the honing of workers' skills to excel in their job activities hampered creativity, owing to the repetitiveness of tasks and less skills variety. As a result, employee efficiency in the workplace did not improve (Oldham & Fried, 2016).

The introduction of another school of thought, focusing on human relations, brought about a new shift where human aspects such as interpersonal relations and worker satisfaction were emphasised in the process of job design (Roethlisberger & Dickson,1964). Workers were no longer viewed as money-making machines, but rather as unique individuals with needs and wants that are beyond economic necessity.

In line with the new concepts just mentioned were motivational aspects. These included Herzberg, Snyderman, and Mausner (1966) intrinsic motivation, and later Maslow's (1970) higher order need for self-actualisation, which were integrated into job design to create worker satisfaction.

In relation to Maslow's theory, the Job Characteristics Model (JCM) of Hackman and Oldham, 1975, 1976, 1980) superseded Herzberg et al., (1966) two-factor theory. Job characteristics theory, in turn, stemmed from Turner and Lawrence's (1965) theory of task attribute measures for satisfaction and absenteeism.

The JCM holds that jobs should be designed in such a way as to create positive work experiences for job holders. Accordingly, work design projects should be carried out to evaluate existing jobs in order to determine how they affect those who fill them (Oldham & Hackman, 2010).

At the same time, job design strategies should assist in solving problems related to productivity and employee alienation (Hackman & Oldham, 1976; Hulin & Blood, 1968). As such, the JCM provides a significant testable framework to explain the effects of job characteristics on employee internal motivation, which then manifests in work-related outcomes such as job satisfaction (JS) and performance (Oldham & Fried, 2016).

Ilgen and Hollenbeck (1991) shed light on their perspective on job design by explaining that the construction of new or the altering of established jobs demands information about the nature of those jobs. The elements of the physical and psychological demands that are necessary to capture the important dimensions of the tasks are also critical.

According to Fleishman, Quaintance, and Broedling (1984), the dimensions of the tasks must meet the needs of various constituencies. To do so, jobs should be classified into diverse systematic approaches, of which one is the task characteristic approach. This approach is deductive and addresses job design from a motivational perspective.

According to Hackman and Oldham (1975, 1976, 1980), the job characteristics model should be developed further to refine and systemise the relationship between jobs and individual differences. Furthermore, the model proposes that employees who have a strong desire for growth need strength (GNS) will respond positively to jobs that are high on core dimensions.

The job characteristics approach has dominated research on job design, therefore the approach is pivotal in the field of HRM (Foss, Minbaeva, Pedersen, & Reinholt, 2009; Truxillo et al., 2012). However, it has also received criticism. Roberts and Glick (1981) were among the early critics of the JCM, arguing that the JCM is only functional and useful to individuals high on GNS and makes no attempt to identify desirable task attributes for low GNS individuals. Therefore, the model cannot be generalised to individuals who are low in GNS.

Accordingly, critics of the model propose that it should also maintain a clear distinction between the kinds of work relations by taking into consideration particular situational and social influences on task perceptions (Roberts & Glick, 1981). These supplementary variables have been explored further in the form of situational factors, individual characteristics (Turner & Lawrence, 1965), and individual differences in work value and sub-cultural predispositions (Blood, 1969).

Taking the above into consideration, this suggests that the most common measures of job design focused on a narrow set of motivational properties (Morgeson & Humphrey, 2006). Earlier, Taber and Taylor (1990) found that the JCM has low consistency and, furthermore, that the revised items did not improve the originals in terms of predicting employee work-related outcomes owing to inconsistent results (Oldham & Hackman, 2010). Thus, the original formulation of the JCM is not sufficiently complete to examine the modern work context, particularly the relational-social aspects of the job characteristics construct (Oldham & Fried, 2016).

Given the radical shift in the nature of work, Oldham and Hackman (2010) have acknowledged the criticism of their theoretical model. The authors thus conceded that more attention should be given to redesigning work that does not have motivational properties, as the approach seems to be challenged by the emergent work environment (Parker, 2014).

Going forward, the re-evaluation of the JCM is important because of the changing nature of work (Oldham & Friedman, 2016). Morgeson and Humphrey (2006) advise that, prior to implementing the JCM, a review of the job design literature should also be carried out in order to reduce the risk of the study being deficient.

In order to avoid deficiency, it is critical to identify specific contexts that require theoretical integration and where complementarities exist between job characteristics and different HRM practices (Bartling, Fehr, & Schmidt, 2012). Doing so will enable organisations to gain insight into their employees' perceptions and the developing attitudes and behaviours relative to their work context.

The potential risks of deficiency have led to the inclusion of additional approaches in the job design literature. In particular, the critique of Roberts and Glick (1981) has been considered before in the sociotechnical system that originated from the Tavistock Institute in London in the 1950s (Trist & Bamforth, 1951). However, this approach to job design required the entire system and its subsystems to be considered, including the social and the technical (Friedlander & Brown, 1974).

While the sociotechnical system considers the entire system, job design studies, by contrast, have traditionally focused on single jobs as opposed to autonomous work groups. Therefore, job design research has often failed to consider the interrelationships among jobs in the redesign of work processes (Hackman & Oldham, 1976). The process therefore requires more comprehensive measures (Morgeson & Humphrey, 2006).

Ironically, the typical changes in work content prescribed by job design research and by sociotechnical systems theory appear to be the same (Rousseau, 1977), and they converge in terms of their use of six job characteristics as a tool for desired organisational change (Parker, Wall, & Cordery, 2001). This suggests that the core dimensions of job design adhere to the same core approach represented by linear models with a one-directional causal explanation (Clegg & Spencer, 2007). Smith and Sainfort (1989) also

propose a holistic approach to job design. This approach is more comprehensive and measures a wide variety of job characteristics.

In view of the comprehensive measures, the approach necessitates integrating various dimensions of a work system (Morgeson & Humphrey, 2006). These dimensions include the individual's physical characteristics, perceptions, personality and behaviour, the technologies available to perform a specific job task, the work setting and the organisational structure that defines the individual's involvement, interaction and control. Like the sociotechnical system, technology imposes limitations on the types of changes possible, particularly in the physical and social environment (Rousseau, 1977). Moreover, although it is possible to measure a wide range of job design characteristics, it is not clear whether each of these characteristics are distinct.

Considering the limitations of technology, it is important to understand the underlying structure when developing a comprehensive measure of work, otherwise work design characteristics can adopt a reductionist viewpoint which is at the same time problematic, as it does not capture all the more complex conceptualisations of job design (Morgeson & Humphrey, 2006).

Notably, the social dimension of work has been neglected (Grant, 2007; Oldham & Hackman, 2010). It has been found that losing contact with people isolates employees and makes them crave meaningful relationships, a problem that would seem to prevail in the case of teleworkers (Grant, 2007; Parker et al., 2001).

The decision to give less attention to relational aspects in work design research has been proven to be detrimental and little has been revealed about the unique effects of social characteristics (Humphrey, Nahrgang, & Morgeson, 2007). In contemporary work organisations, social interaction has become more pervasive and intrusive and therefore relational aspects need more consideration. This, in turn, has created a drastic shift in job design features and the ensuing research on the relational aspect of work (Bartling et al., 2012).

2.2.2   New paradigm: Bottom-up approach

The top-down approach to job design (Hackman & Oldham, 1980) could feasibly be extended by a bottom-up approach (Grant, 2007; Grant et al., 2007). A bottom-up approach to job design creates worker participation and goal-setting behaviours which may also produce positive emotional states (Locke, 1996).

According to Spreitzer (1995), a bottom-up approach permits employees to perceive themselves as being psychologically empowered. Wrzesniewski and Dutton (2001) suggest that the job boundaries, the meaning of work and work identities are not fully determined by formal job requirements. As such, employees are capable of extracting these psychological states from cues which tend to be far removed from their formal job design (Wrzesniewski, LoBuglio, Dutton, & Berg, 2013).

In a bottom-up approach, individuals have the latitude to make changes to the task or the relational boundaries in their work, thereby acting as job crafters (Johns, 2010; Parker, 2014). Thus, it is reasonable to assume that proactive individuals might mould their work characteristics to fit their individual abilities or personalities (Parker et al., 2001). Workers' proactivity in this respect is referred to as 'job crafting' where employees are given the discretion to mould their jobs to suit their preferences, skills and abilities (Wrzesniewski & Dutton, 2001).

According to Rousseau (2001, 2005), a bottom-up approach is promoted by knowledge workers in negotiating idiosyncratic deals, thereby customising their conditions of work while eroding standardised conditions. In this regard, Parker et al. (2001) indicate that the work context is very different today and, thus, idiosyncratic deals are more prevalent in emerging work practices.

The restricted range of work characteristics and outcomes addressed by traditional theory limits its ability to capture the salient aspects of modern work. In this regard, Hornung et al. (2010) propose the concept of task ideals. This means that, if proactive workers are

permitted to customise their jobs, it will increase healthy job characteristics related to complexity and autonomy/control (Oldham & Fried, 2016).

This indeed diverges from the traditional top-down approach to job design. In the early approaches, job design was a responsibility of top management and the arrangement of task activities was subsequently imposed on employees (Taylor, 1914). Consequently, the job design literature on the topic of job crafting considers individual differences in much greater depth (Nicholson, 2010). The bottom-up approach also pays attention to the critical elements of interdependence between co-workers and supervisors (Nicholson, 2010).

The early primitive work on job crafting focused on three approaches – cognitive crafting, task crafting and relational crafting (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Wrzesniewski & Dutton, 2001). However, the early approach to job crafting has evolved and there have been fewer attempts to refine these categories in order to develop an operational measure of crafting (Bakker & Demerouti, 2014).

These early approaches focused on increasing social job resources to exploit feedback from job holders (Grant, 2007), increasing structural job resources to develop personal capacities, taking on new challenges to increase complexity and job demands, and decreasing hindering demands to preserve wellbeing and reduce work related stress (Tims, Derks, & Bakker, 2016).

The proactive bottom-up approach does not come without challenges. Several studies have established that individual employees use one or more of the job activities explained in the approach (Oldham & Hackman, 2010). The reason for job crafting is to promote person-job fit and produce positive employee outcomes; however, research to date has provided mixed support for this strategy, with some studies showing that the general measure of job crafting has a non-significant relationship with performance (Tims et al., 2016).

The results for attitudinal outcomes under job crafting are also mixed. As several investigations have shown, various job crafting activities have mixed relationships with the job crafter's behavioural and attitudinal outcomes, and particularly with JS and OC (Leana, Appelbaum, & Shevchuk, 2009). Although responsive to individual needs, idiosyncratic deals, which also refer to job crafting, tend to be created in an ad hoc fashion (Oldham & Hackman, 2010; Rousseau, 2005). Moreover, organisations battle with the zone of negotiability, which needs to be managed properly to avoid undermining trust and cooperation at work (Rousseau, 2001, 2005). As such, organisations populated by idiosyncratic deals face coordination challenges (Hornung et al., 2010).

As the organisation and the employee start to negotiate a working relationship that acknowledges and meets the needs of both parties, new challenges arise (Johnson, 2004). Furthermore, although job crafting principally refers to constructive, legitimate actions, it may not be explicitly authorised by the employer (Hornung et al., 2010; Oldham & Fried, 2016). In addition, employees' perceived opportunities to craft their own jobs are limited by contextual factors such as prescribed tasks, task dependence, organisational hierarchy and organisational expectations and employees have to adapt their expectations and behaviour accordingly (Berg, Wrznieswski, & Dutton, 2010).

Moving towards a more individualised form of organisation consequently requires that the benefits and risks of customising jobs be documented, and the implementation processes that bring balance to the real benefits of job crafting be identified (Hackman & Oldham, 2010). However, doing so requires the basic assumptions of traditional work design theories to be reviewed and core concepts unravelled to reveal those aspects that still apply, while those that do not apply should not be put into operation (Gibson, Gibbs, Stanko, Tesluk, & Cohen, 2011).

2.3   THE NATURE OF JOB DESIGN

The radical shift in the nature of work created by the paradigm shift discussed in the previous section has resulted in job design taking different approaches (Parker, 2014)

Accordingly, the engineering approach focuses on job simplification, which is similar to the scientific approach of Taylor (1914) and Gantt (1919).

The work simplification approach comprises fewer tasks, which inhibits employees from being more resourceful (Oldham & Fried, 2016), thereby creating repetition and routine (Marinova, Peng, Lorinkova, Van Dyne, & Chiaburu, 2015). Hence, the nature of the job is not enriched and job holders' discretion is limited, forcing them to obey minimum standards and thereby compromising their creativity (Bartling et al., 2012). Consequently, owing to lack of job enrichment, most job holders reacted negatively to the job simplification approach and the attempt to improve productivity alongside aspects of performance was seriously challenged (Challenger et al., 2012; Oldham & Fried, 2016). Nevertheless, job design continues to evolve and the limited nature of past job design attempts has led management scholars to consider a broader scope and depth on the topic.

The approach was an attempt to design quality jobs that are more enriching for the job holder (Morgeson & Humphrey, 2006). Here job design and job characteristics becomes antecedents of workplace creativity and innovation (De Spiegelaere, Van Gyes, Vandekerckhove, & Hootegem, 2012). As a result, the focus is more on the human approach with the goal of enhancing organisational efficiency and employee job satisfaction.

The evolving nature of jobs within the human approach enables enrichment and empowerment to remain critical aspects (Challenger et al., 2012). The elements of enriched job design are more prevalent in contemporary organisations where job holders have discretion, variety and high levels of responsibility and outcomes such as job satisfaction (JS) and organisational commitment (Wood, Veldhoven, Croon, & De Menezes, 2012).

In the contemporary organisations, the new working approaches introduce fluid work structures and flexible schedules that are in contrast to those of traditional jobs and

working hours. As such, this changing work context also creates a vaguer distinction between work and non-work (Wegman, Hoffman, Carter, Twenge, & Guenole, 2016). Analysing this emergent work context tends to be more complex and therefore coerces management scholars to strive to find human resource practices both in theory and practice that are suitable for this change (Parker, 2014; Truxillo et al., 2012).

To comprehend the job characteristics and employee work-related outcomes brought about by the changing work context, organisations give greater attention to job design where employee participation is central to the contemporary work arrangement (Truxillo et al., 2012). Job design strategy that takes into consideration employee participation acquires circular and dynamic processes. Such strategy embodies flexibility, which allows job holders to adjust their jobs to better suit their needs and the operational requirements (Challenger et al., 2012). Indeed, job design has evolved to focus on human aspects, with more emphasis on the job holders and less on organisational processes (Wood et al., 2012).

In this regard, knowledge is considered alongside motivation as a mechanism underlying effective job design approaches. However, this is interceded by how change is managed within different environmental settings, taking into account the existence of a diverse workforce (Hernaus & Pološki Vokic, 2014). Henceforth, HR professionals, managers and social scientists seek to stimulate innovative behaviour from broad categories of employees (De Spiegelaere et al., 2012).

The latest developments in job design therefore give more prominence to increased autonomy, meaningful work and skill utilisation, thereby giving employees greater scope to craft their jobs (Wood et al., 2012). As such, the scope and depth of the job is enriched with motivational properties that are directed at improving the essential nature of the work performed. The aforementioned job   of autonomy correlate to the job characteristics approach where different dimensions underlie the structure of work (Lunenburg, 2011)

2.4 MULTIDIMENSIONALITY OF JOB DESIGN

The dimensions that underlie the structure of work have the potential to induce specific work-related behaviour; hence, if work is poorly designed then the outcomes might be negative (Bakker & Demerouti, 2014). To comprehend intricate work-related behaviours, the structure in terms of which jobs are organised has multiple dimensions. These multiple dimensions are influenced by various factors which can either inhibit or enhance positive work experiences (Wrzesniewski & Dutton, 2001; Wrzesniewski et al., 2013).

Most job design dimensions are influenced by macroeconomic factors such as national policies that regulate the business and labour market. These policies also provide guidelines for developing the organisational policies that set the foundation for the context of work (De Beer, Tims, & Bakker, 2016).

On the organisational level, the quality of job design depends on certain factors, for example the organisational culture, which sets the path for traditional practices in the institution including flexible work schedules that come with dimensions of autonomy and variety (Morgeson & Humphrey, 2006; Parker, 2014). Sufficient knowledge and leadership within the organisations affect a wide range of job dimensions such as social support (Morgeson & Humphrey, 2006).

Social support is necessary where the dimension of task complexity is established as well as some level of job demand (Bakker & Demerouti, 2014). The amount of information processing to complete the job and the problem-solving skills required reflect the level of difficulty and demands to perform the job. Accordingly, managers are prompted to create supportive work environments in which information sharing and assistance from others are present (Wood et al., 2012).

In these types of work environments, proactive behaviour and innovative thinking are encouraged (Holman et al., 2012). The strategy is adopted in order to comprehend job dimensions that are challenging and varied (Shantz et al., 2013). Thus, innovative

behaviour can be achieved by factoring in the dimensions of skill variety and job crafting (Hornung et al., 2010; Wrzesniewski et al., 2013).

Technology is another critical factor in the process of redesigning jobs and if not properly aligned with the underlying structure of the organisation, it can affect the quality of jobs. This underlying structure should be contingent on the organisation's circumstances (Bratton & Gold, 2012).

Where a best fit between emerging structures and the prevailing virtual conditions in which the organisation operates is lacking, there may be poor job design quality. As a result, creativity and job enrichment may be inhibited, thus impacting badly on job satisfaction. As a result, jobs need to be redesigned to suit the context of the evolving work environment and its objectives. For instance, where the objective is to create a competitive edge, innovation is critical (Holman et al., 2012). Using technology, most contemporary organisations have factored in flexibility, autonomy and innovation as the dominant dimensions of job design (Challenger et al., 2012).

On the other hand, technology has constricted the social dimensions of work (Grant & Parker, 2009) and thus has the potential to inhibit the critical dimensions of autonomy, discretion and complexity (Armstrong, 2010; Parker, 2014). Thus, the difference between the task and the social job dimensions affects the way job holders thrive in the work context and therefore has an influence on the organisation of work and the design decisions (Hernaus & Pološki Vokic, 2014).

The dimensions of job design matter for individual job holders, as these characteristics affect their sense of meaning, growth and development, as well as their overall wellbeing (Parker, 2014). Hence, the organisation has to consider actively seeking and selecting proactive individuals who can adapt easily to the new characteristics of work (Hornung et al., 2010).

Personality is a key factor in the job redesign process, particularly where complexity and the fluid structures of work are the main drivers of job redesign (Wrzesniewaki et al., 2013). Therefore, organisations have to find job design strategies that are aimed at improving the person-job fit by aligning individual differences and job characteristics (Goštautaitė & Bučiūnienė, 2010; Marinova et al., 2015).

In addition to the person-job fit approach, multigenerational lenses are also factored into the process of job design (Hernaus & Pološki Vokic, 2014). This is because time and age shape the dimensions of particular job characteristics. Hence, the same job characteristics may affect the wellbeing and behavioural outcomes of different job holders differently. For example, the dimensions of task variety and skill variety affect older and younger workers differently (Zaniboni, Truxillo, & Fraccaroli, 2013).

The exclusion of different generational cohorts in the job design research may substantially limit an accurate prediction of individual attitudes and work-related behaviour (Humphrey et al., 2007; Truxillo et al., 2012). This indicates that the job design that eventually emerges is very complex, as it deals with multiple dimensions which have a profound influence on the redistribution of power, resources and employment relations (O'Reilly & Tushman, 2013).

Of particular importance to these dimensions are the specific outcomes, which may be either positive or negative, depending on the job redesign project (Bakker & Demerouti, 2014). As a result, the successful redesign of work demands evidence-based tools, processes and guidance that will help the key drivers involved in redesigning jobs (Parker, 2014).

Therefore, in order to capture a wide range of job characteristics, HR practitioners and job designers embarked on job redesign projects in an endeavour to develop comprehensive and integrative measures (Grant & Parker, 2009; Morgeson & Humphrey, 2006). The success of these projects depends on the relevant selection of job characteristics that will produce the anticipated work-related outcomes (Holman et al., 2012).

2.5   THEORETICAL MODELS AND THE RELATED CONSEQUENCES

Several theoretical models have shaped the development of the job design literature (Bakker & Demerouti, 2014). However, the review in this study will cover only those theoretical models that have had a significant influence on job design strategies and related HRM practices. The selection of a relevant range of job characteristics that produces the anticipated work-related outcomes is guided by pertinent theoretical models used in the process of job design (Challenger et al., 2012).

The properties of the selected theoretical model should have the potential to enhance specific change-oriented behaviour within the work environment (Marinova et al., 2015). This is fundamental, since organisational behaviour is a function of the interaction between the employees and their work environment (Wegman et al., 2016).

The influence of the work environment on the behaviour of individual employees necessitates the presence of complementary characteristics and HRM practices in the organisation (Bartling et al., 2012). The goal is to find the right alignment that will elicit positive consequences (Parker, 2014). Hence, management scholars are deliberating a wide range of measures that embodies both theory and practice.

2.5.1   Psychological Demand-Decision Latitude Model

The Psychological Demand-Decision Latitude Model stems from the theoretical perspective on the demand-control model (Theorell & Karasek, 1996). This model has been designed to predict negative consequences or strain in the workload (Kain & Jex, 2010). In this model, workload demands that are present in the work environment are referred to as job demands, and decision-making latitude is referred to as job control or discretion (Karasek, 1979).

Empirically, job demands are task-level dimensions that require sustained physical or psychological effort from employees (De Spiegelaere et al., 2012). On the other hand, job

decision latitude is related to the organisation's authority structure and technology, and therefore gives the job holder discretion over the methods used to address problems arising from their job demands (Holman et al., 2012).

This model postulates that psychological strain is an outcome of the job demands coupled with the range of decision-making freedom available to the job holder who faces those demands (Theorell & Karasek, 1996). In such cases, the demands are high, while the decision latitude or control is very limited (Buttigieg & West, 2013). Hence, the independent composite measure job strain is related to the dependent variable, symptoms of mental strain, which stem from passive jobs (Kain & Jex, 2010).

The following figure and the accompanying notes have been adapted from the *Journal of Occupational Health Psychology* (Theorell & Karasek, 1996, p. 9).
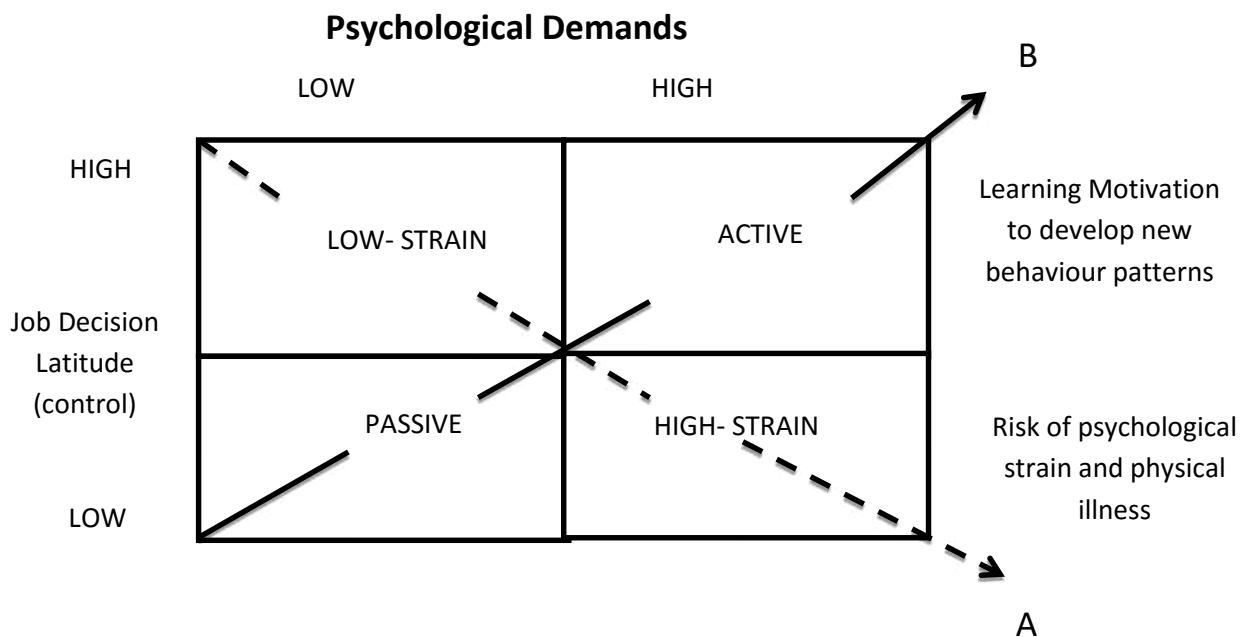
Figure 2.1. Psychological Demand-Decision Latitude Model. Adapted from "Current Issues Relating to Psychosocial Job Strain and Cardiovascular Disease Research", by T. Theorell and R. A Karasek, 2008, *Journal of Occupational Health Psychology,* 1(1), p. 9. Copyright 1996 by the Educational Publishing Foundation.

According to the model, heavy job demands characterised by monotony and limited control result in mental pressure, which in turn results in negative consequences such as depression and learned helplessness (Theorell & Karasek, 1996). Furthermore, the same combination characterised by a heavy workload and close supervision is associated with job dissatisfaction and turnover intentions (Buttigieg & West, 2013). To counteract this effect, the quality of job should be design so as to encompass high job demand and high job control (De Spiegelaere et al., 2012). Such jobs are active, whereby job control buffers the relationship between job demands and strain (Kain & Jex, 2010).

Job holders should be given the opportunity to foster active learning and innovative behaviour to reduce the undesirable effects of job demands (Holman et al., 2012). These are the psychosocial effects of the work environment. Accordingly, the implication of this model is that job redesign should to allow for learning, task enjoyment and personal growth (Bakker & Demerouti, 2014).

Additive effects of the psychological demand-decision latitude model on employee wellbeing and motivation have been found; however, with mixed results on the interaction effects. Therefore, this model is inconsistent (Bakker & Demerouti, 2014).

In order to avoid misinterpretations and inconsistencies, future research in this area needs to examine a wider range of job design characteristics than job control and problem-solving demand (De Spiegelare et al., 2012). In addition to the need to balance workloads and emotional demands, an opportunity to acquire knowledge through variety, feedback and social interdependence should also be included to create active jobs (Holman et al., 2012).

In the Psychological Demand-Decision Latitude Model, however, these aspects are missing, as the model requires both of the characteristics of the individual and the work environment to be analysed separately (Theorell & Karasek, 1996). By contrast, the characteristics of control/autonomy, variety, and feedback can be found in the JCM (Oldham & Fried, 2016).

2.5.2   The Work Design Model

The missing aspects in the psychological demand-decision model suggest that existing measures of job design might be incomplete/limited (Grant, Fried, Parker, & Frese, 2010). Campion and Thayer (1985) developed a more comprehensive multimethod job design model, which included a wide variety of job characteristics. However, the instrument suffered measurement problems, exhibiting gaps in the measurement of construct (Morgeson & Humphrey, 2006).

Edwards, Scully, and Brtek (1999) also noted that the conceptualisation of the work design model missed key work characteristics such as autonomy, which can be found in the JCM. Morgeson and Humphrey (2006) refined the model and developed a broader theoretical Work Design Model (WDQ). This model captures a wide range of job design factors and measures 21 job characteristics. It also includes motivational, social and work-context characteristics (Humphrey et al., 2007).

The motivational characteristics of the model include the task characteristics and the knowledge characteristics (Morgeson & Humphrey, 2006). Task characteristics have dimensions of autonomy and task significance, while knowledge characteristics have dimensions of skill variety and specialisation (Oldham & Fried, 2016). The social characteristics include interdependence and social support. According to Grant et al. (2010) and Taylor (2014), these are relational job characteristics that impact on job contact or beneficiaries receiving services offered by the job.

The contextual characteristics of the WDQ model include ergonomics and work conditions (Humphrey et al., 2007). In lean manufacturing, the job design extricates contextual characteristics such as the technical tools and equipment used to reduce waste in human effort, inventory, time to market and production space (Cullinane, Bosak, Flood, & Demerouti, 2014).

Notably, the WDQ model demonstrates analytically that the task characteristics outlined by the instrument affect a wide variety of work attitudes and behaviours, which are largely

mediated by the critical psychological states of meaningfulness and responsibility on the job, as well as knowledge of results (Oldham & Hackman, 2010). These critical psychological states are based on the JCM. Similarly, these psychological states also induce work-related outcomes such as JS and OC (Oldham & Fried, 2016; Parker, 2014).

Obstruction of these psychological states can result in negative behavioural outcomes such as absenteeism and turnover intentions (Humphrey et al., 2007). High levels of physical demands and poor working conditions with improper ergonomics result in work overload, burnout, anxiety and stress (Buttigieg & West, 2013). At the same time, the social aspect that is not prioritised creates negative role perceptions and role conflict (Parker, 2014).

The WDQ construct measurement is undeniably comprehensive (Truxillo et al., 2012). Nevertheless, although it is possible to measure a wide range of work characteristics, it is not clear whether each of these characteristics are distinct (Humphrey et al., 2007). Furthermore, this approach requires diverse management approaches (Cullinane et al., 2014).

Given the above, the implementation of the model necessitates a broad, recurring process (Challenger et al., 2012). Alternatively, work design characteristics may be summed up as task, knowledge, and social and contextual characteristics, although this reductionist viewpoint does not capture the more complex dynamics of job design (Humphrey et al., 2007).

As a comprehensive measure, the WDQ is essentially broad and is not exempt from constraints (Truxillo et al., 2012). Most importantly, the contextual characteristics of ergonomics and work conditions necessitate an understanding of the underlying work structure (Armstrong, 2010; Bratton & Gold, 2012). Thus, where internet technologies have had an impact on the contemporary work setting and where workers telecommute, the model might be limited in terms of measuring the contextual characteristics (Gibson et al., 2011).

2.5 3   The Job Demand-Resource (JD-R) model

The JD-R proposes that working conditions can be divided into two broad categories, namely, job demands and job resources (Bakker & Demerouti, 2014). Job demands "refers to those physical, social, or organizational aspects of the job that require sustained physical or mental efforts and are therefore associated with costs such as exhaustion" (Demerouti et al., 2001, p. 501). Accordingly, job demands affect working conditions and may lead to negative consequences in the form of energy depletion and may even undermine employees' motivation. Thus, the model examines the effects of burnout resulting from stressful working conditions (Bakker & Demerouti, 2014). The following figure presents a diagram of the model, which is adapted from the *Journal of Managerial Psychology* (Bakker & Demerouti, 2007, p. 313).
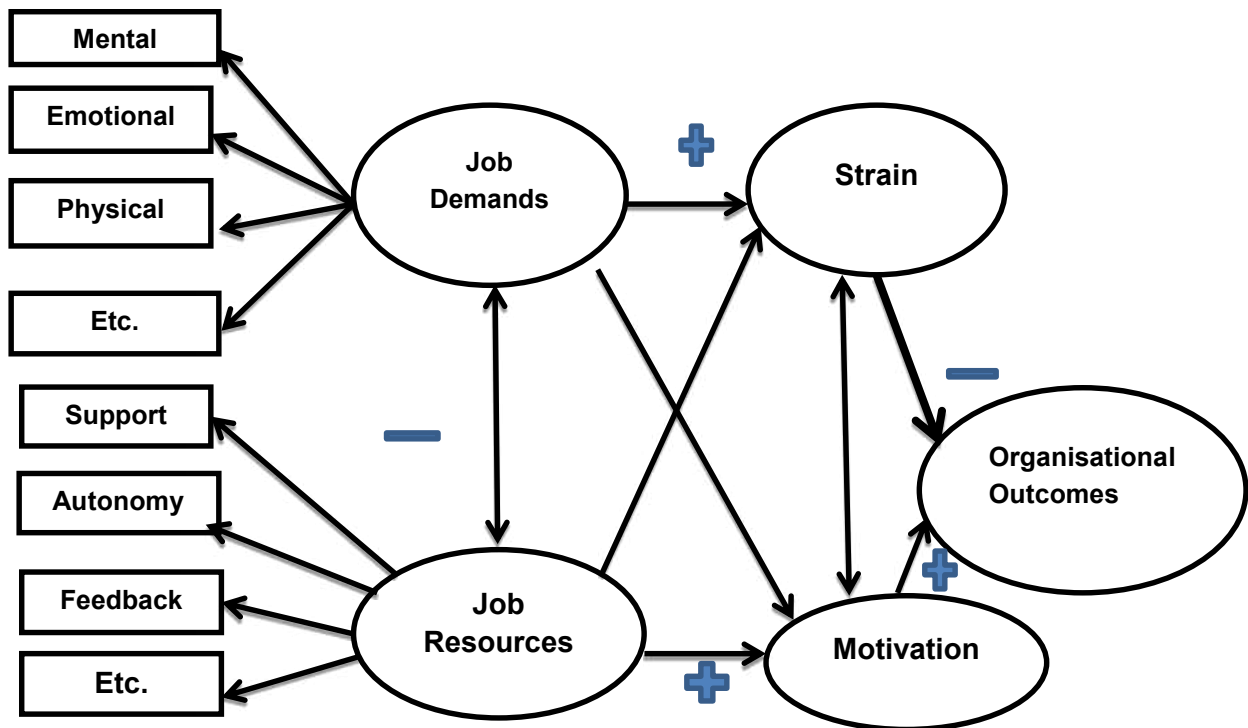
Figure 2.2. The Job Demands-Resource Model. Adapted from "The Job Demands-Resources Model: State of the Art", by A. B. Bakker and E. Demerouti, 2007, *Journal of Managerial Psychology*, 22(3), p. 313. Copyright 2007 by the Emerald Group Publishing Limited.

Job resources refers to certain physical, psychological, social or organisational aspects of the job that are instrumental in achieving work goals, reducing the job demands

associated with exhaustion, and ultimately stimulating learning, personal growth and development (Cullinane at al., 2014).

Job resources include job control, knowledge and skills, autonomy, and task variety of which are task characteristics (De Spiegelaere et al., 2012; Parker, 2014). The job resource of social support refers to relational job characteristics (Taylor, 2014). Similarly, these job resources relate to the early primitive approaches of job crafting, which involve cognitive crafting, task crafting, and relational crafting (Demerouti et al., 2001; Wrzesniewski & Dutton, 2001).

The basic premise of the job demand-resources (JD-R) model is that burnout develops irrespective of the type of occupation when demands are high and when job resources are limited (Demerouti et al., 2001; Wrzesniewski & Dutton, 2001). The JD-R illustrates two psychological processes: one which is motivational in nature and one which is health-impairing (Bakker & Demerouti, 2007). According to Cullinane et al. (2014), these dual processes occur simultaneously as the result of lean job design.

Motivation occurs when job resources satisfy employees' basic need for autonomy, and competence and relatedness foster motivational outcomes, engagement and commitment (Bakker & Demerouti, 2014). If a work environment includes these job resources, job crafting behaviours are stimulated, particularly where there is P-J fit (Chen, Yen, & Tsai, 2014). Thus, the JD-R enables job crafting by increasing social job resources to exploit feedback and structural job resources to develop personal capacities, while decreasing hindering demands to preserve wellbeing and reduce stress (Tims et al., 2016).

By contrast, a work environment that lacks these resources has a negative impact on the individual job holder, causing them to experience health impairments such as burnout and stress (De Beer et al., 2016). As the job demands increase the workload levels, goal achievement is impaired (Demerouti et al., 2001). Where high levels of workloads are evident, and workers' discretion is low, innovative behaviours decrease and job holders

lose motivation. As a result, withdrawal from the job becomes a coping mechanism (Bakker & Demerouti, 2014).

2.5.4   The Job Characteristics Model (JCM)

The Job Characteristics Model (JCM) has had a significant influence on job design research, and some of the elements of the JD-R stem from it. Thus, the JCM embodies an attempt to design jobs with increased motivational properties that influence job satisfaction (Hackman & Oldham, 1975, 1976, 1980). This approach is directed at improving the essential nature of the work performed, hence, the JCM measures the individual job holder's response to the job (Oldham & Fried, 2016). The job redesign model addresses elements of the job that need to be enriched in order to produce desired outcomes (Lunenburg, 2011). The graphical presentation of the model is adapted from Hackman and Oldham (1976, p. 256) in the journal of *Organizational Behavior and Human Performance*.

| CORE JOB CHARACTERISTIC | CHRITICAL PSYCHOLOGICAL STATES | OUTCOMES |

Skill variety
Task Identity
Task significance

Autonomy

Feedback from the job

Experienced meaningful of the job

Experienced responsibility for the outcomes

Knowledge of the actual results of the work activities

Moderators:
1. Knowledge and skills
2. Growth and Strength
3. "Context" Satisfaction

High internal work motivation

High "growth" satisfaction

High work effectiveness

Figure 2. 3. The Job Characteristics Model. Adapted from "Motivation through the Design of Work: Test of a Theory", by J.R Hackman and G. R. Oldham, 1976, *Organizational Behavior and Human Performance*, 16(2), p.256. Copyright 1976 by Academic Press, Inc.

The JCM proposes the following five core job dimensions: skill variety, task identity, task significance, autonomy and feedback (Hackman & Oldham, 1980). These are discussed as follows:

Skill variety entails the necessity to apply multiple skills to perform a wide range of tasks. Skill variety is therefore similar to job enlargement, both of which make the job interesting (Humphrey et al., 2007).

Task identity compels the job holder to produce an identifiable piece of work from start to finish. Accordingly, the job holder has an opportunity to complete the whole piece of work, instead of just a small part of it (Shantz et al., 2013).

Task significance signifies the impact that the job has on those who are benefiting from the services provided on the job. The significance of the job leads the job holder to experience greater meaningfulness (Grant, 2007; Taylor, 2014).

Autonomy refer to the job holder's freedom to decide how to perform his or her tasks. The dimension reflects the extent to which the job allows independence, and discretion to schedule work, make decisions, and choose the methods used to perform tasks (Humphrey et al., 2007; Spiegelaere, Van Gyes, & Van Hootegem, 2016). Autonomy therefore requires effort from the job holder instead of merely following instructions. This dimension has elements of job crafting (Shantz et al., 2013).

Feedback entails knowledge of the results based on the work done. The information provided thus has to be direct and clear in terms of the effectiveness of the task performed (Oldham & Hackman, 2010).

These five core dimensions have positive attributes that lead employees to experience three psychological states in which job holders

1. view their work as meaningful
2. feel responsible for the outcomes
3. acquire knowledge of the results.

The significance of these core dimensions depends on the job holder's drive for psychological growth, which in fact refers to their Growth Need Strength (GNS). GNS therefore refers to the degree to which individuals desire an opportunity for self-direction, learning and personal accomplishment at work (Lunenburg, 2011).

Consequently, the JCM is moderated by individual characteristics such as GNS (Bakker & Demerouti, 2014). However, the individual's GNS cannot function in an environment characterised by tight control (Parker, 2014). Hence, to facilitate individual GNS, there has to be a structural transformation that will foster cognitive development (Parker, 2014).

The design of high quality jobs enables the growth and development of individual job holders. This, in turn, enhances their motivating potential (Wood et al., 2012). Thus, the JCM is widely used to assess the scope of the job and has consistently provided a stable framework (Oldham & Fried, 2016). Using a job diagnostic review, the core dimensions of the model yield an index known as the motivating potential score (MPS) The MPS is expressed by the following formula (Hackman & Oldham, 1976, 1980):

$$\text{MPS} = \left(\frac{taskvariety + taskidentity + tasksignificance}{3}\right) \times autonomy \times feedback$$

In this formula, the core job characteristics of skill variety, task identity, and task significance are combined and divided by 3, while the job characteristics of autonomy and feedback are non-additive, instead having a multiplier effect (Lunenburg, 2011; Oldham & Hackman, 2010). Since task variety, task identity and task significance are additive, if one is missing or measured as zero, the job holder may nevertheless still experience meaningfulness in the work. However, if either autonomy or feedback is missing, the job offers no motivating potential because of the multiplier effect, therefore MPS = 0 (Casey & Robbins, 2010).

The core dimensions of the JCM denote a job design strategy that is enriched with motivational properties (Lunenburg, 2011). As such, these motivational properties enhance job holders' satisfaction and commitment to the job (Casey & Robbins, 2010). On the other hand, the lack of these individual core dimensions may lead to negative work-related outcomes (Hackman & Oldham, 2010; Nagar, 2012).

> *Limiting autonomy forces the employees to obey some minimum standards, which is reflected in the higher minimum effort level. It also restricts employees' ability to work more smartly and being able to react in a flexible and efficient way to a changing environment* (Bartling et al., 2012, p. 840).

Similarly, a job that lacks the dimension of task variety is repetitive, limits creativity and force the job holder to lose interest (Oldham & Fried, 2016). Ultimately, job holders become restricted in taking psychological ownership of the job (Shantz et al., 2013).

The opportunity to complete the entire piece of work results in a good understanding of how the job contributes to the objectives of the organisation. Task identity therefore creates mastery in regard to one's own job (Marinova et al., 2015).

Employees who have an opportunity to complete an entire piece of work are in a better position to mould their jobs to suit their knowledge, skills and abilities (De Beer et al., 2016; Wrsiesniewski et al., 2013). Individuals who are eager to work effectively but lack the resources to meet the demands of the job may experience frustration on the job (Le, Robbins, & Westrick, 2014; Lunenburg, 2011).

Accordingly, a lack of task identity potentially creates role ambiguity and detachment from the organisation (Bakker & Demerouti, 2014). This detachment in turn has a negative effect on task significance; if the job holder is unaware of the impact of their job on others and has no knowledge about their effectiveness on the job, they lack the necessary social support (Taylor, 2014). The lack of feedback within the social context might therefore limit

the relational aspects of the job. Consequently, job holders might have turnover intentions (Parker, 2014).

The JCM therefore has a significant impact on the individual job holder. A job that is designed with consideration of the core dimensions enables the employee to experience self-actualisation, therefore their pride and self-esteem improves (Li, Zhang, Song, & Arvey, 2016). Moreover, where employees' knowledge, skills and abilities are congruent with the demands of the enriched jobs, they are predicted to feel good about their jobs and perform well, as well as increase their self-image and perceived control (Chen et al., 2014).

Thus, the JCM stimulates broader outcomes beyond satisfaction and organisational commitment, and extends growth satisfaction and internal work motivation (Parker, 2014). However, on the negative continuum, burnout and negative role perceptions occur when the scale is lacks balance among all the dimensions (Nagar, 2012). Overall, a lack of any of the JCM dimensions may lead to negative work-related outcomes such as job dissatisfaction, absenteeism and turnover (Oldham & Fried, 2016; Hackman & Oldham, 2010).

2.6   EXTENSION OF THE JOB CHARACTERISTICS MODEL INTO THE VIRTUAL WORK ENVIRONMENT

Virtual working, and the low cost and portability of computers, which allow employees to telecommute, have brought about a paradigm shift in the work context (Grant & Parker, 2009). Thus, the parameters of major theories developed decades ago need to be expanded by extending the work characteristics, such as social contact and proactivity (Grant et al., 2009; Nicholson, 2010).

Against the background of the theoretical models reviewed, the JCM provides a significant testable framework that explain the effects of job characteristics on employee outcomes such as internal motivation, job satisfaction (JS) and organisational

commitment (OC), particularly in the virtual work context (Oldham & Fried, 2016; Oldham & Hackman, 2010).

The advent of global work and the emergent virtual work environment created by internet technologies have extended the parameters of social contact (Gibson et al., 2011; Nicholson, 2010). Subsequently, virtual work designs remain an important dimension in contemporary work settings and modern educational practices where socialisation and collaborative work takes place (Duncan, Miller, & Jiang, 20011).

Since its inception, the motivational study of Job characteristics (Hackman & Lawler, 1971; Hackman & Oldham, 1980) has received extensive empirical examination, and the model is broadly supported (Casey & Robbins, 2010; Champoux, 1991). In addition, research evidence has confirmed the five core job characteristics as valid independent variables for research, with a positive correlation between satisfaction and commitment (Boonzaier, Ficker, & Rust, 2001).

As suggested by previous studies, the parameters of the JCM are slowly being expanded. Phipps, Malley, and Ashcroft (2012) expanded the JCM They found the JCM to have an influence and a predictive role on the safety climate prevailing among retail pharmacists.

On the other hand, Foss et al. (2009) found job design to be the antecedent to knowledge-sharing that stems from the sender-receiver relationship. Hence, prior to designing jobs, the motive for doing is key in guiding designers, as they cannot just copy other job designs (Parker, 2014).

Expanding complexity and control at work will align work characteristics with individual differences and attributes (Hornung et al., 2010, Parker, 2014). This improves person-job fit and, furthermore, the convergence of the person-job design offers an understanding of how job characteristics may be aligned with certain personal attributes to maximise their joint effects on work-related outcomes (Bakker & Demerouti, 2014).

The JCM has been developed to specify how job characteristics and individual differences interact to affect the individual's motivation, which influences satisfaction, commitment and productivity. As a result, the model remains specifically useful in carrying out job design changes (Casey & Robbins, 2010). Thus, the JCM can be extended to virtual work design, where a prerequisite for experiencing meaningfulness is the presence of efficient and reliable electronically mediated communication (Gibson et al., 2011).

The three psychological states introduced in the original job characteristics theory may encompass the proactive and relational aspects suggested by the bottom-up approach. More specifically, the job characteristics of task significance, autonomy and feedback, bundle together features of social interaction and experienced responsibility (Gibson et al., 2011). Thus, virtual work designs that apply the JCM remain an important tool in contemporary work settings and modern educational practices where socialisation and collaborative work take place (Duncan et al., 20011; Martins, Gilson, & Maynard, 2004).

Conversely, in the virtual work environment, the social dimension requires distributed collaborators who identify with one another and have a mutual awareness of becoming accessible, available and subject to one another, thus demonstrating co-presence (Gibson et al., 2011).

The construct of task significance provides clues to show that jobs may spark the motivation to make pro-social difference by shaping how employees interact and develop relationships with beneficiaries – the people affected by their work (Grant, 2007, 2008; Judge, Bono, & Locke, 2000).

2.7.   CHAPTER SUMMARY

This chapter provided an overview of the topic of job design within the field of HRM. The nature and context of work has evolved to what we have today – emergent virtual work structures brought about by technological development. As a result, the job dimensions that were important in a traditional physical work setting seem limited in terms of

addressing aspects related to the new world of work. Accordingly, the dimensions of work need to be expanded. This suggests that the theoretical framework of job design also needs to be reviewed so that the parameters of the job design models can be expanded to suit virtual work environments.

Within the reviewed theoretical models, the JCM provides a stable and testable framework that is deemed relevant for this study. The model has five dimensions which encapsulate the motivational properties of job design, namely, skill variety, task identity, task significance, autonomy and feedback. Jobs that are designed taking these five core dimensions into account are likely to create meaningful experiences which influence the satisfaction and, ultimately, the commitment levels of job holders.

The framework of the model was therefore subsequently extended to the virtual work environment to test how it influences the JS and OC of e-tutors as telecommuters in ODL institution. The next chapter provides a comprehensive review of JS relative to the five dimensions, as extended within virtual work environment.

CHAPTER 3: JOB SATISFACTION

3.1   INTRODUCTION

The Job Characteristics Model (JCM) has been designed to include motivational properties that depict the conditions in the work environment, and therefore influence job satisfaction (JS). However, the model has been criticised for having overlooked some aspects that contribute to JS (Grant, 2007; Grant et al., 2009; Nicholson, 2010; Roberts & Glick, 1981).

The neglected aspects of JS in the JCM evaluation will be augmented through a comprehensive investigation of JS using relevant theoretical perspectives. This is in response to the caveat of avoiding deficiency of the current study within the modern work context (Morgeson & Humphrey, 2006; Oldham & Fried, 2016).

The changes that have taken place in the modern work context, such as telecommuting, affects job holders' behaviour, attitudes, and ultimately work-related outcomes such as JS (Jain & Kaur, 2014; Oldham & Fried, 2016). As a result, job design within the work environment embodies dimensions of JS extending from physical, psychological and the social aspects (Parker, 2014).

Whatever the nature of the work environment, the physical dimension of JS forms part of the job context (Bakker & Demerouti, 2014), and thus relates to the equipment, tools and technological infrastructure provided to job holders. In some cases, the job context becomes virtual, such as the ones e-tutors work in (Gajendran et al., 2015). As e-tutors work in virtual work environments and form part of the community of higher education telecommuters in ODL institutions (Waters, 2015), their virtual working conditions have an impact on psychological and social aspects.

In light of the emergent virtual work settings in ODL institutions (Thompson, 2014; Waters, 2015), this study will expound on the definition and the nature of JS by tracking its historical development based on the most influential theoretical models. An attempt will also be made to extend its dimensions to virtual work conditions.

According to Thompson (2014) and Waters (2015), comprehensive studies of JS will shed light on the satisfaction levels of telecommuters (e-tutors) in relation to their perceived job dimensions (Bozeman & Gaughan, 2011), and particularly meaningful working relationships in their virtual work environment (Tooksoon, 2011).

3.1.1   Definition of job satisfaction (JS)

JS refers to "the extent to which people like (satisfaction) or dislike (dissatisfied) their job" (Agho, Meller, & Price, 1993, p. 1007; Spector, 1992 p.1). JS is regarded as a consequence of the discrepancy between perceptions and value standards. Value standards refer to aspects of work considered to be beneficial by the job holder and which they therefore seek to gain (Locke, 1976).

Aldag and Kuzuhara (2002) define JS as the affective component of work-related attitudes, that is, how employees feel about their jobs. Therefore, JS is "an emotional response" (Weiss, 2002, p. 190). Buitendach and Rothmann (2009, p. 2) define JS as a "positive or an affective function of the perceived relationship between what one wants from one's job and what one perceives as being offered".

Armstrong (2010, p. 343) explains JS as the "attitudes and feelings people have about their work". Positive favourable attitudes towards the job lead to JS, whereas negative and unfavourable attitudes lead to job dissatisfaction. JS thus refers to an employee's general attitude towards their job (Byars & Rue, 2011; Thompson & Phua, 2012). Overall, this connotation of JS refers to an employee's state of mind regarding the nature of their work (Tookson, 2011). For the purposes of this study, the general connotation of JS refers

to an affective, positive emotional response to one's job and the prevailing environmental work conditions.

3.2 HISTORICAL DEVELOPMENT

The evolution of work structures has changed the nature of work, which in turn has altered the dimensions of JS (Bratton & Gold, 2012). The construct therefore also evolves and becomes a complex phenomenon encompassing new aspects within the work settings (Locke, 1969; Wanous & Lawler, 1972). These evolving aspects seems more prevalent in contemporary organisations where the goal is to gain a competitive edge through employee empowerment. Hence, despite its complexity, JS is still measured as a factor that contributes to efficiency and commitment within the workplace (Aziri, 2011; Challenger et al., 2012).

In consideration of the above, job activities that contain some characteristics that enhance creative performance at work should be developed (Lawler & Hall, 1970; Lunenburg, 2011; Oldham & Cummings, 1996). In this manner, the work environment will facilitate the empowerment, satisfaction and commitment of job holders, thus in turn creating a competitive edge for the organisation (Oldham & Cummings, 1996). Unfortunately, traditional work settings seem to fall short in creating such conditions.

3.2.1 Job satisfaction in traditional work environments

The enactment of job roles in a particular work environment influences the attitudes, beliefs and values of the job holder (Locke, 1969; Scarpello & Campbell, 1983). Previously, Herzberg, Mausner, and Snyderman (1959) revealed that the job context should contain variables that satisfy the internal motivation of the job holder. Hence, the work environment should attempt to meet a job holder's goals and desires by providing an outlet for creativity, self-determination and meaning that will increase intrinsic JS (Lawler & Porter, 1967).

Where the job context does not seem to provide the job holder with the anticipated results or fulfil their desires, the job holder might end up being dissatisfied (Wanous & Lawler, 1972). Additionally, the interaction between the individual's characteristics and the properties of their work context has an influence on their self-determination (Le et al., 2014). These environmental properties are extrinsic in nature; however, they provide individuals with an opportunity to build the self-concept (Walsh & Gordon, 2008).

Traditionally, the environmental factors/dimensions that influence JS are linked to technical supervision, company policies, recognition and compensation (Weiss, Nicholas, & Daus, 1999). The work environment is furthermore characterised by facets such as pay and relationship with co-workers. Accordingly, workers compare their perceptions of these facets with some set of standards (Hancer & George, 2003). Where there is correspondence between perceptions and set of standards, there is an ultimate cause for satisfaction (DeVane & Sandy, 2003).

Rounds, Dawis, and Lofquist (1987) describe this interaction as a person-environment (P-E) fit, where satisfaction is a function of the correspondence between the reinforcement patterns of the work environment and the individual's needs. In this correspondence, the individual is fulfilling the needs of the environment and, in turn, the environment is fulfilling the needs of the individual. As a result, a job holder finds congruence between their jobs and their self-identity, thereby relinquishing greater satisfaction (Tookson, 2011; Weiss, Dawis, & England, 1967).

Comparatively, traditional work settings thrive in creating supportive work structures that are mainly relational in nature. Such work structures create fulfilment by enabling employees to have meaningful interpretations of their workplace. Additionally, these work environments are perceived as having equitable and transparent policies (Chen et al., 2011). These are the working conditions that prevailed in traditional academic environments such as university campuses and lecture rooms (Wheatley, 2012).

In these physical work settings, JS focused predominantly on the job content/activities, thus expediting the achievement of the core mission of the university (Bozeman & Gaughan, 2011). Thus, technology had a minimal impact on physical work settings and was not taken much into consideration (Walsh & Gordon, 2008). However, the rapid evolution of technology-based education has greatly impacted on the manner in which teaching and learning take place (Crawford-Ferre & Wiest, 2012). Accordingly, there has been an emergent virtual transfer of knowledge inside virtual lecture rooms (Allen et al., 2004; Dede, 1996).

These technological developments in education require changes to be made to pedagogical strategies (Kop, Fournier, & Mak, 2011). However, such changes impose constraints on the P-E fit (Weiss, 2002), thus having an adverse result on the satisfaction and commitment of employees (Kristof, 1996). Such constraints are evident in most traditional work settings, where congruence between the individual and the work environment would seem to be difficult to achieve (Jain & Kaur, 2014). It would appear that most organisations encounter challenges in creating environments that are conducive to this congruence (Spector, 1992). Although, transparency and equity seem to prevail in traditional work settings, factors such as HRM practices and policies are often rigid and thus lack the flexibility needed to achieve P-E fit in contexts where technology plays a major role (Bolliger & Des Armier, 2013).

Nevertheless, if the emergent job context were to be ignored, this would be detrimental to the JS of the academic staff responsible for creating a successful university environment (Khalid, Irshard, & Mahmood, 2012). Their environment is dynamic and the new work dimensions are furthermore important determinants of employee wellbeing (Doest, Maes, Gebhardt, & Koelewijn, 2006).

Academic staff highly value both intrinsic and extrinsic satisfaction and these dimensions are concomitant with the content and the context of the job (Khalid et al., 2012). Thus, the satisfaction of faculty members responsible for the facilitation of knowledge transfer is multifaceted, ranging from job activities to working conditions (Thompson & Phua, 2012).

3.2.2 Job satisfaction in the changing nature of work

The dimensions that contributes to JS in the traditional setting are still relevant in the changing nature of work (Oldham & Hackman, 2010). Like the traditional work setting, the task activities performed in the virtual work environment also induce intrinsic JS (Thompson, 2014). However, some of the JS facets and/or dimensions may take a different form owing to the structural changes and new dimensions taking place (Nicholson, 2010; Wood et al., 2012).

The work structure of telecommuting forces employees to perform their duties beyond the traditional, physical work boundaries (Wheatley, 2012), and usually away from the employers' central location (Belovski, 2014; Fonner & Roloff, 2010; Ye, 2012). In the case of e-tutors, the central location is several campuses of the ODL university (Waters, 2015). However, they work mainly from remote locations such as their homes (Gajendran et al., 2015).

The evolution of these work structures reiterates the need for different management approaches in order to change the nature of the work context successfully (Lurey & Raisighani, 2001; Waters, 2015). Accordingly, the dimensions contributing to the prediction of JS in virtual work environment need to be expanded (Gibson et al., 2011; Phipps et al., 2012).

In light of the evolving work structures, telecommuting is a good example of emergent employment practices aimed at expanding the parameters of JS through dimensions such as autonomy and control. These dimensions give telecommuters discretion regarding the way they perform their work activities as well as giving them control over their workspace (Gibson & Gibbs, 2006; Grant & Parker, 2009). Therefore, expanding autonomy and control is paramount, and success depends on the proper alignment of individual attributes with the evolving virtual work conditions (Goštautaité, & Bučiūnienė, 2010; Hill, Ferris, & Märtinson, 2003).

The expansion is furthermore evident in the relational dimensions that emerge from the virtual work environment (Duncan et al., 20011; Hynes, 2014), where workers who are geographically dispersed remain subject to one another and continue their working relationships electronically (Bakker & Demerouti, 2014; Grant & Parker, 2009; Parker et al., 2001).

The use of ICT in contemporary work settings and modern educational practices enables socialisation and collaborative work to take place (Duncan et al., 2011). Hence, the educational context is no exception to such a structural evolution and the concurrent dimensional shift (Waters, 2015). Consequently, success in advocating the use of educational technologies depends on the quality of faculty interaction and the material conditions under which educational facilitators work (Li, 2012). This is undeniably crucial, as employees' interaction and views about the recognition of their colleagues and their department play a significant role in satisfaction within faculty (Bozeman & Gaughan, 2011). Moreover, effective supervision and performance assessment are captured in the quality of these virtual working relationships (Konradt, Hertel, & Schook, 2003; Tooksoon, 2011).

Paramount to virtual JS are the dimensions of technical and institutional support (Fonner & Roloff, 2010; Ye, 2012). These dimensions are mainly extrinsic in nature (Gajendran et al., 2015) and should be implemented together with elements of procedural and interactional justice. This approach creates work conditions that are perceived to be fair and consistent by telecommuters (Calvo, 2013).

3.3   THE NATURE OF JOB SATISFACTION

The historical evolution of the dimensions that influence the prediction of JS in virtual work settings renders the nature of the construct more complex. This complexity creates a practitioner knowledge gap on the causes of JS, hence the aforementioned conception of the construct differs (Locke, 1969; Saari & Judge, 2004; Weiss, 2002). As such, there

is a lack of consensus on what JS is (Aziri, 2011; Seashore & Taber, 1975; Thompson & Phua, 2012).

Additional to the different conceptions, the complex nature of JS stems from the bipolar traits of motivators and the hygienes that originate within the job content and the job context variables (Lindsay, Marks, & Gorlow, 1967; Wanous & Lawler, 1972). According to Herzberg et al. (1959), these motivators are job content variables that satisfy the internal motivation (intrinsic) of the worker, whereas the job context variables are hygiene factors (extrinsic) that prevent dissatisfaction, but do not necessarily influence satisfaction.

Thompson and Phua (2012) explain that the bipolar traits of JS have been conceptualised and operationalised as affective/cognitive constructs. As such, JS has an affective nature that relies on the emotional judgement of the job as a whole, whereas cognitive JS is based more on the logical and rational evaluation of job conditions, opportunities and/or outcomes (Tong, Tak, & Wong, 2015; Wood et al., 2012).

The "intrinsic nature of JS is experienced from internal motivation and the desire to perform an activity in order to experience satisfaction due to the inherent pleasure of the activity itself" (Peters et al., 2014, p. 273). On the other hand, the extrinsic nature of the construct is more contextual and therefore motivated by external factors such as work conditions, company policies, salary, supervision and relationships with co-workers (Peng & Mao, 2015).

Given the above, and contrary to Herzberg et al. (1959), these external hygiene factors are related to the work environment and they may also reduce JS to some level (Ewen, 1964). Evidently, supervision is a source of recognition, whereas salary represents achievement and recognition, which are also satisfying (Lévy-Garboua, Montmarguette, & Simonnet, 2007).

A job holder may derive JS from their sense of achievement and success on the job (intrinsic source), or the rewards that they may receive as a result of their efforts (extrinsic source) (Aziri, 2011). This dimension strongly influences the nature of JS, thus pay satisfaction is driven extrinsically, and if unfairly dealt with or not competitive enough, individuals tend to become demotivated (Spector, 1992).

Significantly, JS in academic staff, who are mainly motivated by a professional calling, focuses predominantly on intrinsic motivation and satisfaction, as such extrinsic factors appear to be neglected (Bozeman & Gaughan, 2011). However, Tooksoon (2011) concur with Ewen (1964), shedding light on the fact that teachers are prepared to leave the teaching profession if an alternative job provides better environmental factors, leading to pleasant working conditions (Morrow, 2011).

The above notion resonates with Byars and Rue (2011, p. 236), "that the organisational reward system often has a significant impact on the level of employees' job satisfaction". In addition to the direct impact, the way in which extrinsic rewards are dispersed can affect the intrinsic rewards of the recipients. Therefore, both intrinsic and extrinsic factors affect the nature of JS, and both can serve as good predictors of the satisfaction levels in knowledge facilitators (Khalid et al., 2012).

3.4   MULTIDIMENSIONALITY OF JOB SATISFACTION

As illustrated above, the nature of JS is influenced by dimensions within the job content and the job context, therefore, the construct is multidimensional with varying conceptions (Donovan & Wright, 2013). As a result, most job holders experience some degree of satisfaction and dissatisfaction with their work dimensions (Kalleberg, 1977; Nagar, 2012). Hence, the evaluation of the construct is based on summative discriminable elements of the job facets/dimensions (Wanous & Lawler, 1972; Martins & Proença, 2012).

The terms of the effectiveness of teaching, whether onsite or online, have similar qualities of responsiveness, supportiveness, and relevance of learning are apparent (Anderson & Cartafalsa, 2012). In both instructional delivery systems, intrinsic satisfaction is derived from the teaching activities, while extrinsic satisfaction is derived from the work environment (Khalid et al., 2012; Thompson, 2014). Accordingly, the underlying philosophy, basic principles and responsibilities do not change substantially (Thompson, 2014). However, the rapidly evolving nature of distance learning has altered the work role of distance educators (Bezuidenhout, 2015).

3.4.1 The job content dimensions

Intrinsic JS is influenced by job content factors such as autonomy and control over job activities (Tookson, 2011). In the case of academic staff who are working in traditional universities, these are mostly teaching and research activities, as well as community engagement (Dahlstrom, 2013). In turn, JS within the job content dimensions emphasises enriched job design that concentrates on the employee's core job activities (Wood et al., 2012)

In an online context, technology is the catalyst /mediator and the online facilitator/e-tutor has to adapt and rely on additional media to illustrate and explicate certain ideas (Fernández-Rodríguez, Muñoz, & Rainer, 2014; Li, 2013; Peschke, 2014). Thus, the online delivery of instruction is more advanced and has complex dimensions in teaching (Anderson & Cartafalsa, 2012; Hurst, Cleveland-Innes, Hawranik, & Gauvreau, 2013).

In accordance with the above, the intrinsic satisfaction of faculty in online education is derived from the ability to utilise a variety of tools and skills to engage and communicate with online learners using learning management systems (LMS) (Anderson & Cartafalsa, 2012; Mabunda, 2010). Through this approach, e-tutors are able to bridge the distance between content and student needs (Bolliger & Amier, 2011; Cleveland-Innes, Stenbom, & Hrastinski, 2014; Mabunda, 2010). In this manner, e-tutors can connect better with learners, and react effectively to novel problems inside virtual classrooms, as well as

monitor learners' active learning in virtual classrooms (Bolliger & Des Armier, 2013; Kop et al., 2011).

These technological teaching dimensions are complex. Thus, based on these dimensions, the intrinsic JS of e-tutors has multiple facets ranging from the aforementioned teaching activities and the utilisation of technological tools for the facilitation of effective learning (Fabry, 2012; Schwartz, 2012) and student online participation (Thompson, 2014). The execution of these primary task therefore requires proactivity and some level of discretion and flexibility (Wood et al., 2012).

Collaborative instruction has the potential to engage learners in a more active and concerted manner (Schwartz, 2012). Students' participation in their online learning environment is influenced by the consistent encouragement and support of their online facilitators and the correct methodological use of technological tools (Sistek-Chandler, 2012). These facets demonstrate student satisfaction with their online learning environment, successful role accomplishment and JS prediction for e-tutors (Thompson, 2014).

The job content dimensions therefore appeal to affective JS, as they evoke emotional responses resulting from performing the job and task accomplishment (Thompson & Phua, 2012). The technological infrastructure used to develop a variety of skills and instructional methods is therefore essential in the provision of support and active learning inside virtual classrooms, and thus affects the intrinsic satisfaction of e-tutors (Bolliger & Amier, 2011).

3.4.2   The job context dimensions

The working conditions of e-tutors are central to building positive perceptions about their virtual work environment (Hlosta et al., 2014; Wheatley, 2015). Remarkably, the job context dimensions of JS do not rely on emotional judgement, but rather on the comparison of what is being offered in the work environment (Peng & Mao, 2015). The

job facets embodying pay structures, promotion and supervision remain fundamental (Weiss, 2002).

Unfortunately, in most cases, part-time telecommuters (e-tutors) form part of university staff members who are directly linked to employment practices that are prone to exploitation (Dahlstrom, 2013; Slattery et al., 2010). Many fill positions that are characterised by low pay and non-tenure (Dawson et al., 2014; McDonald & Makin, 2000). As such, the use of advanced educational technologies will not necessarily change these working conditions (Hurst et al., 2013; Slattery et al., 2010).

Relative to supervision, the traditional role of middle managers is seen as being able to implement top management decisions within the constraints of day-to-day work (Larsen & McInerney 2002). However, under conditions of part-time telecommuting, managers are no longer able to manage by walking around and viewing employees (Fonner & Roloff, 2010). In this set up, the element of control is superseded by trust which plays an important role in virtual work environments (Donovan & Wright, 2013; Gajendran et al., 2015).

The evaluation of these conditions, opportunities and outcomes within the work environment makes contextual JS more cognitive than emotional (Peng & Mao, 2015; Thompson & Phua, 2012). This means that technical and institutional support is paramount in the virtual context (Thompson, 2014). In addition to the above-mentioned facets, the dimension serves as a good predictor of extrinsic JS (Gajendran et al., 2015).

As mentioned earlier, support remains paramount in the virtual work environment and can take many forms (Thompson, 2014). Provision of such support could be in terms of social, technical and institutional support. Certainly, ICT is of great significance in facilitating how organisations can engage and support their employees. This is crucial for improving human relations issues between supervisors and co-workers (Boell, Campbell, Cecez-Kecmanovic, & Cheng, 2013).

When working remotely, success is dependent on social support in the virtual work environment (Dawson-Howard, Standen, & Omari, 2013). In contrast, the relational aspect in virtual space has been neglected and proves to be inescapable (Oldham & Hackman, 2010). Telecommuters/e-tutors work remotely from their home and this physical separation from their co-workers and supervisors may induces feelings of isolation and loss regarding the work environment in general (Caillier, 2014; Dahlstrom, 2013).

To counteract perceptions of loss and isolation, the communication conditions implemented under telework should be effective. Sustaining electronic contact with the central workplace can improve interaction and satisfy the need for social affiliation (Donovan & Wright, 2013; Troup & Rose, 2012). However, this necessitates that communication channels be effective and provide a flow of information with constructive feedback (Dahlstrom, 2013; Fonner & Roloff, 2010).

The technical support provided should be in the form of training such as online teaching/pedagogical strategies suitable for the online environment and the use of technological tools (Donovan & Wright, 2013; Hynes, 2014). On the hand, institutional support should be in the form of resources provided in the virtual work system, for example reliable internet connections and computer equipment (Ye, 2012).

These forms of institutional support and adequate resources create effective working conditions which have a positive effect on extrinsic JS (Donovan & Wright, 2013; Wheatley, 2012). In turn, this technological infrastructure is fundamental (Fabry, 2012; Schwartz, 2012). However, should the necessary forms of support be made available, proper policies should be implemented to avoid exploitation of high student–teacher ratios and long working hours without compensation (Hynes, 2014). In certain instances, exploitation may create unpleasant working conditions where cheap labour prevails and, thus, defeat the intention of institutional support (Dawson et al., 2014; Wilkin; 2013). In situations where telecommuters have to operate with inadequate resources and lack of training in their work system, they will require extra coping strategies and this may lead

to the experience of stress. As a result, the JS of teleworkers may be negatively affected (Konradt et al., 2003).

According to Kain and Jex (2010), inadequate resources are regarded as a job stressor which is revealed in changes in a job holder's physiological and behavioural functioning during task fulfilment. The consequences should therefore be counteracted by increasing work-related and individual resources such as autonomy and social support (Caillier, 2014). Perceived autonomy is a crucial psychological resource for sustaining task performance and positive work-related behaviours, as it satisfies job holders' needs for self-determination (Gajendran et al., 2015).

3.5   THEORETICAL MODELS AND THE RELATED CONSEQUENCES

The different conceptions of the nature and multiple dimensions of JS have distinct theoretical models containing distinct measurements (Quinn & Thorne, 2014; Van Saane, Sluiter, Verbreek, & Frings-Dresen, 2003). These measures range from single item measures or global measures to multifaceted measures (Hirschfeld, 2000; Wright, Christensen, & Pandey, 2013).

The different conceptions and multiple dimensions also create a practitioner knowledge gap on causes of JS and the accurate measure of the concept (Saari & Judge, 2004). Ideally, there should be a comprehensive theoretical model that embraces diverse causes and effect. However, such a model does not exist for JS (Seashore & Taber, 1975).

In contrast, HR practitioners in contemporary organisations can feasibly utilise micro models consisting of multidimensional measures of JS (Martins & Proença, 2012). These models emphasise different aspects of the job and have the potential to measure the construct accurately (Locke, 1969; Weiss, 2002). Moreover, such models capture the workers' reactions and attitudes towards an array of jobs characteristics associated with each type of employment contract (Dawson et al., 2014).

The range of dimensions requires delineating the JS construct into parts of individuals' affective, cognitive and evaluative reactions toward their jobs (Weiss, 2002; Tong et al., 2015). Lack of delineation of the construct brings challenges in both conceptual and operational terms (Thompson & Phua, 2012). Such delineation also has theoretical and practical advantages that mitigate challenges using model measures (Weiss, 2002). It prevents JS from being conceptualised affectively by measuring it cognitively and consequently depicting unequivocal levels of JS (Thompson & Phua, 2012). Thus, the operationalisation of the model depicting JS can be expressed mathematically, therefore allowing an interplay between empirical and theoretical research (Holman et al., 21012; Shafer, Dazzi, & Ventura, 2017)

The mathematical expression of the models exposes job holders' perception and the levels of JS. Lower levels of JS thus lead to negative perceptions towards the job (Bakker & Demerouti, 2014; Oldham & Fried, 2016). The job holder's contribution on the job is also affected and therefore becomes low (Batura et al., 2016). Consequently, the job holder becomes incompatible with the work environment thereby inducing dissatisfaction and negative work-related outcomes (Peng & Chao, 2015). The models that will be discussed in the following sections have remained influential in depicting and expressing levels of JS:

3.5.1   The Herzberg Two-Factor Model

The Herzberg two-factor model (Herzberg et al., 1959) posits two unipolar traits that are unrelated, therefore variance in JS is a result of the level of motivators (internal factors), and the variance in job dissatisfaction is a result of the level of hygiene (external) factors. The following figure is a schematic illustration of Herzberg's Two-Factor model, adapted from Chu and Kuo (2015, p. 56) in the journal of *Human Resources and Adult Learning*.

Traditional concept of employee satisfaction

Satisfied ←――――――――――――――――――――――――→ Dissatisfied

The two-factor theory posits that factors influencing satisfaction and dissatisfaction are separate and independent

Motivators

Satisfied (Positive) ←――――――――――――――→ Not satisfied (Neutral)

- Accomplishment
- Recognition
- The nature of work
- Promotion
- Personal growth

Hygienes

Not dissatisfied (Neutral) ←――――――――――――――→ Dissatisfied (Negative)

- Supervision
- Wages and salary
- Interpersonal relations
- Organisational policies
- Work environment

Figure 3.1. Herzberg's Two-factor Model (schematic development). Adapted from "Testing Herzberg's Two-Factor Theory in Educational Settings in Taiwan", by H.C. Chu and T.Y Kuo, 2015, *The Journal of Human Resource and Adult Learning*, 11(1), p. 56. Copyright 2015 by The Journal of Human Resource and Adult Learning.

Satisfaction and dissatisfaction depend on separate factors (Kano, 1984; Zhang & Bi, 2017). While external hygiene factors are also important, they do not necessarily satisfy the job holder, no matter how well they are provided for within the work environment (Chu & Kuo, 2015). As a result, the theory posits that the feelings are not complementary, in other words, the opposite of job satisfaction would not be dissatisfaction, but rather no job satisfaction (Ewen, 1964; Herzberg et al., 1959). The model is therefore expressed as follows by Herzberg and Lindsay (1967, p. 331) in the *Journal of Applied Psychology*:

$$S = f (M + e) \qquad [1\}$$
$$Ds = f (H + e) \qquad [2]$$
$$\rho (M,H) = 0 \qquad [3]$$

Equation 3.1. Two-factor [1-3].

The expression [1]– [3] thus implies the following: Satisfaction is a function of motivators plus other potential factors and/or error of measurement [1], dissatisfaction (DS) is a function of hygiene (H) plus other potential factors and/or error of measurements [2], and the correlation (ρ) between motivators and hygiene factors is zero [3].

Expression [1] through [3] are formal statements of the relationships among the variable of interest, as treated in the in the two-factor theory (Zhang & Bi, 2017). The model concludes that the motivators and hygiene factors are disjoint, and that satisfaction and dissatisfaction should be conceptualised as two separate variables (Lindsay, Marks, & Gorlow, 1967).

The notion of hygiene factors not being influential in satisfaction has been refuted multiple times (Chu & Kuo, 2015; Radebe & Dhurup, 2014; Zhang & Bi, 2017). It is contradictory to posit that these factors only prevent dissatisfaction and remove unhappiness from the work environment, but do not necessarily influence satisfaction (Chu & Kuo, 2015; Peters et al., 2014).

The model should therefore be modified and conceptualised as a bipolar variable (Herzberg & Lindsay, 1967). The empirical test of the bipolar model of JS has the capability of being additive or non-additive, depending on the data (Aziri, 2011). Hence the relationship of satisfaction to a given antecedent (motivator, hygiene) is **not** independent of the other antecedent (Byars & Rue, 2011; Jain & Kaur, 2014). These factors contribute to the working conditions, and therefore affect job holders' satisfaction (Peters et al., 2014).

3.5.2   The Price-Mueller Model of Job Satisfaction

The Price-Mueller Model of JS attempts to depict a comprehensive framework for understanding job holders' satisfaction. The following model fundamentally includes job

characteristics that contribute to employee satisfaction and has been adapted from the publication of *Human Relations* (Agho, Mueller, & Price, 1993, p. 1109).

ENVIRONMENTAL VARIABLES
Opportunity   -

JOB CHARACTERISTICS

Autonomy   +
Role Ambiguity   -
Role Conflict   -
Role Overload   -
Distributive Justice   +
Supervisory support   +
Internal labour market +
Task significance   +
Integration   +
Pay   +
Routinisation   -

                                          → **Job Satisfaction**

PERSONALITY VARIABLES

Work Motivation   +
Positive Affectivity   +
Negative affectivity   -
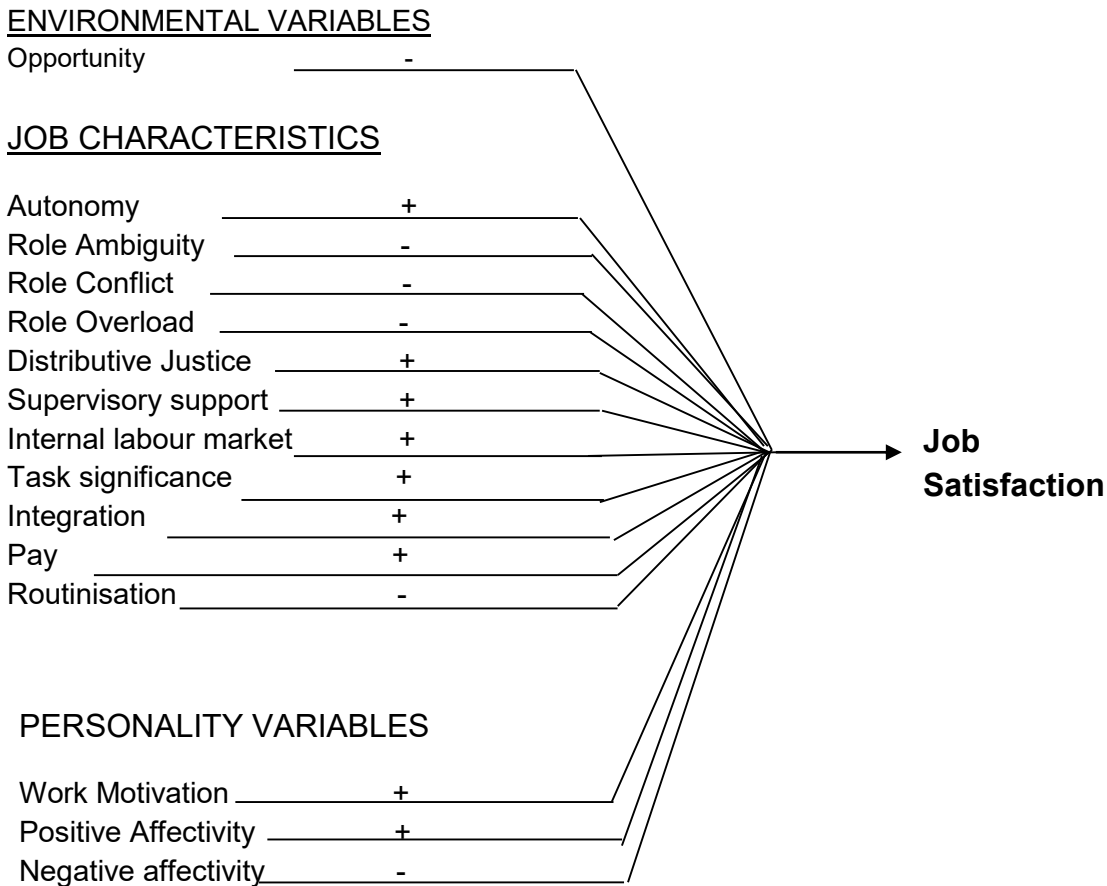
Figure 3. 2 The Price-Mueller model of job satisfaction. Adapted from "Determinants of Employee Job Satisfaction: An Empirical Test of a Causal Model", by A.O Agho, C.W Mueller, and J.L Price, 1993, *Human Relations*, 46(8), 1109. Copyright 1993 by SAGE Social Science Collections.

Equating job characteristics to levels of JS is congruent with the Value-Percept model (Locke, 1976), where satisfaction with a job characteristic = (want – have) x importance. The model can therefore be operationalised as follows from the *Oxford Handbook of Organizational Psychology* (Judge, Hulin, & Dalal, 2012, p. 20–21):

$$S_1 = (v_{ci} - p_i) \times v_i$$

Equation 3.2: The value-percept model.

It should be noted that the value concept is synonymous with concepts of expectation and need (Locke, 1969). In this case, expectations denote one's belief about what will occur in the future, for example in regard to distributive justice, supervisory support, and pay. However, expectations may or may not correspond to what is wanted, thereby resulting in lower levels of JS (Buitendach & Rothmans, 2009).

Low levels of JS result in dissatisfaction and reduce work engagement and organisational commitment. In addition, low levels of satisfaction compel job holders to constantly search for better job opportunity outside their current work environment, and that influences their decision to stay or leave the organisation (Lévy-Garboua et al., 2007). Extreme levels of dissatisfaction ultimately force job holders into quitting their jobs (AlBattat & Som, 2013).

The model remains influential but it is not fully comprehensive and does not clearly delineate the possible environmental determinants of JS, particularly the extrinsic factors (Seashore & Taber, 1975). The extrinsic and intrinsic facets of JS thus need to be clearly outlined to measure JS accurately (Weiss, 2002).

3.5.3   The dispositional approach to the Job Satisfaction Model

According to Judge and Hulin (1993), Affective dispositions influence an individual's subjective wellbeing and ultimately satisfaction with the job. Essentially, the model shows the effect of disposition on job satisfaction using three structural paths, namely, affective disposition to subjective wellbeing, subjective wellbeing to job satisfaction, and job satisfaction to subjective wellbeing.

Subsequently, the model demonstrates job holders' tendency to respond affectively to classes of environmental stimuli (Judge & Hulin, 1993). Similar to the Value-Percept model, a given number of environmental stimuli is relative to the object-value discrepancy (Katzell, 1964, Locke, 1969). What is valued affectively may not correspond with what is expected, thereby resulting in a discrepancy, arousing comparisons of different environmental stimuli (Beer, 1964; Lévy-Gaboua et al., 2007). This model is depicted

below, and has been adapted from the journal *Organisational Psychology* (Judge & Hulin, 1993, p. 394).
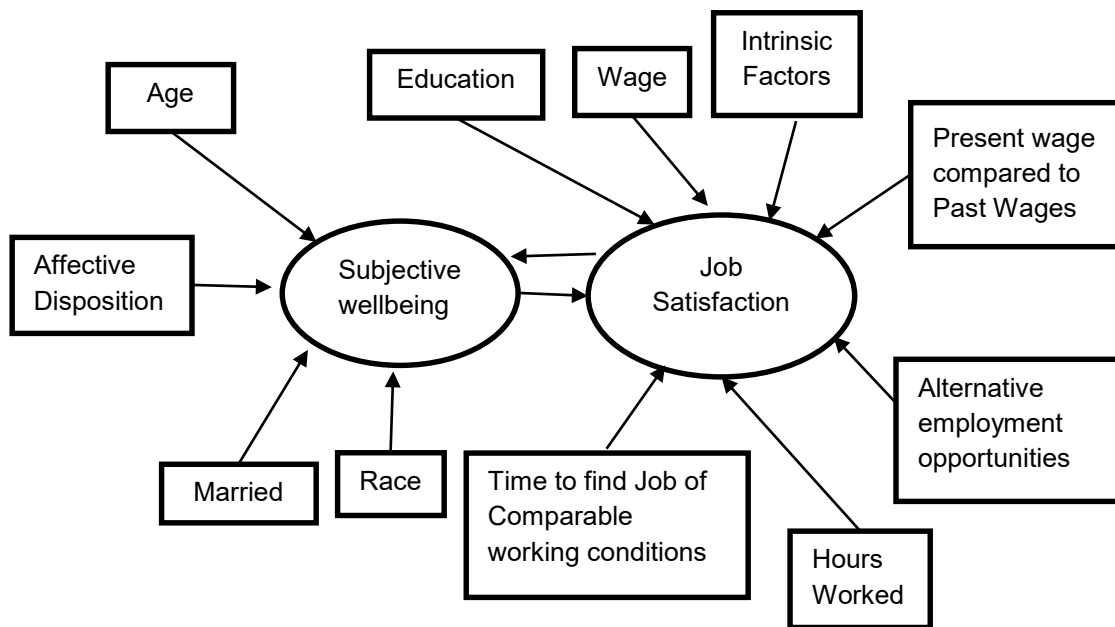
Figure 3.3 The structural model of dispositional approach to job satisfaction. Adapted from "Job Satisfaction as a Reflection of Disposition: A Multiple Source Causal Analysis.", by T.A Judge and C.L Hulin, 1993. *Organizational Behavior and Human Decision Processes, 56(3)*, p. 394. Copyright 1993 by Academic Press, Inc.

This discrepancy will produce different degrees of satisfaction depending on the individual's wellbeing and dispositions (Judge et al., 2012). The model is operationalised as follows in the *Journal of Organisational Behaviour and Human Performance* (Locke, 1969, p. 323):

$$S = 1 - \frac{(|X - V|)}{V}$$

Equation 3.3. Object-value discrepancy model.

Where S = satisfaction, X = the amount of stimulus, and V = the amount most desired. Importance is taken into account by multiplying satisfaction by the importance ratings (Katzell, 1964; Takahashi, 2014). The model concludes that individuals' perceived

discrepancies determine affective responses (positive/negative), however, the formula is based on the actual $X - V$ discrepancy (Lévy-Gaboua et al., 2007). The expression does not account for attitude and reactions towards environmental stimulus such as pay, and therefore lacks evidence to support the assumption (Jessen, 2015; Olafsen, Haalvari, Forrest, & Deci, 2015).

Subjective wellbeing embodies an individual's overall happiness and satisfaction in life, thus those who react positively to neutral characteristics in their lives will also react positively to other satisfaction facet (Judge & Hulin, 1993). Those inclined to dwell on the negatives will be more likely to find gloom in all aspects, including their work environment. As such, these tendencies will transfer to the individuals' reactions to their jobs (Quinn & Thorne, 2014).

Taking into consideration the proposition of the model, subjective wellbeing and not affective disposition was found to have a direct effect on job satisfaction. The representation of the model suggests that the characteristics of jobs do not directly interact with workers' values to produce JS, and hence this notion is fallacious (Peng & Chao, 2015).

By contrast, the affective dispositions are subject to the changing work environment (Judge et al., 2012). Therefore, the effect of environmental factors/stimuli needs to be reconsidered to reveal job holders' internal motivation and reaction to the job facets (Batura et al., 2016). Thus, empirically, the dispositional approach to JS appears to be limited in espousing the congruence between the individual and the work environment (Tong et al., 2015).

3.5.4 Job Facet Satisfaction (JFS) Model

The changing work context necessitates measures that can depict a match between personal patterns of abilities and interests and environmental patterns (Le et al., 2014).

In the case of congruence between the individual and the environment, work becomes more satisfying (Weiss, 2002; Weiss & Cropanzano, 1996).

In this measurement model, a job holder might be satisfied with a particular facet/dimension of the job and dissatisfied with another (Le et al., 2014; Weiss, 2002). Hence, the distinction between overall JS and job facet satisfaction (JFS) is important (Wanous & Lawler, 1972). The light shed from the modification of the Herzberg's bipolar variables (Aziri, 2011; Chu & Kuo, 2015), and the Minnesota Satisfaction Survey (MSQ) (Weiss, 2002; Weiss & Cropanzano, 1996) inspired the schematic development of the model. The following figure depicts a graphical presentation of the model:
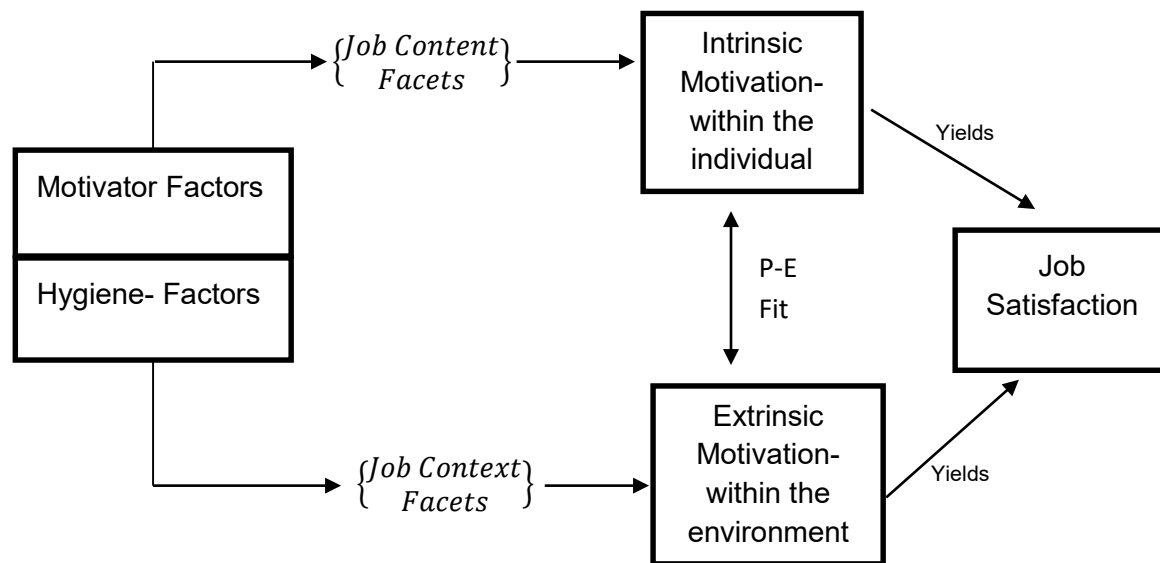
Figure 3.4. The Job Facet Satisfaction Model (Schematic Development).

Overall JS results from a summation of job facets across all aspects of work (Chen et al., 2014; Peng & Chao, 2015). The operationalisation of JS in the MSQ accounts for the congruence/correspondence between the reinforcement system within the work environment and the individual characteristics, thus creating a P-E fit (Lofquist & Dawis, 1969). Previously, the publication of *Psychological Monographs: General and Applied* (Schaffer,1953) operationalised the additive model as follows:

$$JS = \sum^{\textbf{Facets}} (\textbf{JFS})$$

Equation 3.4 JFS [1]

The expression of the model implies that overall JS is a function of the weighted sum of job facets, which accounts for individual differences (Peng & Chao, 2015; Wanous et al., 1997). Thus, it is possible for individuals to hold jobs that do not meet their desires, but which at the same time provide fair equitable outcomes for the inputs required (Locke, 1969).

Individuals place different value on the job facets, and ratings of the importance are utilised to weigh the facets before the summation of the overall satisfaction score (Lazaroiu, 2015; Shafer et al., 2017). As a result, the correlation between facet satisfaction and overall satisfaction increases as the rated importance of the facets increases (Peng & Chao, 2015). The degree of importance is expressed as follows:

$$JS = \sum^{\textbf{Facets}} [\textbf{Importance} \times (\textbf{Wouldlike} - \textbf{IsNow})]$$

Equation 3.5 JFS [2]

The conception of the overall affective orientation on the part of individuals towards the work roles that they currently occupy within a specific work environment unequivocally depicts perceptions of JS (Chu & Kuo, 2015; Judge et al., 2012; Weiss, 2002). This conception is multidimensional and is therefore distinct from a unitary conceptualisation where individuals are characterised by oblique attitudes towards their total satisfaction (Kalleberg, 1977; Peng & Chao, 2015).

The multidimensional concept of JS incorporates differences in work values, and perceived job characteristics as key explanatory variables of JS within a specific context (Peng & Chao, 2015; Tong et al., 2015). Hence, the JFS model is relevant for espousing the P-E fit of e-tutors in their virtual work environment (Wanous et al., 1997; Wheatley,

2012). Accordingly, P-E fit will indicate their satisfaction level within ODL institution (Waters, 2015).

3.6 EXTENSION OF MINNESOTA SATISFACTION SURVEY IN VIRTUAL WORK ENVIRONMENT

Causes of JS in an online context is a growing area of interest, where organisations seek to measure their specific strengths and weaknesses (Buitendach & Rothman, 2009). The fundamental mission of academic institutions embodies the work content which in turn determines the job satisfaction of faculty (Akuamoah-Boateng & Boadu, 2013; Bozeman & Gaughan, 2011). However, the pedagogical changes in ODL institutions alter the conception of JS in virtual working environment (Kop et al., 2011; Wheatley, 2015).

In online instructors (e-tutors), JS is influenced by a multiplicity of factors (Tooksoon, 2011; Fabry, 2012). Hence, the complex facets of both intrinsic and extrinsic JS are under scrutiny (Böll, Cecez-Kecmanovic, & Campbell,2014; Weiss & Cropanzano, 1996; Weiss et al., 1967). Accordingly, the complex dimensions of teaching online calls for multiple facet measures of JS in order to expose the P-E fit (Peng & Mao, 2015; Weiss, 2002).

The multifaceted measures will be espoused to reveal a cluster of evaluative feeling and the degree to which job holders (e-tutors) like their jobs (Spector, 1985, 1992), particularly with regard to proactivity and social/relational aspects inside virtual work environments (Gibson et al., 2011; Nicholson, 2010; Oldham & Hackman, 2010).

The multiple facets measure of the job can potentially capture all the unique aspects of e-tutors' work (Aziri, 2011; Bruck, Allen, & Spector, 2002). Rather than an individual facet score, the summation across all facets will depict and gain an overall satisfaction score (Hancer & George, 2003). Thus, when summed, the facets are the best predictors of JS (Tooksoon, 2011).

The MSQ present itself as an appropriate instrument to expose multifaceted measures relating to intrinsic and extrinsic satisfaction. The instrument can potentially reveal the P-E fit and overall satisfaction (Weiss, Dawis, & England, 1967). The degree of congruence will represent the evaluation and judgement of e-tutors with regard to their role dimensions within their virtual context in ODL institutions.

3.7   CHAPTER SUMMARY

This chapter reviewed the broad aspects of JS in relation to the changing nature of work as a result of technological developments. Owing to the fact that these changes have brought about a paradigm shift in the nature of JS, the dimensions of the construct were investigated. The review focused particularly on the teaching role of e-tutors in an ODL institution where educational technologies have transformed the way educators work and communicate.

In so doing, JS resulting from teaching in traditional lecture rooms was reviewed in comparison to teaching in the virtual classrooms in which e-tutors perform their online teaching activities. The review showed that the underlying philosophy and basic principles of the teaching role do not necessarily change in either of the educational settings. However, technology introduces complex teaching methods which have altered dimensions of JS in a virtual context.

Guided by significant theoretical models, the job activities performed in the virtual work environment constitute the job content dimension, whereas the prevailing work conditions constituted job context dimension. The former dimension relates to the internal motivation of the job holder. Therefore, the teaching activities mediated by technological tools were reviewed as making a meaningful contribution to the intrinsic satisfaction of e-tutors.

On the other hand, facets such as supervision and relationship with co-workers, company policies, pay and recognition embody working conditions relating to the external motivation of the job holder. These external facets were reviewed as having an influence

on the extrinsic satisfaction of e-tutors. The MSQ is therefore deemed pertinent to this study. However, considering the isolated nature of the virtual work environment, the review of the model was done taking cognisance of the potential limitations of the social/relational aspect of virtual JS.

The influence of new facets such as technological infrastructure and institutional support were therefore taken into consideration, and subsequently reviewed as having a significant influence on extrinsic JS. Hence, the model was extended to the virtual work environment. The next chapter presents a review of OC as a possible outcome of JS in the virtual work setting.

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CHAPTER 4: ORGANISATIONAL COMMITMENT

4.1   INTRODUCTION

The JCM affects a wide variety of work-related outcomes (Hackman & Oldham, 1980; 2010, Oldham & Fried, 2016). Similar to JS, organisational commitment (OC) is one of the work-related outcomes induced by job design factors (Lawler & Hall, 1970; Dahlstrom, 2013). Job characteristics, such as skill variety and autonomy are good predictors of JS, and the construct is a proven determinant of organisational commitment (Chen et al., 2011; Dirani & Kuchinke, 22011). Thus, JS contributes significantly to employee's commitment to the organisation (Gutierrez, Candela, & Carver, 2012)

Comparably, the construct of OC contains an affective tone that is also present in JS. These two constructs embody the jobholders' attitudes and feelings that are induced by what is performed at work and the conditions that exist in the work environment (Gajendran et al., 2015). The affective tone of the two constructs continues to gain attention from a growing body of research, and this examination extends to the virtual work environment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002).

Owing to the isolated nature of the virtual work environment, virtual workers need work that is interesting and challenging (Donovan & Wright, 2013). Most importantly, they need a supportive work environment (Fabry, 2012; Hynes, 2014). The work activities in such environments should allow workers to use their skills and talents in order to demonstrate their creativity and innovation (Gutierrez et al., 2012; Lumley, Coetzee, Tladinyane, & Ferreira, 2011). Repetitive work with little individual discretion repels high technology employees in virtual work settings (Döckell, Basson, & Coetzee, 2006).

Accordingly, a supportive work environment is favourable for creating psychological alignment of jobholders' goals (Pinho, Rodrigues, & Dibb, 2014). Such an approach has been proven to be strategic, as a supportive work environment that provides an

opportunity to learn and the sharing of information correlates with the intention to stay (Geldenhuys, Laba, & Venter, 2014). Given the above, this chapter aims to conceptualise the OC construct, and to explain how the construct relates to the JS levels derived from activities carried out inside the virtual work environment and the prevailing conditions within this context.

4.1.1   Definition of Organisational Commitment

The concept of commitment has previously been used independently and unsystematically to analyse both individual and organisational behaviour (Becker, 1960). Therefore, the concept has been conceptualised as an exchange and accrual phenomenon (Marsh & Mannari, 1977). This phenomenon is dependent on the employee's perception of the proportion of incentives relative to the contributions and the accumulation of side bets or investment in the employing system. Thus, while partly a function of personal choice, commitment is primarily a matter of accrued side bets/investments such as pay and seniority, which are significantly linked to age and the presence of a pension fund (Alluto, Hrebriniak, & Alonso, 1973; Becker, 1960).

While the above view of commitment is critical, it is to some degree limiting. According to Mowday, Steers, and Porter (1979, p. 226), OC "refers to the relative strength of an individual's identification with and involvement in a particular organisation". This form of commitment has an affective tone and it is based on the nature and the quality of an employee's work experiences during his tenure in an organisation (Steers, 1977, p. 47).

This identification relates to the person- environment (P-E) fit described under JS (Rounds et al., 1987). As a result, the identification/congruence resulting from the P-E fit is mainly paramount to the individual jobholder (Camilleri, 2006; Gutierrez, Candlea, & Carver, 2012). Under conditions where there are challenges with the congruence, the job holder, and in particular the telecommuter, might experience difficulty in displaying affective response to the organisation (Allen & Meyer, 1990; Morrow, 2011).

P-E fit suggests that the jobholder has a deeper belief in the goals of the organisation, and is therefore willing to contribute meaningfully to the organisation's mission and objectives. Subsequently, the desire to maintain membership intensifies (Allen & Meyer, 1990; Mathews & Shepherd, 2002) and such employees work selflessly and make personal sacrifices, thereby performing beyond normal expectations (Stander & Rothmann, 2008; Walsh & Gordon; 2008).

Based on above connotations, OC is regarded as a psychological and emotional attachment to the organisation. This attachment is central to the enduring character of the individual and results in them identifying with the organisation. This development of affection is the root of meaningful work experiences (Hackman & Oldham, 1980; Oldham & Hackman, 2010; Steers, 1977). Therefore, OC is a function of personal, role-related and structural characteristics, as well as situational factors related to the job setting (Randall & Cote, 1991, p. 199).

4.2   HISTORICAL DEVELOPMENT

The independent and unsystematic use of OC rendered the character and context of the construct equivocal. However, the nature of the concept has been evolving slowly, to become more of a socio-psychological construct today (Ferris & Aranya, 1983, Steers, 1977). Accordingly, in a work context, commitment is constructed on the basis of social processes and working conditions (Meyer et al., 2002). Where these conditions are of great value, then the individual will engage in consistent lines of work activity throughout the course of his/her career (Morrow,2011).

4.2.1   Organisational commitment in traditional work environment

According to Becker (1960), the normal conditions under which commitment would come into being occur when an individual stake something of great value to him, something not originally related to his present activities, and thus makes a side bet/investment. Such a decision would be either deliberate or systematic, constraining future movements (Ritzer

& Trice, 1969). The greater the number of the side bets/investment, the greater the commitment of the individual to the organisation (Buchanan, 1974).

The side-bet such as salary increases, promotion which is greatly influenced by experience and educational background, and thus giving rise to freedom, and status would conventionally motivate the individual to remain consistent in line of work activities within the same organisation (Marsh & Mannari, 1977). Inconsistency would result in major losses of investment with the employing organisation. Hence this traditional view of commitment is regarded as being inflexible, bureaucratic, and systematic (Alutto, Hrebiniak, & Alonso, 1973).

Following this tradition, an individual, and mostly older generation of workers would accrue investment based on the number of years and experience with the organisation and in turn increasing commitment with the employer (Buchanan, 1974). Therefore, variables such as age, gender, education (less), and marital status had a major influence on the extent of organisational commitment (Marsh & Mannari, 1977).

In addition to the gained years of experience, the individual would develop social ties with the organisation, thus making it difficult to consider employment elsewhere (Steers, 1977). Such conditions would render the construct as socio-psychological based on work experiences that propel the individual to forgo alternative employment (Ferris & Aranya, 1983). Without being conscious of it, the individual will identify with the organisation and therefore develop an attachment to that organisation (Buchanan, 1974; Mowday, Steers, & Porter, 1979).

In conditions where commitment is deliberate, an individual has a needs structure that exists outside the organisation (Randall & Cote, 1991). Under such conditions, the individual is committed rather more to the profession than to the organisation (Morrow, 1983, 2011). Thus, the individual will act consistently to maximise the possibility of satisfying his or her professional needs and furthering his or her education, which therefore becomes a strong antecedent of commitment (Cohen, 1999).

If an individual has strong professional bonds, they are more likely to break their ties with the current organisation in pursuit of an organisational culture that upholds their professional codes and ethics (Cohen, 2000; Somers, 1995). However, the conception of commitment based on the professional ties has mixed findings. There are conflicting support for professional commitment or both view of commitment (O'Driscoll & Randall, 1999).

In a work context, the conception of commitment based solely on professional ties was eventually opposed, merely because, without the organisation, commitment lacks context and character (Becker, 1960). The reason for this is that, at first, the individual's goals and values have to be congruent with the goals and values of the organisation. Thereafter, the individual will eventually commit to the organisation (Cohen, 2000; Meyer & Allen, 1997). The view of this study focuses more on the conception of organisational commitment as opposed to professional commitment.

4.2.2   Organisational commitment in the changing nature of work

The work environment has changed radically, and the conditions that influence organisational commitment can no longer be confined to conventional factors such as pay, promotion and status only (Powell & Meyer, 2004). The affective tone rooted on the identification and emotional attachment to the organisation have raised perceptions of finding a suitable alternative organisational culture. Indeed, while the cost of leaving may be high, it is not associated with economic conditions alone (Gutierrez et al., 2012).

In modern work settings, commitment is related to diverse factors that together yield commitment to the organisation. These factors include social support, structural resources and organisational policies and practices (Peters & Batenburg, 2015). According to Allen and Meyer (1990), these factors could be associated with the jobholder's attachment to the organisation, the aforementioned cost of leaving the organisation and the obligation to reciprocate.

Generally, organisational culture that encourages supportive work environments, strengthen the social ties that individuals have with their organisation, particularly if they are new to the organisation (Morrow, 2011). Depending on the support they receive, jobholders may commit to the relationship that they have with their supervisors and co-workers (Gutierrez et al., 2012). In this manner, jobholders identify with the organisation, making it difficult to break the bond and leave the organisation. As such, the strong desire to maintain membership based on social ties have a strong affective tone (Ramdhani, Ramdhani, & Ainissyifa, 2017).

In terms of modern organisational practices such as telecommuting, conditions that would enhance and maintain affective commitment require different approaches (De Vries, Tummers, & Bekkers, 2018; Morrow, 2011). Telecommuters are not co-located with their supervisors and co-workers, as a result, the ambiance of affection found in social support is mediated electronically through information and communications technologies (ICT) (Boell, Cecez-Keckmanovic, & Campbell, 2016). The communication channels need to be managed effectively as effective communication has a positive impact on the psychological state of telecommuters (Belovski, 2014; Reed, Goolsby, Johnson, 2004).

Identification with one another and attachment to the organisation requires collaborators who are co-present, accessible and accord to one another (Gibson et al., 2011). As a result, social ties in a virtual context require exceptionally strong electronic collaboration and progressive feedback. The practice helps to counteract perceptions of isolation, build positive attitude towards the organisation and reinforce commitment (Collins, Hislop, & Cartwrignt, 2016).

Teleworkers often portray high levels of job involvement and work longer hours, however their work is tacit and their dedication might go unnoticed, thus ultimately hampering their commitment (Bentley et al., 2016). However, supervisors who recognise and reward the dedication of teleworkers increase the value of flexible work arrangement practices.

In addition to the abovementioned, effective communication can counteract the problematic professional isolation often reported by teleworkers (Collins et al., 2016). Overall, work/life balance becomes a worthwhile investment and losing the opportunity might be costly for the telecommuter, especially females who have personal responsibilities such as childcare (Bae & Kim, 2016; Morrow, 2011).

The attachment to the organisation is also dependent on the provision of structural resources in the form of technological support and the relevant training interventions. These are some of the expectations that telecommuters have in order to fulfil their role, and therefore these form part of the telecommuters' psychological contracts. Moreover, reliable communication channels and emotional support also forms part of the contract (Bentley et al., 2016). According to McDonald and Makin (2000), the contract contains tacit expectations between jobholders and their supervisors, and both parties need to fulfil these expectations.

Montes, Rousseau, and Tomprou (2015) explains further and emphasise that the psychological contract is stronger than just expectation. It involves pledges and reciprocal obligations not included in the formal employment contract. Supervisors who do not violate the contract raises the perception that favourable benefit is not feasible elsewhere, and therefore the perception increases telecommuter's obligation to reciprocate and commit to their current organisation (De Vries et al., 2018).

4.3   THE NATURE OF ORGANISATIONAL COMMITMENT

Similar to JS, OC is affective in nature. Hence, it is considered to be an emotional attachment to the organisation such that the strongly committed individual identifies with, is involved in, and enjoys membership of the organisation (Allen & Meyer, 1990). According to Walsh and Gordon (2008), the strongly committed individual identifies with the organisation based on the belief that their organisation is pivotal to their enduring character.

Pinho et al. (2014) depicted the nature of OC from a psychological perspective. The jobholders' goals are aligned with the mission and values of the organisation, thus creating an emotional attachment to the organisation. This attachment will lead the jobholder to engage in conscious ways and behaviours that will sustain the relationship with the organisation (Stander & Rothmann, 2008). Such employees are believed to be more productive and less likely to quit (Bambacacus & Patrickson, 2008).

Many researchers have studied the construct of OC from an attitudinal perspective (Allen & Meyer, 1990; Lumley et al., 2011; Solinger, van Olffen, & Roe, 2008). In line with this view, the construct relates to individuals' mind-sets about the organisation and therefore fits into the environment and the prevalent management practices (Boell et al., 2016; Camilleri, 2006).

Relatively, the changing nature of the work environment draws attention to the emotional ties created by being co-present and accessible to one another using electronic means (Gibson et al., 2011). Psychologically, the jobholders virtually identify with one another, thus creating an attachment that makes it difficult for the jobholder to leave the organisation voluntarily (Allen & Meyer, 1990).

Considering this nature, OC can be portrayed from an emotional, attitudinal, behavioural, and motivational perspective (Manetje & Martins, 2009). Based on the above expound, Buchanan (1974, p.533) laid the foundation on three components, namely: (1) identification of one's own goals and values to that of the organisation, (2) psychological immersion or absorption in the activities of one's work role, and (3) a feeling of affection for and attachment to the organisation

4.4   THE MULTIDIMENSIONALITY OF ORGANISATIONAL COMMITMENT

In line with the nature of the construct and the historical development, conditions of the work environment bring about multiple commitments levels that surpass conventional dimensions of OC (Döckell et al., 2006). This evolution causes the construct to be multi-

dimensional, particularly under remote work structures (Allen & Meyer, 1990; Gutierrez et al., 2012; Meyer et al., 2002).

Potentially, each type of commitment can be measured against the various targets of commitment which, in turn, develop into multiple dimensions of the construct (Gutierrez et al., 2012). According to Allen and Meyer (1990) and Meyer et al. (2002), these dimensions' form part of the three types of commitment, namely, affective, continuance, and normative commitment.

4.4.1   Affective Commitment

Affective Commitment (AC) denotes emotional attachment to, "identification with, and involvement in the organisation" (Meyer et al., 2002, p.21). According to Döckel et al. (2006), AC is critical for employees working in a high technology environment. Specifically, for telecommuters, the issue of organisational identity is a critical factor in building the perception of belonging to the organisation. Organisational identity also creates a psychological link to the organisation through contact with co-workers and supervisors (Dahlstrom, 2013; Dawson-Howard, Standen, & Omari, 2013; Reed et al., 2016).

4.4.2   Continuance Commitment

Continuance commitment (CC) refers to anything of value the individual has invested such as time, effort, training, competitive wages (Döckell et al., 2006; McDonald & Makin, 2000). In terms of CC, telecommuting is perceived as reducing costs and travel time (Shekarchizadeh et al., 2015). According to Waters (2015), telecommuting has provided faculty staff with the opportunity to reduce commuting costs through remote access to their work environment, thus enabling them to maintain their academic and social services to students.

If telecommuters perceive these benefits might be lost, if they were to leave the organisation (Allen & Meyer, 1997), their CC may be greatly influenced, and therefore they may be more likely to stay with the organisation. In this approach, continuance commitment is more calculative, as it results from considering the benefits of organisational membership against the perceived costs of leaving. This involves employees asking themselves whether they can afford to resign (Aldag & Kuzuhara, 2002).

AC and CC are conceptualised by Meyer and Allen (1984) as being independent. That is, the extent to which one is affectively committed does not affect the degree of CC and vice versa. In agreement, Theron (2006) states that an employee might not experience JS or job involvement, yet be relatively satisfied with the organisation and therefore wish to continue working for it.

The parallel lines of AC and CC can be depicted in the case of higher education. As their family structures continue to evolve, faculty members and staff might appreciate sabbaticals and telecommuting in an effort to meet the demands of both work and home to maintain work/life balance (Waters, 2015). These are flexibility ideals, which may also be factored into the social exchange framework and thus compel reciprocity (Caillier, 2014). According to Gajendran et al. (2015), recipients of flexibility ideals are likely to, in line with social exchange theory, feel obligated to those who approved their special work arrangements, usually their immediate supervisor.

4.2.3   Normative Commitment

The mind-set of obligation or normative commitment (NC) develops as a result of the internalisation of norms through socialisation (Döckell et al., 2006). Through socialisation employees are taught the "correct" way to perceive, think and feel in relation to problems they may encounter in organisations (Donovan & Wright, 2013). Accordingly, Manetje and Martins (2009) identify organisational culture as the antecedent of OC, thus influencing

employees' commitment directly through cultural values and indirectly through HR practices.

4.5   THEORETICAL MODELS AND THE RELATED CONSEQUENCES

Jobholders experiencing higher levels of commitment to the organisation generally have a strong intention to maintain membership with the organisation (Allen & Meyer, 1997). The strong desire to maintain membership manifests into high levels of motivation, job satisfaction, and performance. (Bae & Kim, 2016; Lee et al., 2001).

Under conditions where the jobholder believes that the organisational culture and the prevailing management practices are not central to his / her character, their attitude will portray a different mind-set (Lumley et al., 2011; Ramdhani et al., 2017; Walsh & Gordon, 2008). Consequently, the work conditions become unpleasant for the jobholder and their organisational commitment will begin to decrease (De Vries et al., 2018).

Concomitantly, the intension to leave and find an alternate organisation will increase, thereby resulting into low productivity, absenteeism, and turnover (Morrow, 2011; Wong & Tong, 2014). The manifestation of different dimensions of commitment and the corresponding levels of commitment can be depicted graphically using theoretical models that have remained influential in the topic.

4.5.1   The Lifetime Commitment Model

Lifetime commitment has a role to play in the jobholders' desirability and suitability to stay or leave the organisation. As such, this is based on the norms and values of the organisation (Marsh & Mannari, 1977; Steers, 1977). On this notion, those who stay longer with the organisation are in support of lifetime commitment values and norms of the organisation, and it is mostly men (Buchanan, 1974), whereas those who leave seems to be violating the lifetime commitment values and norms are women. This model (Marsh

& Mannari, 1977, p. 66) is controversial in its conception of commitment and has been taken from the journal *Administrative Science Quarterly*.
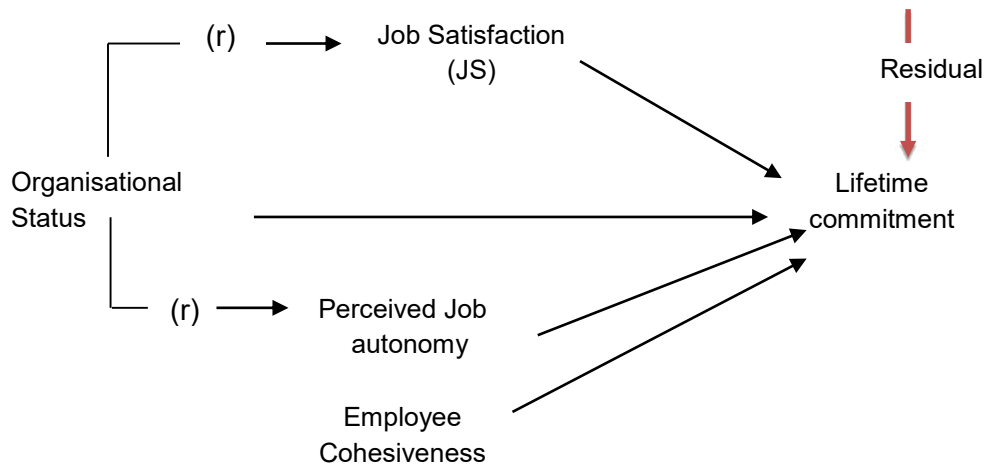
Figure 4.1: Path model for lifetime commitment of male employees. Adapted from Organizational Commitment and Turnover: A Prediction Study, by R.M Marsh and Mannari H, 1977, *Administrative Science Quarterly*, p. 66. Copyright 1977 by Sage Publications, Inc.

The model posits that lifetime commitment varies positively with organisational status, job satisfaction, perceived autonomy, and employee cohesiveness. The red arrow represents residual, which refers to unaccounted variance in facets, such as social origin and current residence, as well as participation on the company-sponsored recreational activities. Hence, the higher one scores on these dimensions, the more one supports lifetime commitment norms and values.

These dimensions are regarded as commitment-relevant experiences creating a desire to maintain membership (Buchanan, 1974). Amongst these dimensions, organisational status such as seniority is the strongest predictor of lifetime commitment (Wiener, 1982). Seniority came with rewards such as pay rises, better chances of promotion and status enhancement. According to Alutto et al. (1973) this increases side-bets or investments in the organisation thereby resulting in greater commitment.

In contrast, the jobholder who has a shared economic obligation is bound to remain attached to the organisation on the basis that it is morally correct to do so despite a lack

of status enhancement (Marsh & Mannari, 1977). Accordingly, this extends to norms and values. Consequent to the moral correctness, dimensions such as JS and perceived autonomy have a strong correlation (r) with lifetime commitment.

The degree of satisfaction with other facets of the job and the jobholder's belief about the extent to which s/he can apply his judgement has better influence on OC (Oldham & Fried, 2016). The dimension of employee cohesiveness is also fundamental to the desire and the suitability to stay or leave the organisation. This refers to the extent to which the employees interact, solidary relationships with fellow employees, both on and off the job (Walsh & Gordon, 2008).

This model has been influential in operationalising the concept of commitment. However, it is biased and limiting. The model takes marriage into consideration to some extent and perceives men to be more in support of lifetime commitment values and norms (Ritzer & Trice, 1969) than women, who would appear to be in violation of lifetime commitment as a result of assuming parenting roles and nurturing families and marriage (Cook & Wall, 1980).

The model is thus less pertinent when it comes to complete measure of OC (Ferris & Aranya, 1983; Cohen, 1999). Organisation are now cognisant of the changing nature of work and roles (Bezuidenhout, 2015, Troup & Rose, 2012). As such, there is a consideration of wide HRM practices such as flexible work arrangements aimed at accommodating women and their caring responsibilities (Calvo, 2013, Gajendran et al., 2015).

4.5.2   The Organisation Commitment Model: Antecedents and Outcomes

The organisational commitment model posits that commitment is influenced by the nature and quality of an employee's work experiences during his or her tenure in an organisation (Steers, 1977). Work experiences are viewed as a major socialising force and as such represent an important influence on the extent to which psychological attachment is

formed with the organisation (Hackman & Oldham, 1980, 2010). Figure 4.2 presents the organisational commitment model as depicted in the journal *Administrative Science Quarterly* (Steers, 1977, p. 47).
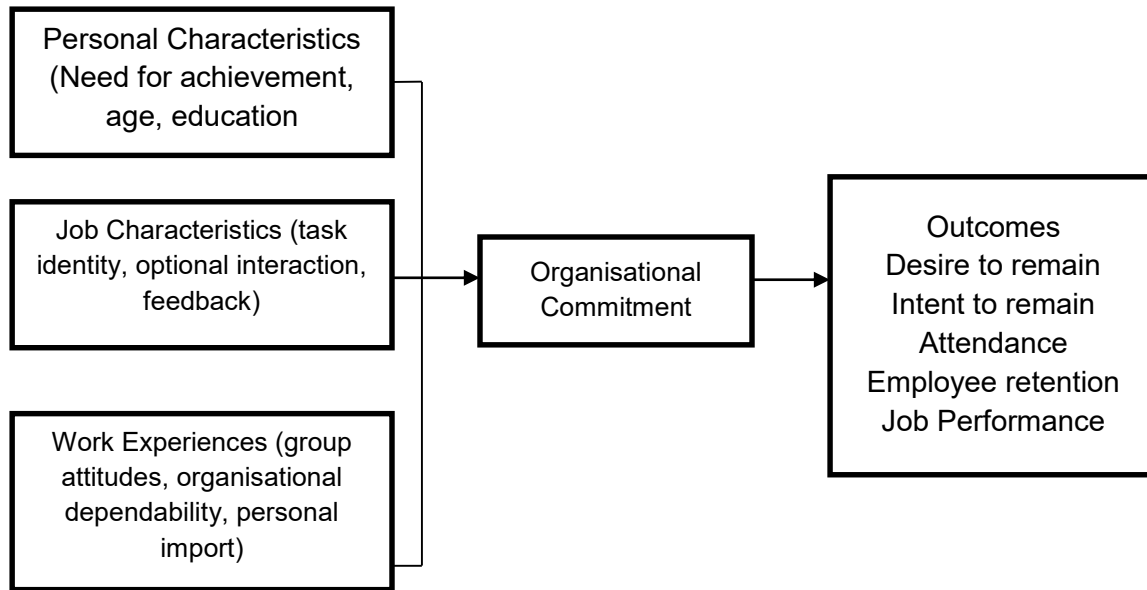
Figure 4.2: The antecedents and outcomes of organisational commitment. Adapted from "Antecedents and Outcomes of Organisational Commitment", by R.M Steers, 1977, *Administrative Science Quarterly*, p. 47. Copyright 1977 by Sage Publications, Inc.

When it comes to the determinants of OC, the work environment has a major influence on employees' perception (Steers, 1977). The dimensions OC can prudently be grouped into personal characteristics, job characteristics, and work experiences (Mowday et al., 1979; Hackman & Oldham, 1980; 2010).

The personal characteristics define the individual in terms of age, opportunities for achievement based on education, and central life interest. Thus, these are what the individual brings into the work environment and if congruent to the job characteristics, there is a cognitive bond which serves as a stimulus to OC (Dirani & Kuchinke, 2011).

Job characteristics include the level of challenge in the job, opportunities for social interaction, and the amount of feedback provided on the job (Oldham & Fried, 2016,

Parker, 2014). The interaction between these characteristics potentially creates experiences that are either pleasant or unpleasant (Meyer et al., 2002; Weiss, 2002).

Based on these experiences, there is an impact on the individual's tenure which might be short or long, where the experiences are pleasant, conditions of work become favourable (Mathews and Shepherd, 2002). Consequently, there is an increase in the desire and the intention to remain with the organisation. Work experiences that are unpleasant and not favourable lead to a short tenure (Chen et al., 2011).

The antecedents and outcome of OC are therefore mostly situational and based on environmental conditions (Randall & Cote, 1991; Wiener, 1982). Therefore, the model remain influential to OC, however is inadequate when it comes to depicting the affective tone founded on the psychological and emotional attachment to the organisation (Allen & Meyer, 1997; Morrow, 2011).

4.5.3   The Multivariate Model of Work Commitment

This model takes a broader account of other commitment construct through a systematic investigation. The motive of model is to identify the strengths and the interrelationship of these major forms of work commitment (Randall & Cote, 1991). Therefore, the model moves from the bivariate correlation approach in to multivariate framework.

This model posits that a jobholder's experiences from several facets of the work environment have varying degree of commitment, and this is based on the value of the work, the job itself, co-workers, the organisation, and the profession (Randall & Cote, 1991). From these environmental facets, the jobholder experiences five major forms of commitment that are related but distinct. These are presented in Figure 4.3, which is taken from the journal *Work and Occupations* (Randall & Cote, 1991, p. 198).
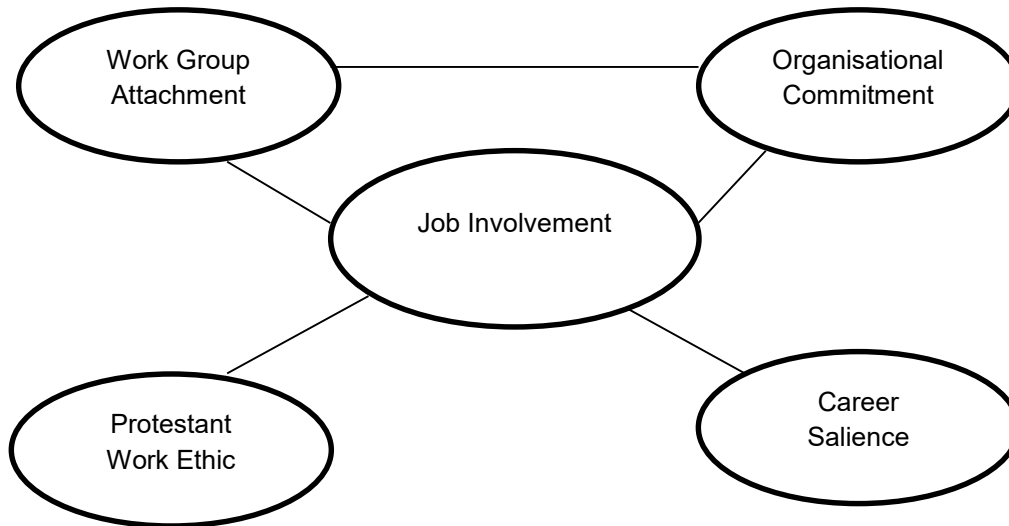
Figure 4.3: Model of the relationships between the constructs of work commitment. Adapted from ''Interrelationships of Work Commitment Construts'' by D.M Randall and J.A Cote, 199, *Work and Occupations, 18(21),* p. 198. Copyright 1991 by Sage Publications, Inc.

Work group attachment refers to the individual's identification and sense of cohesiveness based on social support in the form of guidance and reassurance from members of the organisation (Chen et al., 2011). Most importantly, constructive feedback and clear guidance from supervisors, increases the perception of social support (Stander & Rothmann, 2008). In this initial encounter, the new employee engages into a broader understanding of the organisation through the support of more tenured employees (Morrow, 2011). This process is critical in helping individuals to find their purpose through meaningful experiences. In this way, the individual develops strong ties with the organisation (Manetjie & Martins, 2009).

The protestant work ethics is viewed as a personality attribute assumed to be relatively fixed over an individual's course of life. Thus, based on demographic traits such as gender, age, and educational, an individual is able to exert some level of job involvement (Morrow, 1983; 2011). This is regarded as a significant work commitment construct as it has an influence on the jobholder's affective responses to either their career or organisation (Randall & Cote, 1991).

Job involvement refers to the degree of an individual's submersion in work activities. It is mainly influenced by work group attachment or social affiliation which shapes the individual's attitude towards the job (Walsh & Gordon, 2008). Furthermore, job involvement is tied to the protestant work ethic owing to values learnt early in the socialisation process. Consequently, the jobholder will portray these values when interacting with the work group regardless of the context in which he or she is employed (Cohen, 1999).

Career salience refers to an individual's commitment being directed mainly at the profession rather than the employing organisation (Morrow, 1993). This viewpoint regards commitment to the profession and to the employing organisation as having exclusive norm and values. However, such commitment may be incompatible with the culture of the organisation (Cohen, 2000). As such, individuals who have an enduring commitment to their profession rather than to their organisation are deeply submerged in their jobs; hence, job involvement is a strong predictor of career salience (Morrow, 2011).

Organisational commitment is generally an outcome of identification with the organisation and the subsequent work conditions (Witting, 2006). As a result, an individual has the willingness to exert more effort and be increasingly involved in the job activities (Wong & Tong, 2014). Additionally, social bonds with members of the group are also regarded as a significant antecedent of OC, as socially involved individuals may be reluctant to break social ties (Cohen, 2000).

Based on this, OC comprises personal and role-related factors as well as structural and situational factors related to the job (Morrow, 2011). As such, the multivariate model of work commitment is very comprehensive, covering all the work commitment constructs. However, this model will not be used as an attempt to test all the work commitment constructs would exceed the scope of this study.

4.5.4 The three Component Model of Organisational Commitment

Allen and Meyer (1990) developed a multidimensional model that proposes three simultaneous mind-sets encompassing affective, normative and continuance organisational commitment. The model is taken from the book, *The psychology of attitudes* (Eagly & Chaiken, 1993, p. 209).
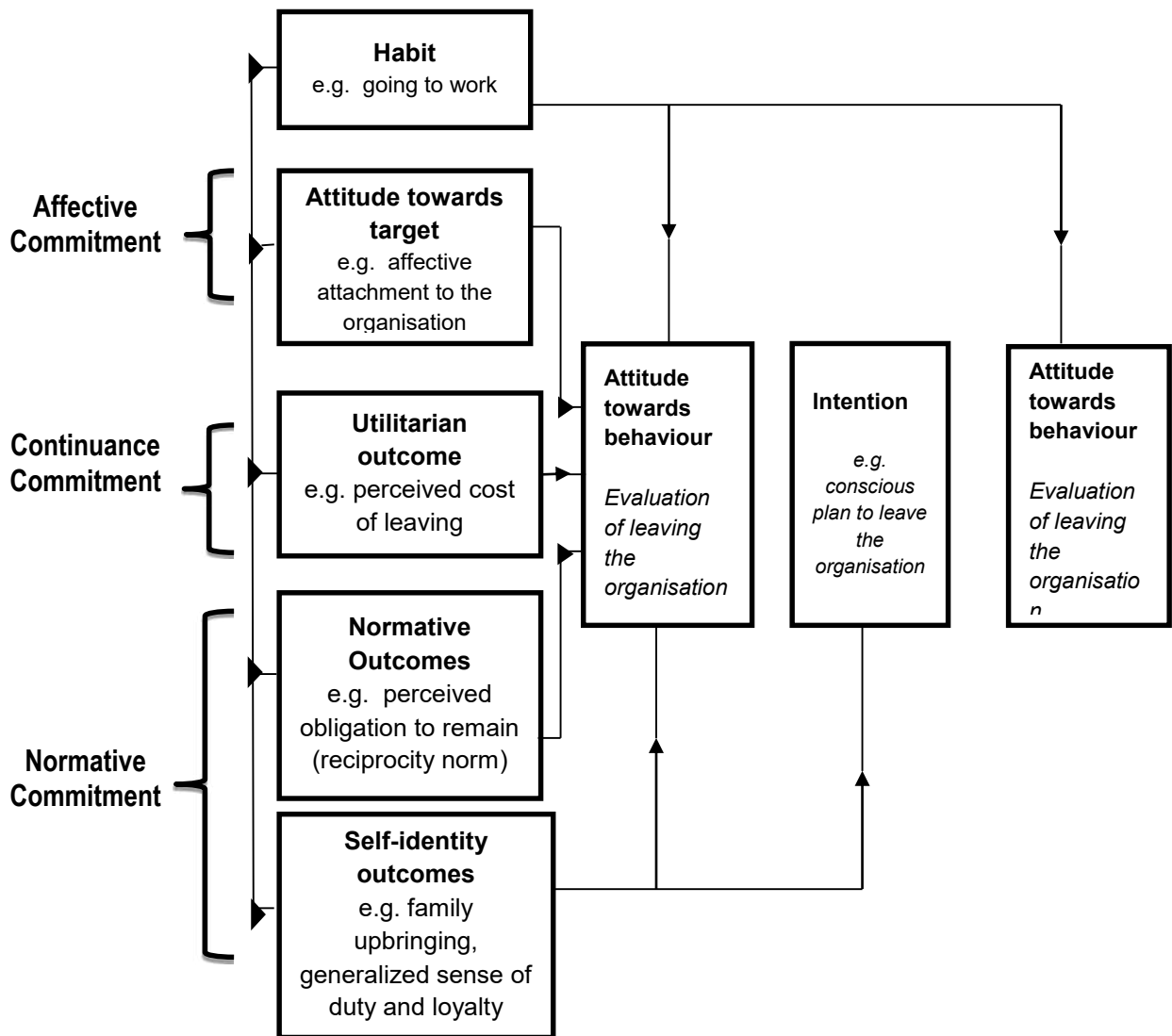
Figure 4.4. The integration of the three-component model of organisational commitment. Adapted from "The psychology of attitudes", by A.H Eagly and S. Chaiken, 1993. Copyrights 1993 by Harcourt Brace Jovanovich College Publishers.

This model remains influential on the construct of OC (Allen & Meyer, 1997, Solinger et al., 2008). Generally, the model depicts the dimension of OC as a specific application of attitude–behaviour relations in a workplace (Eagly & Chaiken, 1993). According to Allen and Meyer (1990), affective commitment (AC) reflects commitment based on emotional ties with the organisation. On the other hand, continuance commitment (CC) reflects commitment based on the perceived costs of leaving the organisation, while normative commitment (NC) reflects commitment based on a perceived obligation towards the organisation (Jaros, 2007, p.7; Lee et al., 2001).

When placed within this general model, the dimensions are expressed inversely (Solinger et al., 2008). AC equates with an attitude towards a target, while CC and NC represent the anticipated outcomes of a behaviour, that is, the act of leaving (Eagly & Chaiken, 1993). The inverse expression of dimensions in the general model is parsimonious and places limitations on the conceptualisation of OC. The model will be used in the current study, however, with reference to the original formulation of the three-component model of organisational commitment (Allen & Meyer, 1997; Ramdhani et al., 2017).

AC signifies an emotional attachment to, identification with, and involvement in the organisation and its goals. As a result, individuals commit to the organisation for its own sake (Allen & Meyer, 1997). CC on the other hand progresses based on the accrued economic interests and benefits and the perceived lack of alternatives (Allen & Meyer, 1990). Hence, the accrued benefits compel employees to stay committed to their organisation as the costs associated with leaving the organisation are high (Somers, 1995).

NC is, in some respects, similar to AC. People continue membership with the organisation because they feel they ought to, based on a perceived obligation towards the organisation (Allen & Meyer, 1997). The receipt of benefits induces a need to reciprocate (Collins et al., 2016). According to Morrow (2011), the obligation to reciprocate is based on the psychological contract, thus entailing beliefs about what the employer owes employees and what employees in turn owe the employer.

The need to reciprocate also resonates with social exchange theory. This theory indicates that the recipients of flexible work arrangements are likely to feel obligated to those who approved their special work arrangements, which is likely to be their immediate supervisor (De Vries et al., 2018; Gajendran et al., 2015). Thus, the three-component model continues to remain prominent in regard to the OC construct (Cohen, 1999; Solinger et al., 2008). The model is generalisable to other contextual work settings (Lee et al., 2001; Wong & Tong, 2014), and it is therefore deemed relevant for the current study.

4.6 EXTENSION OF ORGANISATIONAL COMMITMENT INTO VIRTUAL WORK ENVIRONMENT

Telecommuters are not physically co-located with their co-workers and supervisors (Caillier, 2014). Calvo (2013) advise that it is more prudent to select experienced employees who have at least worked a minimum period in a central location, since NC develops during early socialisation within the organisation (Döckell et al., 2006). Those who have worked in the central location would have been integrated with the context of the organisation and therefore would be familiar with its culture (Donovan & Wright, 2013).

The established track record of work and trust with their managers create pleasant conditions. According to Lumley et al. (2011), certain conditions of work are valued more by employees and if the conditions are congruent with their needs, then their JS and OC will increase. For telecommuters this would mean a supportive organisational culture with the formal implementation of work/life policies (Beham, Baierl, & Poelmans, 2015).

The degree of organisational support perceived by telecommuters seems to be the key work-related variable that correlates strongly with AC (Meyer et al., 2002). However, the isolated nature of the virtual work environment introduces distinctive issues regarding the way employees relate to their organisation when compared to the physical workplace setting (Dahlstrom, 2014). Being physically separated from the work setting can impede members in building implicit knowledge among themselves (Böll, Cecez-Kecmanovic, & Campbell, 2014).

A lack of personal contact with co-workers, especially managers, is detrimental to the employment relationship (Stredwick & Ellis, 1998). As a result, this leaves telecommuters with a perception of professional isolation which might hamper career salience (Donovan & Wright, 2013, Morrow, 2011). Furthermore, working alone at home can create a fear of being out of sight, with accompanying limitations on professional life (Ng, 2006). Over time this might reduce teleworkers' identification with the organisation (Böll et al., 2014).

Teleworking dissolves traditional spatial and temporal boundaries between work and home (Wheatley, 2012). Many studies reveal that telecommuters have a tendency to work longer hours to ensure there is no misconception that they are not working (Donovan & Wright, 2013). Many academics are high achievers who invest more time in their work. This may result in the blurring of the boundaries between work and family lives which can also be problematic (Ng, 2006).

Loosening constraints in terms of when and where employees can engage in their work poses challenges too (Boell et al., 2013). It can drain mental resources, lead to burnout, and create work/life role conflict, as well as diminish work-related attitudes and behaviours such as commitment (Caillier, 2014; Fonner & Roloff, 2010).

According to Leslie, Manchester, Park, and Mehng (2012), perceived commitment is positively related to favourable working conditions. However, Leopold and Harris (2009) highlight that contingent telecommuters tend to lack competitive wages, have fewer development opportunities and poorer career progression.

When compared to permanent staff who work under pleasant conditions, the relational psychological contract of telecommuters is seriously hampered (De Vries et al., 2018). Consequently, the commitment levels of telecommuters such as e-tutors could decrease and thus increase turnover intentions.

In considering the prevailing conditions under telecommuting, studies with a magnitude extending beyond physical work settings are critical in exposing the commitment levels

of telecommuters. In this case, the three-component model of organisational commitment is relevant for extension to the virtual work environment (Akram et al., 2017; Bae & Kim; 2016; Lee et al., 2001).

4.7   CHAPTER SUMMARY

This chapter provided an overview of OC as an outcome of JS in a virtual work environment. The isolated nature of this work environment presents challenges related to the fact of not being physically co-located with supervisors and co-workers and, therefore, has the potential to create perceptions of professional isolation which impact negatively on commitment. Professional isolation is reported by academics who telecommute to perform their role (Ng, 2006). Thus, the current review of the construct exposed certain limitations in relation to AC, which were to some degree linked to demographical trends (Dirani & Kuchinke, 2011).

Affective commitment is mainly influenced by a supportive organisational culture and congruence with the work environment (Cohen, 2007). These factors support the jobholders' psychological and emotional attachment/identification with the organisation. Furthermore, the investigation revealed that within emergent virtual work settings, psychological and emotional attachment require exceptionally strong electronic collaboration and ongoing feedback (Boell et al., 2016; Gibson et al., 2011).

The aforementioned electronic communication reinforces cognitive presence, which counteracts the professional isolation. Thus, cognitive presence builds on identification with the organisation and increases commitment. Commitment developed through cognitive presence is prevalent in ODL universities characterised by online teaching activities. As such, the influence that technology has on commitment is experienced by e-tutors who facilitate learning inside virtual classrooms (Peschke, 2014).

In terms of the age demographic, OC developed electronically seems more appealing to a younger generational cohort of academics that is interested mainly in strengthening

social ties. Older generations who have long tenure with the ODL institution might have already established social ties through other aspects of work (Morrow, 2011; Steers, 1977).

Social ties developed through the overall culture and identification with the goals of the organisation are strongly related to the affective responses developed over years of experience. For instance, comprehensive skills in research and development form part of the educational background needed to contribute to the goals of academic institutions in order to continue membership (Khalid, Irshad, & Mahmood, 2012). Such skills are acquired over time and through years of experience.

In relation to CC and NC, the dimensions are influenced mainly by the costs associated with leaving the organisation and the obligation to reciprocate respectively. For telecommuters, and specifically e-tutors, the opportunity to gain work/life balance is valued most. Furthermore, when factoring in gender, most female telecommuters have personal responsibilities such as child care. Therefore, they perceive the cost of forgoing the work/life balance for alternate employment to be higher. As a result, in appreciation of the opportunity, telecommuting intensifies the obligation to reciprocate by working long hours (De Vries et al, 2018; Gajendran et al., 2015).

Given the above, the review revealed that forms of support needed to commit in a virtual context is multidimensional. Provision of technological resources and the relevant training are forms of support which also increases costs associated with finding an alternative employment. In retrospect, the dimension continuance commitment is thus mostly valued by young academic telecommuters who still need to acquire multiple skills in order to commit to their organisation and at the same time increase prospects of progression, growth, and development.

The component model of OC has been instrumental in revealing the three dimensions of OC. The model was therefore extended to the virtual work environment to reveal the type and levels of commitment of e-tutors in their virtual context. The next section reports on the theoretical relationship that was found between the three constructs, thus building on the conceptual framework for the study.

THE CONCEPTUAL FRAMEWORK

INTRODUCTION

This section concludes the investigation of the relationship between the JCM, JS and OC based on the literature study. A theoretical relationship between JCM, JS and OC has been established (Dirani & Kuchinke, 22011). The findings on this relationship are based on the dimensions of the JCM, facets of JS and the three components of OC. These findings are presented in an integrated manner, in order to articulate the conceptual framework used to build and test the hypotheses of the study. The framework also served as the foundation for integrating the results of the empirical research with the literature study.

THE RELATIONSHIP BETWEEN JOB CHARACTERISTICS, JOB SATISFACTIONS AND ORGANISATIONAL COMMITMENT.

Job design is a work strategy employed by organisations to solve problems of productivity and employee isolation (Hackman & Oldham, 1976, 1980). Therefore, the JCM is a job design model that aims at designing jobs that bring positive work experiences to job holders (Oldham & Hackman, 2010). As a result, job design within work environments embodies dimensions of JS and OC, extending from the physical, psychological and social aspects of work (Parker, 2014).

JOB CHARACTERISTICS AND JOB SATISFACTION

The JCM affects a wide variety of work-related outcomes such as JS. JS infers an affective, positive emotional response to one's job and the prevailing environmental work conditions (Hackman & Oldham, 1980; Oldham & Hackman, 2010). The affective responses are therefore influenced by the motivational properties found in the five core dimensions of the job (Oldham & Fried, 2016). The job dimensions stimulate the critical

psychological states where job holders perceive their work as meaningful, feel responsible for the outcome and receive feedback on their work (Truxillo et al., 2012).

In view of these critical psychological states, the dimensions of skill variety, task identity, task significance, feedback, and autonomy from the job were especially deserving of current investigation within the ODL institution. The goal was to find an understanding of how to stimulate job satisfaction in the virtual context.

Skill variety was found to be related positively to job satisfaction as it led to the accumulation of increased job skills needed to advance in a career that is heavily impacted by rapid technological advancement. These rapid technological developments are prevalent in higher education, particularly in the ODL institution (Wheatley, 2012). Therefore, skill variety becomes a critical factor in role fulfilment and JS within the virtual context of ODL universities (Finch & Jacobs, 2012; Fonner & Stache, 2012).

The opportunity to complete an identifiable piece of work from start to finish has a significant effect on those benefiting from the work services. At the same time, individuals who are able to produce an identifiable piece of work develop mastery of their own job. (Gibson et al., 2011). Task identity is therefore critical to e-tutors as it will enable them to master their job and gain knowledge of the impact made by their job (Marinova et al., 2015). As such, when it comes to task identity and task significance, the intrinsic meaning of work has a more positive relationship with intrinsic JS, as compared to extrinsic JS (Parker, 2014).

Feedback, on the other hand, was found to be important to all workers. However, due to the lack of physical presence, the dimension was found to be mainly valued in a virtual context (Grant et al., 2007). Telecommuters in higher education need increased job knowledge in order to sustain collaborative work and maintain social aspects. Hence, constructive and ongoing feedback is critical to the academic telecommuter (Ng, 2006). Given the abovementioned, feedback is more positively related to extrinsic satisfaction as it is external to the jobholder and provided mainly by those benefiting from the services

(Taylor, 2014). Autonomy also relates positively to job satisfaction due to the opportunity to mould/craft jobs in order to suit job skills and abilities. As a result, the dimension gives rise to psychological ownership of work (Shantz et al., 2013).

Due to the fact that autonomy gives rise to psychological ownership, the dimension might be perceived to be related to intrinsic JS (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). However, the dimension is strongly related to extrinsic JS, as the discretion to decide how to perform one's tasks is granted by the employer. This forms part of the working conditions which are external to the individual jobholder.

Given these theoretical findings, JS lie substantially, although far from exclusively, in the immediate realities of the job activities performed within specific work environments (Truxillo et al., 2012). Thus, in a virtual context, JS lie even more strongly in the perceptions of these realities, where cognitive presence compensates for the absence of physical presence (Akuamoah-Boateng & Boadu, 2013; Cleveland-Innes, Stenbom, & Hrastinski, 2014, Peschke, 2014).

JOB SATISFACTION AND ORGANISATIONAL COMMITMENT

Relative to the job characteristics and structural conditions of work, JS and OC have been studied extensively and have been found to have an affective ambiance (Collins et al., 2016). In support of the aforementioned, organisational behaviour researchers have established the relationship between the two constructs (Dirani & Kuchinke, 2011).

The affective responses in relation to the two constructs have also been established within the academic field (Khalid et al., 2012). This is vested in the notion that academics who are satisfied with their work will ultimately commit to the university as opposed to leaving for better jobs (Smith, 2007). According to Allen and Meyer (1990), this manifests in three forms of OC, namely, affective, normative and continuance commitment.

AC develops on the basis of employees' beliefs in and acceptance of organisational norms and values; thus, identifying with the organisation and having a willingness to exert considerable effort towards the objectives of the organisation. This form of commitment is demonstrated through the performance of job activities. Hence, affective commitment is positively linked to intrinsic satisfaction.

Normative commitment develops as the result of the internalisation of norms through socialisation within the organisation. According to Dahlstrom (2013), normative commitment may be difficult to develop under virtual work conditions owing to teleworkers being physically separated from their supervisors and co-workers. However, lack of physical presence can be counteracted by creating a strong supportive culture for telecommuting.

A strong supportive culture will therefore strengthen the social ties that telecommuters have with their organisation (De Vries et al., 2018; Morrow, 2011). Moreover, such supportive organisational cultures will increase telecommuters such as e-tutors' obligation to reciprocate by being committed to ODL institutions (Gajendran et al., 2015).

Although normative commitment is related to affective commitment, it is positively related to extrinsic satisfaction as it develops based on the external conditions of work. Similarly, CC is also positively related to extrinsic satisfaction. This commitment develops based on what is deemed valuable to the jobholder, and therefore provided by the organisation. Telecommuting comes with benefits such as flexible work arrangements which might be perceived as costly if membership of the organisation were to be lost. As a result, this might propel telecommuters to continue membership with their current employer (Allen & Meyer, 1997).

Taking cognisance of the affective ambiance, employees who are satisfied with their jobs will show a greater propensity to stay in their organisation (Radebe & Dhurup, 2014). In the virtual context, the propensity to stay is influenced mainly by the creation of a supportive culture and thus raising perceptions of belonging to the organisation. This

prerequisite is generally important to academics in ODL institutions. Consequently, JS in a virtual context contributes significantly to the academic telecommuters' psychological attachment to the university (Böll et al., 2014; Li, 2013).

JOB CHARACTERISTICS AND ORGANISATIONAL COMMITMENT

The nature of the context in which the job resides has an impact on the jobholders' emotional bond with and their psychological attachment to the organisation (Oldham & Fried, 2016). Therefore, the aforementioned dimensions of the JCM and the affective responses lead to discretionary behaviours such as OC. However, OC behaviour can only flourish in a work environment that does not embody tight control (Parker, 2014).

The work environment that facilitate the presence of the JCM dimensions such as autonomy and feedback have a positive influence on the individual characteristic such as growth need strength (GNS) (Bakker & Demerouti, 2014). Providing faculty members in ODL universities with the discretion to produce an identifiable piece of work using variety of skill and methods fosters cognitive development, and therefore, facilitate individual GNS for academic telecommuters (Bozeman & Gaughan, 2011; Ng, 2006).

The facilitation of individuals' GNS creates P-E fit in terms of which jobholders can find self-identity through their job role within the organisation (Morrow, 2011; Weiss, Dawis, & England,1967). Furthermore, P-E fit is central to the individual's enduring character and therefore encourages identification with the values and norms of the organisation.

The presence of P-E fit propels the jobholder to perform beyond their normal expectation, thereby portraying emotional and psychological attachment to the organisation (Gordon & Walsh, 2008). In ODL universities, the sustaining of emotional and psychological attachment needs to be facilitated through pleasant working conditions with prospects of academic progression (Khalid et al., 2012; Ng, 2006). Thus, the attachment could take place in the form of affective, normative and/continuance commitment (Cohen, 2007; Meyer & Allen, 1997).

INTERRELATIONSHIP BETWEEN THE THREE CONSTRUCTS

The sub-sections for this segment discussed the relationship between JC and JS, JS and OC, and JC and OC. The constructs are therefore interrelated. The interrelation of the constructs emerges from the nature of the job and the employee's experience at the workplace which eventually influences JS and OC (Nagar, 2012).

The following Figure 4.5 is a schematic presentation of the interrelationship between the three constructs, which serves as the conceptual framework of the study.

Figure 4.5: Conceptual framework of the study

Figure 4.5 is a schematic presentation of the conceptual framework that served as a guide for mastering the phenomena under study and therefore was useful in obtaining the objectives of the research study. Hence, the framework was fundamental in providing a theoretical logic / hypothesis that helped to explain and predict the relationship between JCM, JS, and OC (Rasinghe & Fonseka, 2011).

The conceptual framework substantiated the theoretical reasoning for the study. Therefore, the study predicts that the structural formation of work and the manner in which jobs activities are organised have an impact on how jobholders perceive their role. This is linked to the psychological states aroused from the core dimensions of JCM.

Given this reasoning, the core dimensions of JCM have a positive influence on multiple facets of JS. This may be either internal or external to the individual jobholder. In turn, this has a causal relationship with the employee's attachment to the organisation which portrays different forms of commitment to the organisation (Gutierrez et al., 2012)

According to Bambacas and Patrickson (2008) and Ramdhani et al. (2017) committed employees perform better, produce more, and are more involved. This is particularly the case of telecommuters such as e-tutors who have gained the work/life balance opportunities and therefore feels obligated to reciprocate by working long hours (De Vries et al., 2018).

This is closely linked to extrinsic factors within the employee's work environment (Coetzee et al., 2007; Döckell et al., 2006). Furthermore, OC was positively related to person-organisation fit (Coetzee, Schreuder, & Tladinyane, 2007). As a result, JS plays an important role in the process leading to turnover.

Turnover results from the fact that JS is directly and negatively related to employees' intentions to continue or discontinue their membership with the organisation (Chen et al., 2011). Overall, this indicates that jobholders who are satisfied with their job and the prevailing work conditions develop cognitive bonds with their organisation and eventually work towards sustaining the concomitant membership (Dirani & Kuchinke, 2011).

SECTION SUMMARY

This section presented the theoretical relationships between JCM, JS, and OC. Firstly, the relationship between JC and JS, JS and OC, and JC and OC was articulated. Secondly, the constructs were found to be positively interrelated subsequently leading to the construction of a conceptual framework for the current research study. From this construction the research objective was achieved through the framing of the hypotheses, which were empirically tested. The next chapter, Chapter 5, outlines the research plan for achieving the research objectives. The empirical results will be presented in Chapter 6.

CHAPTER 5: RESEARCH DESIGN

5.1   INTRODUCTION

The literature review in the previous chapters investigated job design strategies extensively, with particular reference to the JCM. The review of the model provided insight into the five core dimensions that influence JS and ultimately OC within the virtual work environment.

In this chapter, the research design used in this study will be discussed. The chapter begins with an explication of the research design, the purpose of the research and the research paradigm, which entailed quantitative analysis. The research variables under study are also discussed together with an explanation of the data collection method that was employed, involving the use of specific research instruments. Finally, an outline of the phases of the research study is presented.

5.1.1   Definition of the research Design

A research design is "a plan to be followed in order to realise the research objectives or hypotheses" (Ligthelm, Martins, & Van Wyk, 2005, p. 82). It sets out the general way in which the researcher intends to carry out the research study (Saunders, Lewis, & Thornhill 2003, p.28). Ligthelm et al. (2005) explain further that, in essence, the researcher develops a structure or framework to address a specific research problem or opportunity (Ligthelm et al., 2005). According to Uma and Roger (2003), research design is a process which involves a series of rational decision-making choices.

Uma and Roger (2003) explain that, in this process, the researcher could make use of a collection of quantitative data about a particular group of people or other appropriate units of study. According to Leedy and Ormrod (2013), these data are numbers that reflect specific measurements of the characteristics in question. Accordingly, this research study

will follow a quantitative research method and use a self-report, correlational survey design strategy to answer the research questions and achieve the objectives.

5.2   PURPOSE OF THE RESEARCH

This research aimed at examining the statistical nature of the relationship between JCM, JS and OC within the virtual work environment and to establish whether differences exist in JCM, JS and OC in terms of certain demographic variables (gender, educational background, job tenure, and geographical region).

For the purpose of this study, the research design followed a deductive approach, in terms of which a research project was designed to test the hypothesis (Uma & Roger, 2003). According to Saunders et al. (2003, p. 86) and Maylor and Blackmon (2005), this approach requires the researcher to deduce a hypothesis from a theoretical framework; this hypothesis proposes a relationship between two or more concepts that may explain a behaviour or a social phenomenon. This is known as the hypothetico-deductive method (Saunders et al., 2003, p.85; Uma & Roger, 2003, p.27).

According to Ranasinghe and Fonseka (2011), to test the hypothesis, the phenomena or concepts under study are operationalised in terms of variables and the facts can be measured quantitatively. The testing of the hypothesis can take place through some form of empirical enquiry which will either tend to confirm the theory or indicate the need for its modification (Saunders et al., 2003).

5.3   RESEARCH PARADIGM: POSITIVISM

The current study reflects the principles of positivism, the paradigm the researcher used in striving to remain objective. Leedy and Ormrod (2013) expound further on this, stating that the best way to stay clear of any biases and remain objective is for the researcher to identify a systematic way of measuring the phenomenon under study.

Accordingly, in line with this enquiry paradigm, a deductive method of reasoning based on the theory was applied. This theoretical logic was useful in **describing** the research problem and assisted in constructing an explanation for the nature of the relationship between the variables (Ranasinghe & Fonseka 2011). This deductive enquiry paradigm was therefore quantitatively oriented, making it possible to develop objective and precise indicators and measures. Such indicators and measures often use numbers to capture important features of the variables being studied (Ranasinghe & Fonseka 2011).

Drawing from the enquiry paradigm, this study involves **descriptive research**, thus having the potential to raise issues that need explaining. Therefore, the **explanatory approach** adopted followed a systematic process which helped to explain the phenomena that occur in the world through the use of quantitative data (Creswell, 2014). The approach allowed the researcher to report on what is happening and why (Field, 2009).

Theoretical deduction was therefore used to describe and explain possible relationships between the variables – the JCM, JS and OC – within the virtual work environment of e-tutors (Umar & Rogers, 2003). The results of the study were deemed useful owing to the relationships found. In addition, the level of significance between the variables will serve as a useful source of information to human resource practitioners in redesigning jobs. This information will also assist in determining the best human resource approaches for enhancing work-related outcomes such as JS and OC in the e-tutors' virtual work environment.

5.4   RESEARCH METHODOLOGY

In taking the positivist stance, the researcher developed a research methodology for attaining the research objectives. This methodology described the procedure for translating the research plan into specific methods and the techniques used to collect and analyse data (Maylor & Blackmon, 2005). This study consisted of two parts; the first a literature study and the second an empirical study.

5.4.1 Part one: literature study

A critical literature review formed the foundation on which this research study was built (Saunders et al., 2003). This part of the research process helped to identify theories, models and concepts, as well as relationships between concepts associated with this topic (Maylor & Blackmon, 2005). This deductive approach assisted the researcher to develop a theoretical framework as follows:

- Job characteristics, job satisfaction, and organisational commitment were conceptualised from the theoretical perspective
- Integrate the variables and conceptualise the theoretical relationship between the variables (JCM, JS, OC).

5.4.2 Part Two: Empirical Study

The empirical study entailed the implementation of the research plan as guided by the theoretical perspectives, which the researcher subsequently tested using data (Saunders et al., 2003). In this way, this study was extended further to take a closer look at the virtual work environment and to examine multiple variables simultaneously.

5.4.2.1 Research variables

Saunders et al. (2003) explain a *variable* as an individual element or attribute on which data can be collected. Once data have been collected, a network of correlation among variables can be identified. A dependent variable is influenced by an independent variable, and this influence may be either positive or negative (Uma & Roger, 2003, p. 89).

The dependent variables in this study are job satisfaction (JS) and organisational commitment (OC), whereas the independent variable is the Job Characteristics Model

(JCM). These variables were used to formulate the hypotheses which were tested using quantitative measures.

5.4.2.2 Formula of research hypothesis

As stated earlier, the constructs under study were operationalised in terms of variables, hence, the research variables under study are the JCM, JS and OC. The formulation of the hypotheses were deduced from the theoretical perspectives to test the relationship between JCM, JS, and OC in order to determine the appropriate statistical analyses.

5.4.2.3 Type of analysis: Quantitative

Quantitative research generally entails the collection of primary data from large numbers of individuals who will form the population under study (Ligthelm et al., 2005). Data are analysed and the research findings are subjected to mathematical or statistical manipulation to produce broadly representative data of the total population and to forecast future events under different conditions. The objective is to project or generalise the results to a wider population. Generalisability ensures that the research is as objective, reliable and reproducible as possible (Maylor & Blackmon, 2005).

5.5 METHOD USED TO ENSURE VALIDITY AND RELIABILITY

Measurements were put in place to ensure the validity and reliability of the research findings, and verification was done using scientific methods (Maylor & Blackmon, 2005).

5.5.1 Validity

Validity refers to how accurate the research has been conducted (Maylor & Blackmon, 2005). Saunders et al., (2003) explains that, this requires a data collection method or methods to measure accurately what the researcher intended to measure, and not a related concept. According to Leedy and Ormrod (2013), researchers have to consider

the validity of a research project as a whole and address issues of internal and external validity.

The methods of internal validity allow the researcher to draw accurate conclusions about the cause-effect and the relationships between the sub-constructs. According to Saunders et al. (2003) and Maylor and Blackmon (2005), external validity refers to the generalisability of statistically significant results, while Leedy and Ormrod (2013) explain that it refers to the extent to which the results apply to situations beyond the study itself and the conclusions drawn can be generalised to other contexts (Leedy & Ormrod, 2013).

In regard to questionnaires, the extent to which an instrument measures what it is supposed to measure is known as construct validity (Kumar, 2011; Pallant, 2011). Thus, **internal validity** was assured using standardised instruments that capture the complete content of the JCM, JS and OC. Standardisation allows different factors of the construct to be measured by the related items (Maree, 2016).

In addition, the validity scores on existing instruments were checked for high or low correlations which would allow for meaningful and useful inferences to be drawn (Creswell, 2014). As such, internal validity was assured using **pilot testing** and **exploratory factor analysis (EFA)** (Pallant, 2011).

In terms of EFA, the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity were conducted to check sample adequacy. The communality values were also obtained to validate the correlation of structures and, finally, factors were extracted based on the context of study.

With this research study, measures of **external validity** were also considered to ensure statistically significant and generalisable results (Leedy & Ormrod, 2013; Maylor & Blackmon, 2005; Saunders et al., 2003). This was achieved through the testing of theoretical models that were relevant to the research topic, problem statement and aims. Furthermore, plausible hypotheses were framed to ensure design validity.

Additional to the above, the relationships between variables were tested scientifically using the aforementioned statistical analyses. A multivariate analysis was also conducted by means of canonical correlation to explain the actual relationship between the one independent variable and the two dependent variables (Maylor & Blackmon, 2005, p. 336). In conclusion, a representative sample was drawn from every possible member of the population. This strategy constituted a census technique (Saunders, 2011).

5.5.2   Reliability

Reliability refers to the degree to which a data collection method will yield consistent, similar findings (Saunders et al., 2003). According to Maylor and Blackmon (2005), this means that different researchers would obtain the same findings if they were to repeat the same study. Therefore, **external reliability** was assured by checking measures of internal consistency that were obtained from the past use of the instrument (Creswell, 2014).

Reliability can be assured by administering the instruments to the same respondent on more than two occasions – the test-retest method. Alternatively, reliability can be assured by administering the instrument and subsequently, on the second occasion, administering an equivalent instrument measuring the same construct (equivalent form reliability) (Maree, 2016).

The challenge associated with these methods is that with the former there is a memory effect where, if the time lapse between the two occasions is too short, the respondent may remember their responses on the first occasion and then simply respond in the same way. However, the latter method, where an equivalent instrument is administered, may eliminate this challenge (Maree, 2016). Still, time is of the essence in research projects, and administering the instrument on more than one occasion takes time.

Considering the time constraints, this study assured **internal reliability** through split-half reliability, in terms of which the items that make up the instrument were divided into two

separate instruments. In order to achieve this split-half reliability, all the questionnaires were divided into two parts with a more or less equal number of items. The instruments were loaded onto a web survey platform – Qualtrics. Thus, the respondents had to complete the two parts that made up one construct. The scores of the sub-dimensions on these two separate half instruments were then compared by means of a correlation coefficient.

Internal reliability or consistency was also assured using Cronbach's alpha coefficient, which is based on inter-item correlations. This means that the coefficient measures the degree of similarity among items formulated to measure a certain construct; hence, if items are well formulated, there will be a strong correlation (Maree, 2016). A Cronbach's alpha score of above 0.70 is judged to be acceptable (Pallant, 2011). Therefore, in order to ensure a reliable score, the data collection was specifically related to the variables under study, making use of existing surveys and standardised questions relating to the theoretical models under study.

5.5   PHASES OF THE EMPIRICAL STUDY

Once the variables under study had been identified and the type of analysis chosen together with the methods for assuring validity and reliability, the empirical study could commence. This part of the study included several phases and scientific steps.

PHASE 1: Determination of the population sample

The empirical study took place among the population of e-tutors employed on a part-time basis in a virtual work environment at an ODL university in South Africa. As the university consists of various colleges, e-tutors in the Colleges of Accounting Sciences; Agriculture and Environmental Sciences; College of Economic and Management Sciences; Education; Human sciences; Law, and Science, Engineering and Technology were initially used as a sampling frame. Following the determination of the population, several scientific steps were followed.

Step 1: Sampling Technique

A probability sampling design was initially planned to answer research questions and achieve the objectives (Saunders et al., 2003). This technique comprised representative sampling and was used mainly in implementing the survey-based research strategy (Saunders et al., 2009).

In terms of a probability sampling approach, all members of the population have a known and equal chance of being selected and represented in the sample (Ligthelm et al., 2005). In the current study, a stratified random sampling was considered provided the university colleges had equal numbers of e-tutors, and equal samples from each college could be drawn from the sampling frame (Leedy & Ormrod, 2013).

It was consequently planned that the sampling frame should be divided into six discrete strata. However, the likelihood then arose of having different numbers of e-tutors in the colleges because the intake and allocation of e-tutors in each college is controlled by the number of student registered for a particular module in the course. Thus, the researcher planned to ensure that each stratum was represented proportionally within the sample. To do this, the following systematic process was followed:

1. E-tutors were identified and a sampling frame (a list of e-tutors) was acquired.
2. A suitable sample size was decided on.
3. The relevant sampling techniques and the sample were chosen.
4. The researcher made certain that the sample represented the population (Saunders et al., 2009).

The sampling frame for the study was thus identified. The total number of e-tutors for the years 2013 to 2016 are presented in Table 5.1 below.

Table 5.1

Aggregate number of e-tutors from 2013-206.

YEAR	2013	2014	2015	2016
E-TUTOR NUMBERS	1561	3947	5208	2366

Table 5.1 presents an aggregate number of e-tutors during the period 2013 to 2016. A sharp decrease in the number of e-tutors in 2016 indicates challenges with job tenure and low retention rates among e-tutors. Accordingly, capacity decreased from 5208 to 2366 in 2016. This table was subsequently used to calculate the sample size on the basis of the number of e-tutors in 2016. This was done prior to obtaining the actual list. In terms of identifying an adequate sample size, Leedy and Ormrod (2013, p. 215) provide the following guidelines, where N = population size:

- If the population is smaller, say, $N = 100$ or fewer, then the entire population will be surveyed.
- Where N is around 500 (give or take 100), then 50% should be sampled.
- If N is around 1500, then 20% should be sampled.
- Beyond a certain point, where $N = \pm 5000$, the population size is almost irrelevant, then a sample size of 400 will be adequate.

Following these guidelines, an **adequate sample size** was calculated as follows:

$$N = \frac{2366 \times 20}{100} = 473.20$$

According to Creswell (2014, p. 159) choosing a sample size based on selecting a fraction of the population is a misguided approach. Instead, the determination of a sample size should be based on the analysis of the study, and then by making reference to the tables for survey estimates.

With reference to the analysis of the current study, 2366 e-tutors represent a *finite sample*. Thus, if e-tutors chose not to participate, there was no replacement strategy. In

this instance, it was possible that the researcher might have had difficulty obtaining sufficient data for analysis (Saunders et al., 2009). In view of the finite sample, the researcher proposed that all of the 2366 e-tutors be invited to participate in the study. Table 5.2 presents the calculation for the minimum sample required as adapted from the publication of *Research methods for business students* (Saunders et al., 2009, p. 219; pp. 581–582).

Table 5.2

Estimation of the required minimum sample

Assuming data are collected from all cases in the sample and the population size is around 2000, given a 95% confidence level the required minimum sample size will be 322. However, relative to the analysis of the study, the following estimates were made, where:

$ń$ = minimum size

$\rho\%$ = proportion belonging to the specified category

$q\%$ = proportion not belonging to the specified category

z = z value corresponding to the level of confidence required

$e\%$ =margin of error required

Levels of confidence and associated z values

Level of Confidence	Z Value
90 %	1.65
95 %	**1.96**
99 %	2.57

$$ń = \rho\% \times q\% \times \left[\frac{z}{e\%}\right]^2$$

$$ń = \frac{(1.96)^2(0.5)(1-0.5)}{(0,05^2)} = 384$$

Where the population is less than 10 000, a smaller sample size can be used without affecting the accuracy.

Table 5.2 presents the formula for estimating the size of the minimum sample required. A relaxed margin of error was specified at 7%. This margin was specified to draw a minimum sample size at a 95% level of confidence, such that the results would be statistically significant (Field, 2009). The adjusted minimum sample size is presented in Table 5.3 below.

Table 5.3

The adjusted minimum sample size

Population (N)	**2366**
Proportion (p)	50%
Proportion not belonging (p)	50%
Precision / Margin of error (e)	7.0%
α	5.0%
Z value	1.96
n	196
% of population	6.5%
Adjusted n for the finite population (N)	**184**

Table 5.3 presents the adjusted minimum required sample. Given the specified 7% margin of error, the minimum required sample for 2366 e-tutors was calculated at 184. This estimation was chosen based on the **z** score of **1.96,** indicating a **95%** level of confidence that the sample size would yield a statistically significant results for the current study. As mentioned earlier, the method for estimating the sample size based on selecting a fraction of the population is misguided (Creswell, 2014). Therefore, the method was not considered for the current study.

Although the aggregate number of e-tutors in the university was provided, the **exact** numbers in each college was only verified after full permission to conduct the research had been granted. When the final list of e-tutors was received, it was found that the actual population was no longer at 2366 but instead amounted to $N = \pm 1051$. As pre-empted, the population size posed a risk when it came to issues related to a replacement strategy.

In order to counteract the risks of non-replacement and low response rate, all the e-tutors on the list were invited. This constituted a census, in terms of which data were collected from every possible member of the e-tutor population (Saunders et al., 2009). Ultimately, a population sample of 276 completed the survey successfully, thus n = 276.

A scientific process was followed and data collected represented the characteristics of the entire population. The research study remained deductive and the sampling process took the following form:

- Identifying and acquiring a sampling frame.
- Publishing the questionnaire on an online platform, in this case Qualtrics.
- Sending an e-mail (with a link to the online survey) via a gatekeeper (ICT) to the all the e-tutors to increase the chances of high response rate.
- Ensuring equal and proportional representation of the characteristics of the population from all colleges at the university.

Step 2: Research instrument

Self-administered questionnaires were used to gather data from a sampling frame of all the units in the population. The goal was to make sure that the sample was representative of the population, thus allowing the results to be generalised to the entire population. This also enabled a statistical evaluation of the sampling error to be undertaken. In this way, the researcher was able to assess how likely the sample was to be unrepresentative and by how much (Ligthelm et al., 2005).

Step 3: Choosing and motivating the survey

Surveys are useful for capturing facts, opinions, behaviour and attitudes. Accordingly, structured, standardised questionnaires formed the basis for data collection in this study and were used as the research tool. The research technique applied comprised self-administered questionnaires, the intellectual property rights of which were respected and

acknowledged. For this purpose, a letter for requesting permission for was sent to the inventors of the research instruments, and subsequently all of them granted permission. These instruments included the JCM (Hackman & Oldham, 1980), the Minnesota Satisfaction Questionnaire (Weiss et al., 1967) and the Organisational Commitment Questionnaire (Allen & Meyer, 1997).

- **Job Characteristics Model (JCM):** The Job Characteristics Model of Hackman and Oldham (1975, 1976) was used to measure the dimensions used to predict the work-related outcomes (attitudinal and behavioural) of e-tutors in their virtual work environment. The questionnaire consists of the five core dimensions of job characteristics, namely: task identity, skill variety, task significance, autonomy, and feedback. Each dimension is measured by three items, which produces a total of 15 items that measure the overall job characteristics.

  The JCM uses a seven-point Likert-type scale to measure the participants' responses based on the aforementioned dimensions. Research studies have shown the measures of internal consistency reliability. In a study by Johari, Yahva, and Omar (2011), test results pertaining to the instrument revealed the overall internal consistency reliability for the job characteristics scale to be 0.847. In addition, Gibson et al. (2011) extended the instrument into virtual work designs, and the results produced revealed internal consistency of 0.85.

- **Minnesota Satisfaction Questionnaire (MSQ):** The Minnesota Satisfaction Questionnaire (Weiss et al., 1967) was used to measure the job satisfaction level of e-tutors. The 20-item on 7-point Likert type scale measures components of satisfaction which are dissimilar, namely intrinsic job satisfaction and extrinsic job satisfaction.

Intrinsic job satisfaction measures perceptions or feelings about the nature of the job tasks and these includes statements such as the 'freedom to use my own judgement' (Weiss, 2002). The extrinsic job satisfaction measures feelings about situational job aspects that are external to the job.

This internal and external facet of the MSQ covers items like "My pay and the amount of work I do" (Spector, 1992). Research studies support the validity of the instrument. Buitendach and Rothman (2009) tested the instrument in a selected South African organisation and the study revealed sufficient internal consistency of well above 0.70. The estimation through the Cronbach's alpha presented the results as follows: extrinsic satisfaction α=0.82 and intrinsic satisfaction α= 0.79 and the total job satisfaction α=0.86.

- **Organisational Commitment Questionnaire (OCQ):** Organisational commitment will be measured using Allen and Meyer (1997)'s three-component model that was originally developed in 1990. The instrument comprises of 3 subscale measuring affective, continuance and normative organisational commitment.

Each subscale consists of 6 items and uses a 7-point Likert type scale to measure the respondent's responses for each of these items. Allen and Meyer (1997) reported internal consistency reliability estimates for affective commitment (0.82), continuance commitment (0.74), and normative commitment (0.83). Lumley et al. (2011) explored the OC levels in the IT environment within the South African context, and the results for internal consistency were as follows: AC (0.79), CC (0.68), and NC (0.82).

PHASE 2: Data Collection

Saunders et al. (2003) explain that a survey strategy allows ample data to be collected from a large population in a highly economical way; moreover, this strategy gives more control over the research process. According to Maylor and Blackmon (2005), survey designs are associated with tools and techniques such as questionnaires, structured interviews and structured observation. In the context of this study, the research tools chosen were questionnaires.

Unit of analysis

The unit of analysis refers to the level of aggregation of the data collected during the subsequent data analysis stage (Uma, & Roger, 2003). In terms of the unit of analysis for this study, data was collected individually from e-tutors serving contracts at an ODL institution in South Africa.

Step 4: Distribution

With a self-administered questionnaire, the respondents are able to answer a structured and standardised list of questions without the presence of the researcher. The delivery method used for this research entailed loading the questionnaires onto the Qualtrics platform and delivering them online via email (Maree, 2016; Maylor & Blackmon, 2005). Accordingly, the questionnaires were sent to the e-tutors' email addresses as an attachment or a web link and they were asked to complete and return them (Leedy & Ormrod, 2013; Maylor & Blackmon, 2005). Qualtrics is web survey, the software of which is able to record the answers in a file or database (Maylor & Blackmon, 2005).

Step 5: Administration of the survey

The data was collected by distributing the questionnaire electronically to e-tutors serving part-time contracts within six different colleges within the ODL University of South Africa.

Initially, distribution was planned via ICT whereby, the survey link was send to all the e-tutors to increase the chances of high response rate. However, there were no responses.

The researcher then took another approach and send the link via email to groups of (ten per email) e-tutors. Each questionnaire was had a covering letter expounding the purpose of the study and assuring that all responses will remain confidential. Permission to collect data from e-tutors was obtained from relevant colleges within the institution.

Step 6: Scoring of the survey

The responses to each item of the questionnaire were captured into an electronic spreadsheet format. The data was analysed using computer Statistical Package for social Sciences- SPSS. Data was analysed quantitatively through descriptive statistics, inferential statistics and regression analysis. Correlations between variables were also done to investigate the strength of the relationship. In addition to the correlation coefficient, the statistical significance was also measured and the alpha probability (α) will be set at $\rho< 0.05$.

PHASE 3: Statistical processing of data

Statistical tests rely on certain population characteristics which might be categorised into different groups or subgroups (Maree, 2016). The examples of the population characteristics are provided by the demographical data. Statistical analysis therefore entailed three main categories:

Step 7: Descriptive statistical analysis

Descriptive statistical analysis allowed the researcher to draw meaningful and useful inferences from scores on the instruments about the following: demographical data of a group (e-tutors) in a given situation, think systematically about constructs under

investigation, offer recommendations for further probe and research, and help make certain decisions based on research (Creswell, 2014, p.206; Uma & Roger, 2003, p.122).

Given the aforementioned, tabulation of data sets was computed to get descriptive statistics of biographical data. These were in the form of frequency counts, proportions/percentages, central tendency measures such as the median, the mode and the mean and standard deviations.

Step 8: Reliability and validity analysis

Internal reliability or consistency was assured by using the Cronbach's alpha coefficient. This is based on inter-item correlations which provide an indication of the average correlation among all items that make up the scale (Maree, 2016; Pallant, 2011). A value above 0.70 was judged to be acceptable (Pallant, 2011).

Internal validity was ensured through the use of standardised instruments that captured the complete content of the JCM, JS, and OC. Standardisation allowed different factors of the **construct** to be measured by the related items, (Maree, 2016). Construct validity was explored to establish whether items "measure hypothetical constructs or concepts" (Creswell, 2014, p.206). Therefore, internal validity (construct validity) was explored using **Exploratory Factor Analysis** (Pallant, 2011).

Step 9: Inferential analysis

Correlational analysis was also conducted to examine the extent to which two complete variables (JS and OC) and their sub-dimensions are related to each other (Saunders et al., 2003). According to Leedy and Ormrod (2013), a correlation exists if, when one variable increases (JS), another variable (OC) either increases or decreases in a somewhat predictable fashion. This involves simple statistical measures for looking at bivariate relationships (Maylor & Blackmon, 2005, p. 313), "where the **hypothesis testing**

is undertaken to explain the variance in the dependent variables and/or to predict organisational outcome" (Uma, & Roger, 2003, p. 124).

On the contrary, the research findings relating to bivariate relationships are based on limited analysis, as relationships between two variables have been explored without controlling for another variable (Maylor & Blackmon, 2005, p. 313; Pallant, 2011, p. 128). As such, multivariate analysis was conducted to build and strengthen the credibility of the research findings.

A multivariate data analysis was used in the form of regression and moderated regression to determine the influence of a third variable, namely: JCM. In the process, the established correlation was employed to determine the influence of the independent variable (JCM) on the relationship between dependent variables JS and OC. Hypothesis testing indicated the nature of the relationship between three variables (Ranasinghe & Fonseka 2011).

Statistical analysis was also needed to test whether differences exist between the various demographic groups (Maylor & Blackmon, 2005). A statistical test t-test was therefore used to compare average score between two groups, while ANOVAs were used to test for variance between more than two groups (Maree, 2016; Maylor & Blackmon 2005). Anova and independent sample t-tests were performed for the purposes of checking differences between subgroups of e-tutors.

The statistical significance was also reported, as this shows the probability of the results to be found, and indicates whether they are due to a chance or non-chance event. To counter for the probabilityof a Type I error, the significance value was tested at a 95% confidence level (p, 0.05). As such, the alpha probability (α) was set at $\rho < 0.05$ and the level of statistical significance was set at $\rho < 0.05$. This provides 95% confidence that the results will be accepted as the standard when applied in other research contexts.

PHASE 4: Reporting of the research results

The results were presented in tables, diagrams and or graphs whereas the discussions of the results were presented in a systematic framework ensuring that the interpretation of the results are communicated and articulated in a clear manner. The results of the empirical research were integrated into the findings of the literature review.

PHASE 5: Formulation of conclusions, limitations and recommendations

The final step link the conclusions based on the results and their integration with theory. The limitations of the research based on the controlled variables namely demographical variables such as age, gender, marital status, number of dependents, region of residence, occupational level and tenure with another organisation were discussed. Thereafter,the recommendations were made in terms of JCM, JS, and OC of e-tutors in their virtual work environment.

5.6   DELIMITATIONS

This study was confined to examining relationships between JCM, JS and OC. The primary interest in this study was the dependant variables, namely: JS and OC. The goal was to investigate how they are being influenced by the independent variable, namely JCM. The study endeavoured to investigate how the core dimensions of JCM can influence the relationship between JS and OC in a different context.

The population of interest are the tutors working part-time at an ODL University. However, by virtue of their virtual work environment, the study focused on e-tutors only. Other tutors, such as the face-to-face tutors, as well as full time academics were excluded from the study.

The relationship between JCM, JS, and OC is in such a way that OC is influenced by the nature of the job and the employee's experiences at the workplace. Hence committed

employees perform better, produce more and are more involved. Therefore, JS plays an important role in the process leading to staff turnover (refer to section 3.4).

In consideration of the above factors, this study will only focus on examining the relationship between JCM, JS, and OC. Given this framework, the performance levels and turnover intensions of the e-tutors will not be examined.

The design for this research study is a correlational design where the researcher used correlational statistics to describe and measure relationship between variables (JCM, JS, and OC). Therefore, study utilised a non-experimental design (surveys) to describe the relationship amongst variables. Experimental designs were excluded (Creswell, 2014).

5.7   ETHICAL CONSIDERATION

The research was conducted according to the University of South Africa 's research ethics policy and all the possibilities for harm were thought through and prevented at all times (Maylor & Blackmon, 2005). The ethical procedures of the institution were followed throughout the research process. Participation was completely voluntary and privacy was maintained at all times.

The abovementioned was ensured by protection of participants' identities (Maree, 2016). The nature and quality of the individuals and the organisation 's performance were strictly confidential. This study employed online survey strategies. As such taking into consideration the context of this study, no raw data about participants was posted online (Leedy & Ormrod, 2013).

The researcher gained informed consent from participants. The consent form contained a brief description of the nature and the goal of the study and description of what participation will involve in terms of activities and duration. A description of the benefits of the study, including for those of the participants and the ODL University as whole were outlined. Furthermore, a statement outlining that a summary of the findings upon

completion will be provided to all the stakeholders including the participants was also stated.

The form also contained the researcher's contact details (Leedy & Ormrod, 2013). The researcher reported and analysed the data honestly regardless of the pressure and prior expectations, and as such took responsibility of the research findings, even if they are unfavourable. Thus, ethical guidelines and standards as stipulated by the University of South Africa on the policy on research ethics was form the basis of this study (UNISA ethical policy, 2012). The ethical clearance approved in order to gain permission to conduct the study. The following general ethics principles was adhered to:

- *Essentially relevant:* Before undertaking research there was adequate consideration of the existing literature on the subject under study, and the available alternatives. Taking into consideration the insufficiency of resources in South Africa, it was clearly demonstrated that the research is essential to the pursuit of knowledge and/ or the public good.
- *Maximisation of public interest and social justice*: Research was carried out to the advantage of society, and with the purpose of increasing public interest and social justice. All efforts were made public in a suitable manner and form, and at the correct time, information on the research undertaken, as well as the results and the implications of the research.
- *Competence, ability and commitment to research*: The researcher was competent and therefore followed UNISA's ethical standard that governs research that involved human beings. Commitment to research and to the relevant subject in particular is a critical prerequisite for good and ethical research.
- *Respect for protection of rights and interest of participants and the institutions*: The researcher respected and protected the dignity, privacy and confidentiality of the participants and where relevant, institutions, and were never subject them to procedures or risks not directly assigned to the research project or its methodology. Research and the pursuit of knowledge

were not regarded as the ultimate goal at the expense of the rights of participants and institutions.

- *Informed and non-coerced consent*: Autonomy requires that participation of individuals should be freely given, and specifically be based on informed consent. Participants (e-tutors) were be told the nature of the study and therefore given the choice to either participate or not participate (Leedy & Ormrod, 2013). Direct or indirect pressure, as well as undue enticement of people in the name of research was avoided. These act as barriers to independent decision making and may result in people consenting against their better judgement to participate in studies involving risks. This takes place when participants are coerced to participate in research study.

- *Respect for cultural differences*: The researcher treated research participants as unique human beings within the context of their community structures, and respected what is sacred and secret by tradition. Research preferably commenced with, and not merely on, and identified community. Where needed consent of "gatekeepers" was obtained in additive to that of research participants.

- *Justice, fairness and objectivity*: principles for the selection of the participants of research was fair, besides being scientific. Easily accessible individuals or groups were not extremely burdened with research being carried recurrently on them.

- *Integrity, transparency and accountability*: The conduct of research was honest, fair and transparent. The Researcher was honest about personal limitations, competence, belief systems, and values and needs. Acknowledgement of the contribution of the researcher's contribution or that of members of the research team was done appropriately. The researcher did not exploit her position or knowledge for personal power or gain.

- *Risk minimisation*: The researcher ensured that the actual benefits to be derived by the participants or society from the research clearly offset possible risks, and that participants were subjected to only those risks that are clearly needed for the conduct of the research. In order to minimise the

risks, the researcher made an assessment and took adequate precautions to mitigate risks.

- *Non-exploitation*: The research participants, researchers (including student and junior members, communities, institutions or vulnerable people) were not exploited. The community in which research was conducted will have proper gain. As far as possible, communities will receive feedback on research carried out to them.

5.8   CHAPTER SUMMARY

This chapter reflected on the research plan and the methodology used to achieve the research objectives. The design strategy outlined the unit of analysis chosen from the population of interest. The description and the rationale for choosing measuring instruments was articulated based on the framing of the hypotheses. Data collection procedure were also properly planned taking cognisance of the ethical consideration. An outline of the empirical investigation was also provided. The chapter provided the basis for reporting on the research results that are presented in chapter 6.

CHAPTER 6: DATA ANALYSIS RESULTS

6.1   INTRODUCTION

This chapter reports on the results obtained from the statistical analysis of the data. The general aim of this study was to examine the nature of the relationships between the variables job characteristics, job satisfaction (JS) and organisational commitment (OC). The results were subsequently interpreted in terms of descriptive statistical analysis, validity and reliability, inferential analysis entailing correlation and regression analysis, as well as moderated regression. In addition, the results of the paired t-test, independent t-tests, and ANOVA are reported here. Finally, the model is validated to draw meaningful conclusions about the population under study.

6.2   UNIT OF ANALYSIS OF THE RESEARCH

The unit of analysis refers to the level of aggregation of the data collected during the proceeding of data collection stage (Uma & Roger, 2003). In terms of the unit of analysis for this study, data were collected individually from the sample frame of e-tutors serving contracts at an ODL institution in South Africa.

6.3   DESCRIPTIVE STATISTICAL ANALYSIS

The statistical analysis of this data fell into three main categories: descriptive statistical analysis, the calculation of frequency scores and measures of dispersion, and proportional measures in terms of percentage scores. The next section reports on the biographical data

6.3.1   Sample Profile

The sample data were obtained from the unit of analysis which entailed a list of active e-tutors, where N = $\pm$1051. This represents a ***finite sample***, the size of which posed risks and therefore necessitated a replacement strategy. Consequently, a census was

considered a suitable strategy (Saunders et al., 2009) and all active e-tutors on the list were invited to participate in a web-administered survey – Qualtrics.

The aforementioned census strategy was employed to counteract the low response rate that is common with online surveys. In this study, of the 1051 self-administered questionnaires distributed, 362 responses were returned. However, some of these questionnaires were not fully completed and, thus, 83 were regarded as spoiled, leaving a sample size of 279 (n = 279). This number accounted for 26,55% of the response rate. The response rate was subsequently deemed to be sufficient, being more than the recommended 20% when N is around 1500 (Leedy & Ormrod, 2013).

6.3.2 Biographical Data

The profile of the sample is described according to the categories of the following biographical variables: gender, age, educational background, colleges, and regions. The data included are based on their influence in making inferences and the planned contrast regarding JCM, JS, and OC in a virtual work environment. The following tables present the results for the biographical data:

- ***Distribution of Gender***

The gender variable consists of the proportion of male and female e-tutors in the virtual work environment where work/life balance is at play. Figure 6.1 graphically depicts the proportions and the number/counts of gender distribution.
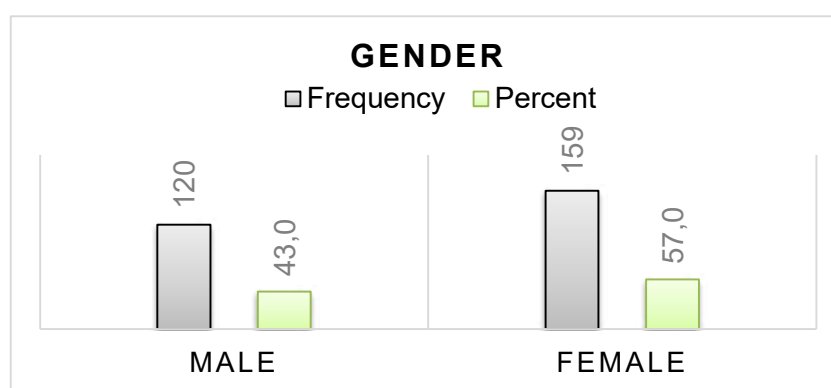
***Figure 6.1.* Gender proportions.**

The binary variable, gender, is indexed in Table 6.1 to show total statistics.

Table 6.1

Gender: Binary Variable (n = 279)

		Frequency	Percentage
Valid	Male	120	43,0
	Female	159	57,0
	Total	279	100,0

Table 6.1 shows the binary variable, gender, indicating that 57% of e-tutors in the study were female, leaving male e-tutors to make up 43% of the sample (n = 279). This is a fair representation of the population, as females generally constitute a larger population in academic institutions (Rothmann & Jordaan, 2006). Accordingly, significant differences in JS and OC levels may obtain for male and female e-tutors based on the work/life balance afforded within the virtual work environment (Dirani & Kuchinke, 2011; Gajendran et al., 2015).

- • **Age Groups**

Age composition revealed different generational cohorts of e-tutors. Figure 6.2 graphically depicts the distribution by age.
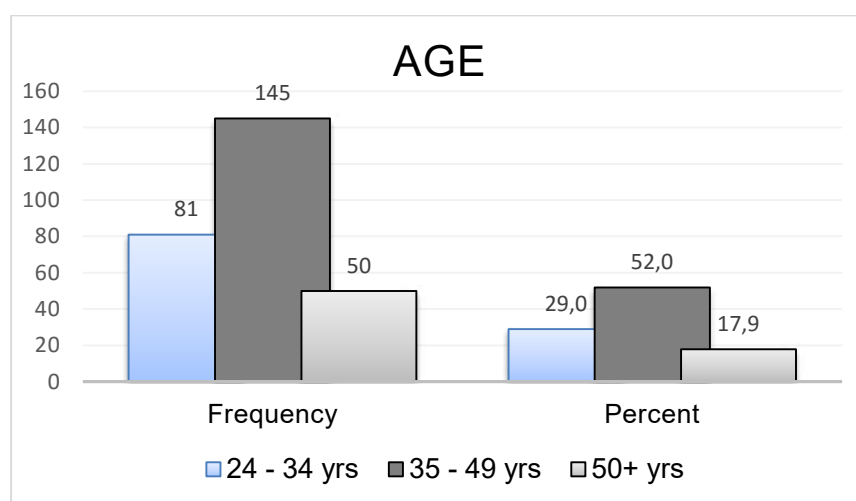
Figure 6.2. Distribution of age.

Table 6.2 presents an index of the total descriptive statistics for proportions of e-tutors' age.

Table 6.2

Age: Continuous Variable (n = 279)

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	24–34 yrs	81	29,0	29,3	29.3
	35–49 yrs	145	52,0	52,5	81.9
	50+ yrs	50	17,9	18,1	100.0
	Total	276	98,9	100,0	
Missing	System	3	1,1		
Total		279	100,0		

Table 6.2 shows the composition of age groups for the sample participants (n = 279). In this study, the majority of e-tutors were aged between 35 and 49, representing a reasonably young generation of virtual workers. According to Strauss and Howe (1993), this demographic cohort of e-tutors is referred to as generation X.

In this study, this cohort comprised 52% of the sample population. This cohort is followed in size by the youngest generation (generation Y) of e-tutors, with ages ranging between 24 and 34 years and making up 29% of the sample population. Collectively, the demographic cohorts of e-tutors from generations X and Y may have similar perceptions when it comes to virtual working conditions, as opposed to the older generation of e-tutors who fall within the generation known as the baby boomers.

The last generation (baby boomers) are 50 years and older and in this study the cohort comprised only 17,9% of the sample population. These age group compositions were expected because older and younger workers from different generational cohorts may react differently to the same job characteristics, particularly in a virtual work structure where technology plays a major role (Truxillo et al., 2012).

Virtual work environments are characterised by technological advancements which necessitate a variety of skills, skills generally preferred by generations X and Y rather than baby boomers (Hernaus & Pološki Vokic, 2014). Hence, young generation of

workers might prefer virtual working conditions as compared to older generation of workers

• ***Educational Background***

Educational background is a critical success factor which has a positive influence on JS and OC (Dede, 1996; Turney et al., 2009). Figure 6.3 shows the proportions regarding e-tutors' educational background and highest level of qualification.
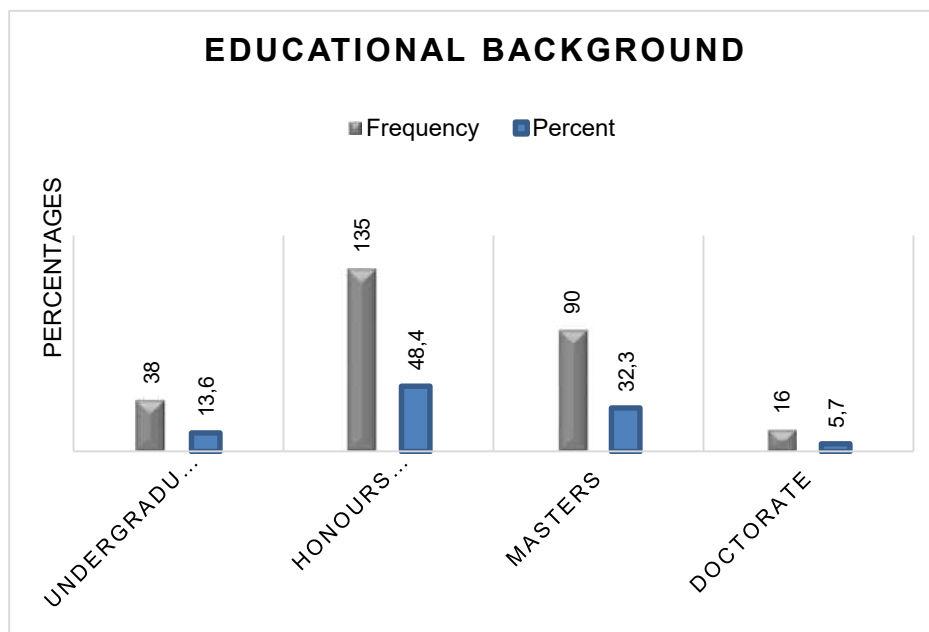
Figure 6.3. **Educational background.**

The frequency numbers and proportions in relation to educational background are presented in Table 6.3 below.

Table 6.3

Educational Background: Ordinal Variable (n = 279)

		Frequency	Percentage
Valid	Undergraduate Degree	38	13.6
	Honours Degree	135	48.4
	Masters	90	32.3
	Doctorate	16	5.7
	Total	279	100.0

Table 6.3 shows the composition of e-tutors' educational background. The ordinal variable indicates the distribution of the levels of qualification for sample n = 279 as follows: the largest proportion of e-tutors (close to 50%) had honours degrees, whereas those with doctoral degrees comprised the smallest proportion with just under 5.7%. E-tutors with master's degrees constituted over 30%, while those with an undergraduate degree comprised 13,6% of the sample.

The largest proportion, those with honours degrees, are fairly well qualified for the e-tutor job. However, this qualification might limit their progression in academia, which requires extensive exposure to teaching, learning and research (Khalid et al., 2012; Thompson & Phua, 2012). Furthermore, telecommuting means that workers are generally not physically (geographically) co-located with supervisors and co-workers, which means that effective collaborative work has to be made possible through technology. Furthermore, under virtual work conditions, role fulfilment through collaborative work and using technology to teach increases satisfaction (Thompson, 2014).

Given these qualification requirement, the e-tutors who have doctoral degrees and make up the smallest proportion of the sample (5,7%) have better chances of progressing in academia, particularly within the ODL university. They are followed by the 32,3% who are qualified with master's degrees, as such qualifications offer extensive exposure to research. Honours degrees on the other hand have much less exposure to research.

- ***Job Tenure***

Job tenure refers to the number of years of service. Figure 6.4 shows the trends in job tenure among the sample which also refers to years of service (2013–2017).
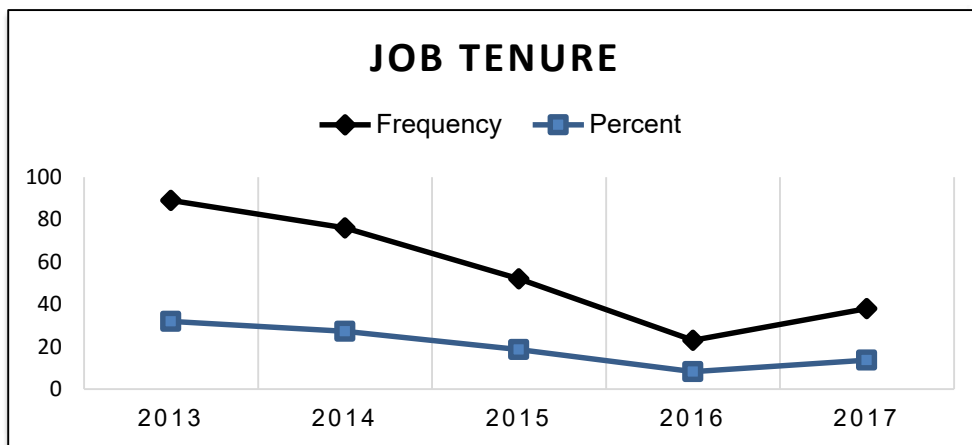
***Figure 6.4.* Job tenure.**

Figure 6.4 shows trends in years of service for the e-tutors. E-tutors who started work in 2013 had the longest tenure with four years of service, whereas those who started in 2017 had been in service for less than a year. Those who started in 2014 had three years of service, those who started in 2015 has two years, while those who started in 2016 had provided their services inside the virtual classroom for a period of one year. Table 6.4 shows an index of trends in the number of years in service.

Table 6.4

Job Tenure: Continuous Variable (n = 279)

	Years of service	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	2013	89	31,9	32,0	32,0
	2014	76	27,2	27,3	59,4
	2015	52	18,6	18,7	78,1
	2016	23	8,2	8,3	86,3
	2017	38	13,6	13,7	100,0
	Total	278	99,6	100,0	-
Missing	System	1	0,4		
Total		279	100,0		

Table 6.4 illustrates job tenure among the e-tutors. The sample distribution (n = 279) shows that the largest proportion of e-tutors had four to five years of service from the period of 2013 and 2014, bearing in mind that the programme started in 2013. The two groups combined had a cumulative percentage of close to 60%, while e-tutors who

had served on the programme from 2015 to 2017 had between one and three years of service with a cumulative percentage of 40%.

The above trends in job tenure indicate that e-tutors who have served longer on the programme may have had more time to develop the necessary competencies for role fulfilment. Therefore, they might experience more JS as compared to those who had a short job tenure of a year (Hrebiniak & Alutto, 1972; Martin & Roodt, 2008). Comparatively, e-tutors with longer job tenure may develop close ties with the ODL institution. This attachment may therefore increase the OC of e-tutors who have served longer than those who have been with the university for just a year (Morrow, 2011).

- *Colleges within the ODL University*

The ODL university consists of several colleges that employ e-tutors' services. Figure 6.5 shows the proportion of e-tutors within specific colleges at the ODL university.

COLLEGE PROPORTIONS

- Human Sciences 2%
- Science, Engineering, & Technology 2%
- Accounting Sciences 22%
- Education 29%
- Agriculture & Environmental Sciences 4%
- Economic & Management Sciences 41%
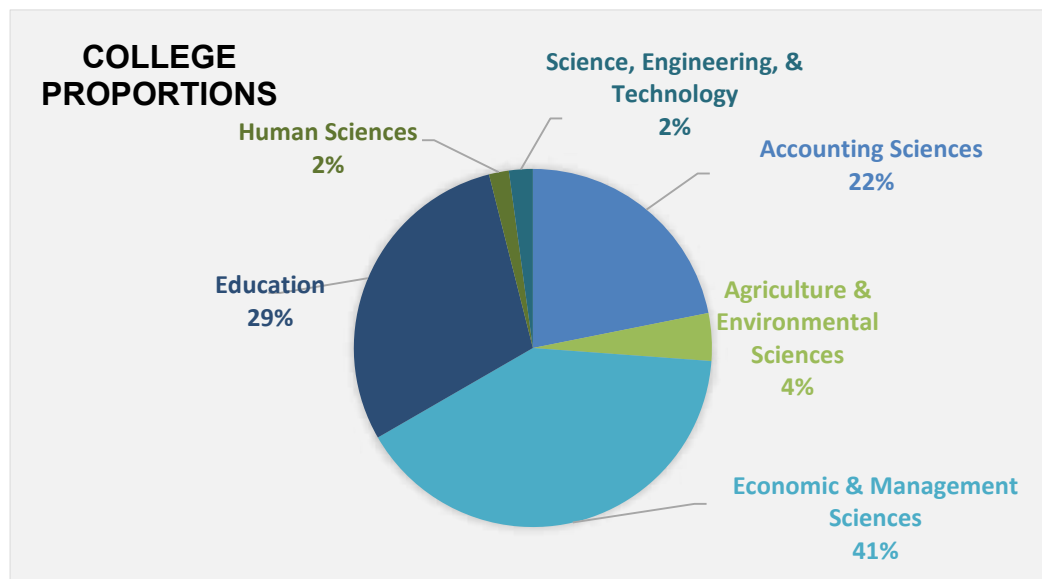
Figure 6.5. **Proportion of e-tutors in the individual college.**

Figure 6.5 is graphical depiction of proportions of e-tutors in the ODL university colleges. The frequency counts and proportions of e-tutors per college illustrated are indexed comprehensively in Table 6.5 below.

Table 6.5

College: Nominal Variable (n = 279)

	Colleges	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Accounting Sciences	61	21,9	21,9	21,9
	Agriculture & Environmental Sciences	12	4,3	4,3	26,2
	Economic & Management Sciences	113	40,5	40,5	66,7
	Education	82	29,4	29,4	96,1
	Human Sciences	5	1,8	1,8	97,8
	Science, Engineering, & Technology	6	2,2	2,2	100,0
	Total	279	100,0	100,0	

Table 6.5 indicates the proportion of e-tutors in various colleges of the ODL university. The College of Economic and Management Sciences (CEMS) represents nearly 41% of the population. This college is followed by nearly 30% from the College of Education (CEDU) and the College of Accounting Sciences (CAS) representing about 22%. The smallest proportions of e-tutor population are in the College of Agriculture & Environmental Sciences (CAES) with 4,3%, the College of Science, Engineering and Technology with 2,2%, and the College of Human Sciences at 1,8%.

The provision of social support and the implementation of policies are two of the greatest predictors of satisfaction with work conditions within a specific work environment (De Vries et al., 2018). Therefore, colleges that promote pleasant virtual work conditions and support in terms of adequate technological infrastructure may increase the JS levels of e-tutors. Moreover, this may have a positive influence on the numbers of e-tutors willing to provide their services within the colleges.

The largest proportion of e-tutors, that is, in CEMS, may serve as an indication that the college has a high demand for e-tutor services due to the high student enrolment numbers. Therefore, the institution needs to provide e-tutors with the necessary support and technological infrastructure in fulfil their role effectively. Such provisions will increase their JS levels and ultimately increase their retention (Thompson, 2014).

The lack of consistency across colleges in terms of e-tutor numbers in the ODL university may indicate significant differences in levels of JC, JS and OC.

- ***Regional Centre***

Telecommuters are geographically dispersed, but remain in contact with their centralised work environment via technology. Figure 6.6 shows the geographic dispersion of e-tutors as telecommuters in various regional centres of the ODL university. Although, e-tutors are dispersed in these regional centres, they still report to their centralised physical work environment, which is the main campus of the ODL university.

DISPERSION OF E-TUTORS PER REGIONS

Legend:
- Eastern Cape
- Gauteng
- KwaZulu Natal
- Limpopo
- Midlands
- Mpumalanga
- Western Cape
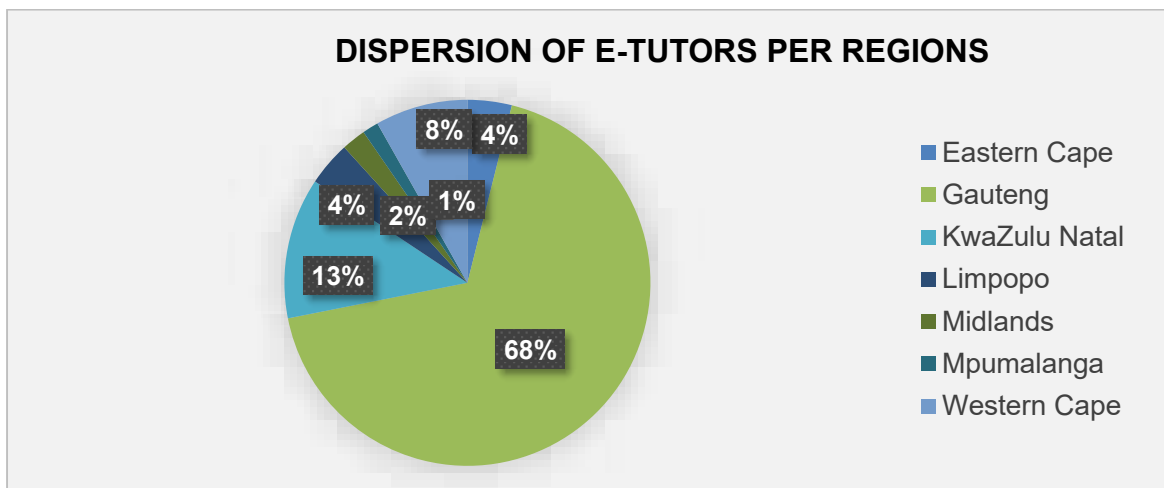
Figure 6.6. **Geographical dispersion of e-tutors.**

Figure 6.6 is a plot of the geographical dispersion of e-tutors among the various regional centres of the ODL institution. The geographical distribution of the e-tutors is subsequently presented in Table 6.6.

Table 6.6

Regional Centre: Nominal Variable (n = 279)

	Regional Centres	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Eastern Cape	11	3,9	3,9	3,9
	Gauteng	191	68,5	68,5	72,4
	KwaZulu-Natal	35	12,5	12,5	84,9
	Limpopo	11	3,9	3,9	88,8
	Midlands	6	2,2	2,2	91,0
	Mpumalanga	4	1,4	1,4	92,4
	Western Cape	23	8,2	8,2	100,6
	Total	279	100,0	100,o	100,0
Missing	System		0,		
Total		279	100,0		

Table 6.6 depicts the dispersion of e-tutors among the various regional centres of the ODL university. The Gauteng regional centre accounts for the largest proportion of participation with nearly 70%, thus creating a pointy distribution, followed by a skewness of 12,5% in KwaZulu-Natal and 8,2% in Western Cape. The Eastern Cape and Limpopo are noticeably similar with 3,9% each, tailing off to 2,2% in the Midlands, and 1,4% in Mpumalanga. The pointy-skew dispersion of e-tutors is graphically depicted in Figure 6.1 below:
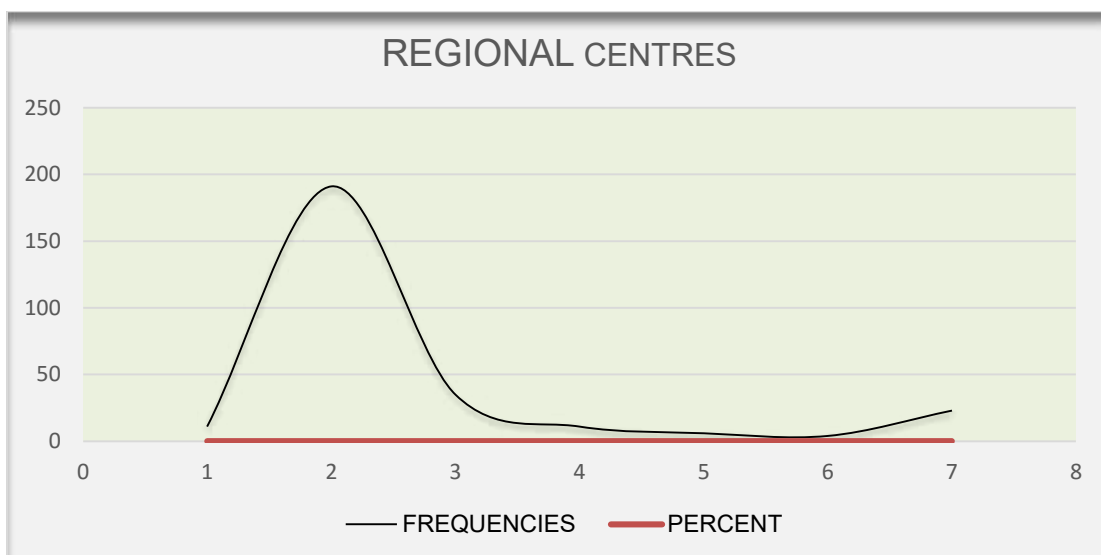
Figure 6.7. **The pointy-skew dispersion of e-tutors.**

The pointy distribution of e-tutors equates to positive kurtosis, thus creating a positively skewed distribution, ending with a heavy tail (Field, 2009). It is concluded that the largest proportion of e-tutors, namely in Gauteng, is justifiable as the region constitutes the central location which houses the main campus of the ODL university.

6.3.3 Integration of the Biographical Results

The interpretation of the results for the biographical variables is as follows:

The majority of e-tutors are females (57%) between the ages of 35 and 49 years (52%), thus positioning them within the generational cohort of generation X. Relative to the probabilities of the age statistics, the standard deviation (s) = 9,26655, and the mean ($\bar{x}$)= 40,6051.

Most of the e-tutors have an honours degree as their highest level of qualification, and have between four and five years of experience as e-tutors (32%). This implies that they are fairly well qualified for the position. Of these, 40.5% serve their contract in the College of Economic and Management Sciences at the Gauteng regional centre (68%).

The biographical results are fundamental to the inferential analysis of the data. The planned contrast of the observed data will show levels of variance. Although there was no specific comparison planned for differences between regional centres, it is significant to note that the Gauteng region takes up the largest proportion of e-tutors (68,5%).

6.4 VALIDITY

This section reports on the validity of the research instruments. Ensuring validity entailed conducting rigorous tests to ascertain whether the scale dimension reflected the construct purported in the original scales (Barry, Chaney, Stellefson, & Chaney, 2011). The process of assessing the validity of constructs comprised two phases – pilot testing and exploratory factor analysis.

6.4.1 Pilot Testing

Existing standardised instruments were reviewed for content validity. The questionnaires were loaded into the web survey Qualtrics and pre-tested. The developed survey link was then sent to the research supervisors and the statistician for expert review. The link was also sent for comment to the two Academic Support Coordinators (ASC) located within the HR department in one of the colleges at the ODL university. The ACSs' role is to administer the monitoring and evaluation of e-tutors' online activities.

The construction of the survey was well received and was deemed to be relevant for measuring e-tutors' feelings. Finally, the survey was sent to a sample of five e-tutors to emulate data collection. All five e-tutors responded. A follow-up was done telephonically to check for any additional comments, however no further recommendations were made. The tutors were happy with the presentation of the questions as they were perceived to be a significant measure of their perceptions and affective tones.

6.4.2 Exploratory Factor Analysis (EFA)

In order to conduct a reliable EFA, the sample size has to be adequate. The results of the Kaiser-Meyer-Olkin (KMO) test and the Bartlett test for sphericity will be reported here. The KMO statistic was found to vary between 0 and 1, indicating patterns of correlations.

Kaiser (1974) maintains that values less than > 0,5 are barely acceptable, and where values are greater than < 0,5, the researcher needs to think about collecting more data. Values between 0,5 and 0,7 are regarded as mediocre, values between 0,7 and 0,8 are regarded as good, whereas values between 0,8 and 0,9 are great, and values above 0,9 are superb. The Bartlett test indicates the level of significance of the correlation structure of a construct; for the purposes of this study, the acceptable value will be greater than > 0,7.

In the following section, factor analysis will be reported based on the grouping of item statements, where factor loadings indicate common variance (communalities) and/correlations of items. Communality values range between one (1), which is the highest value, and zero (0), which is the value showing that variables share no variation with any other variables.

These values are also associated with eigenvalues, indicating the substantive importance of variates. The eigenvalues are depicted on a Scree plot and the cut-off point is at the point of inflexion where factors are selected. Factors with weightings of below 0,3 were not be retained in the analysis.

6.4.2.1 EFA for Job Characteristics Model (JCM)

This section reports on the EFA for the JCM construct. Table 6.7 presents the results of the KMO test.

Table 6.7

KMO Test for the Job Characteristics Model

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin measure of sampling adequacy.		0.816
Bartlett's test of sphericity	Approx. chi-square	1734,973
	df	253
	Sig.	0,000

Table 6.7 presents the KMO value for the JCM construct, indicating a value of 0,816. This value is greater than 0,8 and therefore it validates confidence that the sample size is adequate for factor analysis. The p-value of the Bartlett test is below 0,05 significance, this means that the correlation structure of the construct is strong enough to conduct a factor analysis (Pallant, 2011). Table 6.8. present the communalities for JCM.

Table 6.8

Communalities for the Job Characteristics Model

Communalities	Initial	Extraction
Q13.2 I have a chance to do a number of different tasks, using a wide variety of different skills and talent	0,424	0,501
Q13.8 I get to use the number of complex skills on this job	0,414	0,411
Q13.11R The job is quite simple and repetitive [R]	0,328	0,393
Q14.2 My job involves doing a number of different tasks	0,401	0,390
Q14.6R The demands of my job are highly routine and predictable [R]	0,384	0,447
Q13.3 I do a complete task from start to finish The results of my efforts are clearly visible and identifiable	0,304	0,275
Q13.7 I make insignificant contributions to the final product or service	0,202	0,220
Q14.4R My job is arranged so that I should not have a chance to do an entire piece of work from beginning to end [R]	0,251	0,275
Q14.10 My job provides me with the chance to finish completely any work I start	0,362	0,385
Q13.4 What I do affect the well-being of other people in very important ways	0,405	0,468
Q14.1R What I do is of little consequence to anyone else [R]	0,391	0,559
Q14.8R My job is not very important to the company's survival [R]	0,263	0,224
Q14.11 Many people are affected by the job I do	0,365	0,399
Q13.1 I have almost complete responsibility for deciding how and when the work is to be done	0,303	0,362
Q13.9R I have very little freedom in deciding how the work is to be done [R]	0,398	0,442
Q14.5R My job does not allow me an opportunity to use discretion or participate in decision making [R]	0,340	0,328
Q14.9 My job gives me considerable freedom in doing the work	0,312	0,354
Q13.5 My manager provides me with constant feedback about how I am doing	0,575	0,688
Q13.6 The work itself provides me with information about how well I am doing	0,505	0.514
Q13.10 Just doing the work provides me with the opportunity to figure out how the work is to be done	0,199	0,236
Q13.12R My supervisor or co-worker rarely give me feedback on how well I am doing the job [R]	0,174	0,169
Q14.3 Supervisors let us know how well they think we are doing	0,550	0,609
Q14.7R My job provides few clues about whether I'm performing adequately [R]	0,266	0,379

** **Extraction Method: Principal Axis Factoring****

Table 6.8 presents the extraction of factors for the JCM. A principal axis factor analysis with varimax was conducted to assess the underlying structure of 23 questions of the JCM. Every question has a weight or loading from every factor. Factors are allowed to correlate, and the extraction thereof is based on communalities ranging between 0 and 1. This can be depicted on the Scree plot presented in Figure 6.8 below.
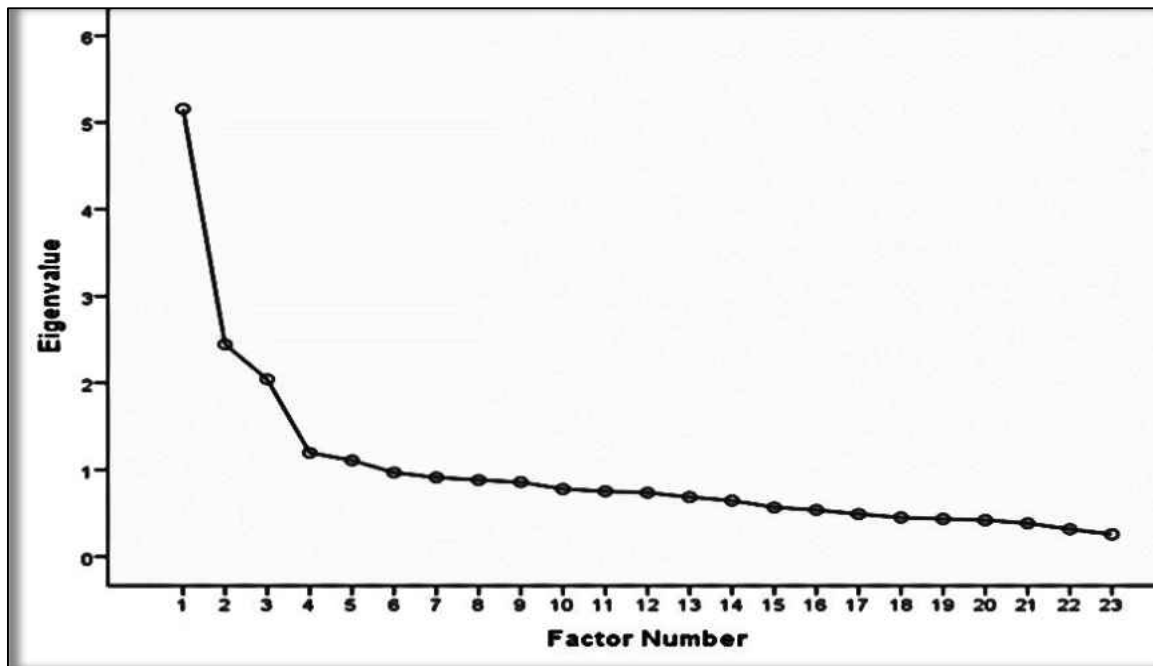
Figure 6.8. **Scree plot for the Job Characteristics Model.**

An initial analysis was run to obtain eigenvalues for each component of the data. Five components had eigenvalues in excess of Kaiser's criterion of 1 and, in combination, the values explained 51,93% of the variance. The scree plot showed inflexion that would justify retaining four factors. The scree plot line starts to straighten up after the fourth component where the eigenvalue is > 1. However, this was slightly ambiguous, therefore, a re-run was done for more rigorous testing. Figure 6.9 shows the results for the re-run on the factor plot.
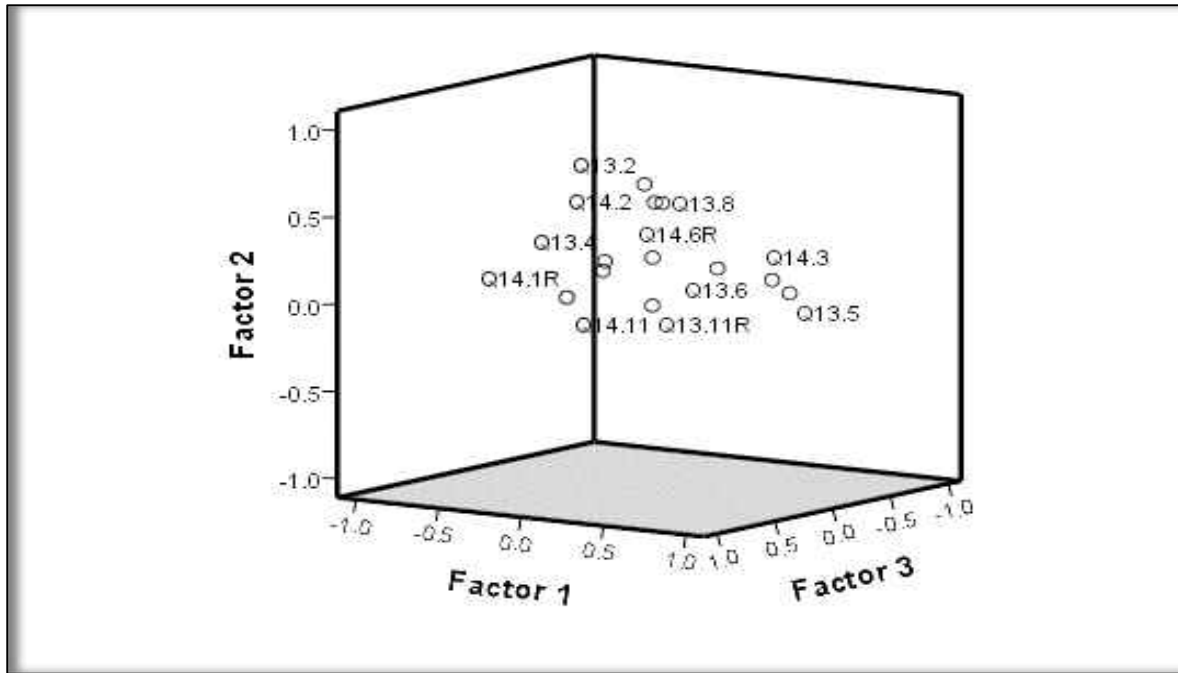
Figure 6.9. Factor plot for the Job Characteristics Model.

The factor plot in Figure 6.9 shows a re-run that was conducted using varimax with Kaiser normalisation. Questions with loadings of above 0,3 are considered to be significant, whereas loadings of 0,4 and above are considered to be meaningful. Communalities of less than < 0,30 for questions are considered to be low and were therefore not considered. Accordingly, the following questions had low communalities and were therefore excluded: Q13.3, 13.7, 14.4*R, 14.8, 13.10, and 13.12*R, 13.2, 13.9*R, 14.7, 14.5*R, 14.10, 14.9, and 13.1. In the re-run of the analysis the factor loading structure was reconsidered. The new factor structures are presented in Table 6.9. below.

Table 6.9

Factor Analysis for the Job Characteristics Model

Rotated Factor Matrix[a]				
	Factor			
	1	2	3	4
		Skill	Task	Skill
	Feedback	Variety1	Significance	Variety2
Q13.5 My manager provides me with constant feedback about how I am doing	0,877			
Q14.3 Supervisors let us know how well they think we are doing	0,747			
Q13.6 The work itself provides me with information about how well I am doing	0,595			
Q13.2 I have a chance to do a number of different tasks, using a wide variety of different skills and talent		0,679		
Q13.8 I get to use the number of complex skills on this job		0,586		
Q14.2 My job involves doing a number of different tasks		0,582		
Q14.1R What I do is of little consequence to anyone else [R]			0,639	
Q13.4 What I do affect the well-being of other people in very important ways		0,303	0,610	
Q14.11 Many people are affected by the job I do			0,597	
Q13.11R The job is quite simple and repetitive [R]				0,771
Q14.6R The demands of my job are highly routine and predictable [R]				0,573

Extraction method: Principal Axis Factoring, Rotation Method: Varimax with Kaiser Normalisation

Table 6.9 presents the new factor structure. The questions were designed to index five dimensions: skill variety, task identity, task significance, autonomy, and feedback. Given the adequate sample size and the convergence of the factor rotation, a new proposed structure was obtained. The items were sorted so that the questions that have the highest loading from factor 1 are listed first down to the one with the lowest factor weight.

Table 6.9 shows factor loadings after the rotations. Only four factors were extracted. In the factor analysis output, that is, items forming the dimension of skill variety, data was split into two subsets of factors, namely, factor 2 and factor 4. The splitting of data

into two subsets represents cross-validation, which is an incomplete version of validity. Therefore, one subset had to be discarded (Knafl & Grey, 2007).

The subset of skill variety in factor 4 had reverse scoring and also contained only two items. Therefore, factor loadings might raise validity issues pertaining to the virtual context under study (Culbertson, 2013). Furthermore, preconceptions about factor 4 might need modification based on the reverse-coded marker items associated in the disjoint sets. Therefore, the subsets for factor 4 were left out, as recommended above (Knafl & Grey, 2007).

Following the cross-validation, the three-factor Job Characteristics (JC_3) was retained as the new structure in the final analysis. The items that cluster on factor 1 suggest that the dimension represents feedback, factor 2 skill variety, and factor 3 task significance.

Task identity and autonomy were suppressed in the final output. These results are not unique: a similar study testing the JCM did not show support for all the dimensions of the model (Cleave, 1993). However, in that study the model was tested in the modern work context and some relationships involving autonomy were not predicted in the model. The suppression of task identity and autonomy in the factor extraction suggests that parameters of the JCM need to be expanded in order to suit the virtual work context (Oldham & Hackman, 2010; Wood, Van Veldhoven, Croon, & De Menezes, 2012).

6.4.2.2 EFA for Job Satisfaction (JS)

This section reports on the EFA for the JS construct. Table 6.10 presents the results of the test.

Table 6.10

KMO for Job Satisfaction

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin measure of sampling adequacy.		0,883
Bartlett's test of sphericity	Approx. chi-square	2583,547
	df	190
	Sig.	0,000

Table 6.10 presents the KMO values for the JS construct, namely, 0,883. This value is greater than 0,8 and therefore validates confidence that the sample size is adequate for factor analysis. The p-value of the Bartlett test was found to be below 0,05 in significance, thus the correlation structure of the construct is sufficiently strong to conduct a factor analysis (Pallant, 2011). Table 6.11. present the communalities for JS.

Table 6.11

Communalities for Job Satisfaction

Communalities	Initial	Extraction
Q15.1 Being able to keep busy all the time	0,482	0,536
Q15.2 The chance to work alone on the job	0,286	0,322
Q15.3 The chance to do different things from time to time	0,492	0,499
Q15.4 The chance to be "somebody" in the community	0,527	0,587
Q15.5 The way my boss handles his / her workers	0,641	0,705
Q15.6 The competence of my supervisors in making the decisions	0,670	0,772
Q15.7 Being able to do things that don't go against my conscience	0,403	0,485
Q15.8 The way my job provides for steady employment	0,330	0,309
Q15.9 The chance to do things for other people	0,496	0,556
Q15.10 The chance to tell other people what to do	0,281	0,239
Q16.1 The chance to do something that make use of my abilities	0,578	0,622
Q16.2 The way company policies are put in practice	0,530	0,534
Q16.3 My pay and the amount of work that I do	0,406	0,628
Q16.4 The chances for advancement on this job	0,486	0,583
Q16.5 The freedom to use my own judgement	0,674	0,750
Q16.6 The chance to try my own methods of doing the job	0,696	0,776
Q16.7 The working conditions	0,439	0,416
Q16.8 The way co-workers get along with each other	0,431	0,407
Q16.9 The praise I get for doing a good job	0,545	0,572
Q16.10 The feeling of accomplishment I get from the job	0,573	0,566

Extraction Method: Principal Axis Factoring.

Table 6.11 presents the factor extraction. Principal axis factor analysis with varimax was conducted to assess the underlying structure of 20 questions of the Minnesota Satisfaction Questionnaire (MSQ). Every question has a weight or loading from every other factor. Factors were allowed to correlate, and the extraction thereof is based on communalities ranging from 0 and 1. The scree plot demonstrates the extraction of factors (see Figure 6.10 below).
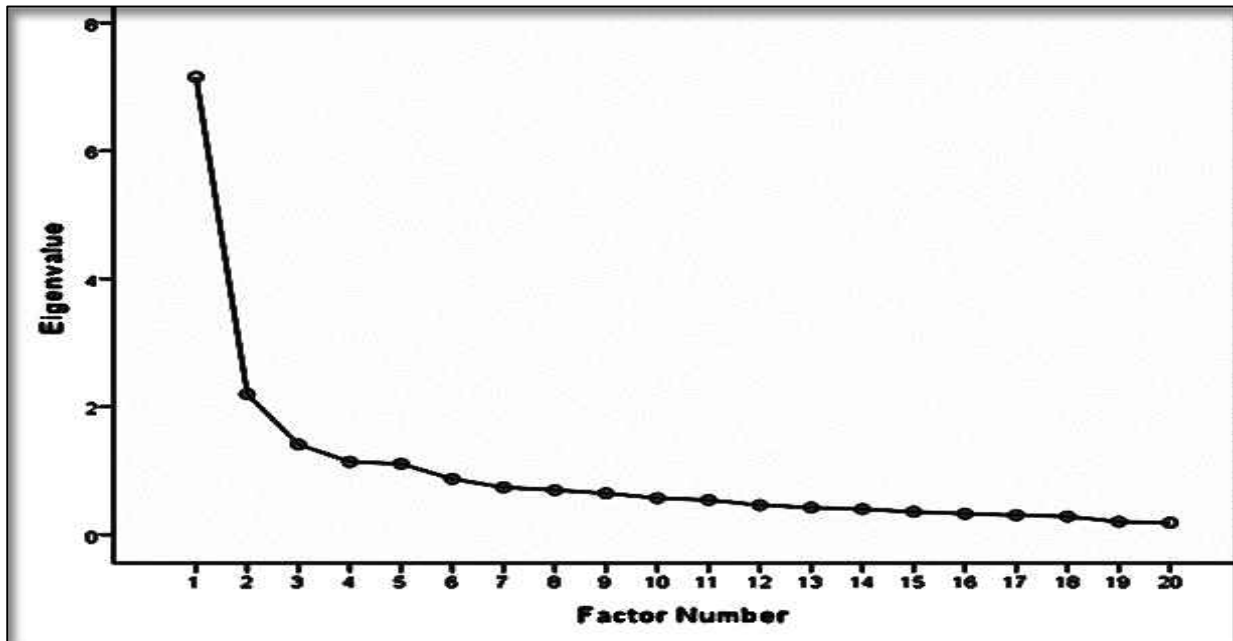
Figure 6.10. **Scree plot for job satisfaction**

Figure 6.10 is a scree plot showing an initial analysis of factors. The analysis was conducted to obtain eigenvalues for each component of the data. Consequently, five components were found to have eigenvalues exceeding Kaiser's criterion of 1. In combination, the components explained 54,95% of the variance. However, as the Scree plot was slightly ambiguous and showed inflexion, that would justify retaining four factors.

Subsequently, a re-run of the analysis was done using varimax with Kaizer normalisation. Questions with loadings of 0,3 and greater were considered significant and meaningful, while those having communalities of < 0,30 were considered to be of low significance and therefore not considered. Thus, the following questions had low communalities and were therefore excluded: Q15.2, 15.7, 16.3, 15.8. Accordingly, the

factor loading structures were reconsidered and the new and final structure is presented in Table 6.12 below.

Table 6.12

Factor Matrix for Job Satisfaction

	Factor	
	1	2
	Intrinsic JS	Extrinsic JS
Q16.1 The chance to do something that make use of my abilities	0,751	
Q16.6 The chance to try my own methods of doing the job	0,735	
Q16.5 The freedom to use my own judgement	0,703	
Q15.3 The chance to do different things from time to time	0,663	
Q16.10 The feeling of accomplishment I get from the job	0,650	
Q15.9 The chance to do things for other people	0,646	
Q15.4 The chance to be "somebody" in the community	0,567	0,380
Q16.7 The working conditions	0,530	
Q15.1 Being able to keep busy all the time	0,516	0,354
Q15.5 The way my boss handles his / her workers		0,750
Q15.6 The competence of my supervisors in making the Decisions		0,740
Q16.9 The praise I get for doing a good job		0,704
Q16.8 The way co-workers get along with each other		0,655
Q16.2 The way company policies are put in practice	0,408	0,562
Q16.4 The chances for advancement on this job		0,487

Extraction method: Principal Axis Factoring

Rotation Method: Varimax with Kaizer Normalisation

Given the adequate sample size and the convergence of the Scree plot, a rotated factor matrix was obtained. Table 6.12 shows factor loadings after rotations. The questions were designed to index two dimensions – intrinsic job satisfaction and extrinsic job satisfaction – and the extraction of factors reflected these dimensions.

The first factor had strong loadings on the first nine questions. Q16.1, 16.6, 16.5, 15.3, 16.10, 15.9, 15.4, and 15.1, which were intended to reflect perceptions of intrinsic JS,

and thus all have strong loadings from the same factor; as such, they provide strong support for being conceptualised as the same construct.

On the other hand, Q16.7 was intended to measure extrinsic JS. In the final analysis, however, the item was found to be closely related to intrinsic JS. In retrospect, one can see why this question could also be interpreted as referring to intrinsic JS. The item reads, "the working conditions". E-tutors are subjected to virtual working conditions as opposed to physical working conditions, hence the conditions could be internalised as matters relating to intrinsic JS. Furthermore, e-tutors' engagement is mainly influenced by emotional expression and cognitive presence as opposed to physical presence (Bentley et al., 2016; Cleveland-Innes et al., 2014).

6.4.2.3 EFA for Organisational Commitment (OC)

This section reports on the EFA for the OC construct. Table 6.13 presents the results of the test.

Table 6.13

KMO for Organisational Commitment

	KMO and Bartlett's Test	
Kaiser-Meyer-Olkin measure of sampling adequacy		0,897
Bartlett's test of sphericity	Approx. chi-square	2508,717
	df	153
	Sig.	0,000

Table 6.13 presents the KMO values. The value for the OC construct is 0,897. This value is greater than 0,8 and therefore it validates confidence that the sample size is adequate for factor analysis. The p-value of the Bartlett test is below 0,05 significance, thus indicating that the correlation structure of the construct is sufficiently strong to conduct a factor analysis (Pallant, 2011). Table 6.14 present the communalities for OC.

Table 6.14
Communalities for Organisational Commitment

Communalities	Initial	Extraction
Q17.1 I am very happy being a member of this organisation	0,491	0,543
Q17.2 I enjoy discussing about my organisation with people outside	0,383	0,379
Q17.3 I really feel as if this organisation's problems are my own	0,410	0,438
Q17.4 I think that I could easily become as attached to another organisation as I am with this one	0,154	0,121
Q17.5 I do not feel like "part of the family" at my organisation	0,307	0,356
Q17.6 This organisation has a great deal of meaning to me	0,514	0,600
Q17.7 I worry about the loss of investment I have made in this organisation	0,245	0,273
Q17.8 If I was not a member of this organisation, I would be sad because my life would be disrupted	0,460	0,415
Q17.9 I am loyal to this organisation because I have invested a lot in it, emotionally, socially, and economically	0,503	0,448
Q18.1 I often feel anxious about what I have to loose with this organisation	0,495	0,569
Q18.2 Sometimes I worry about what might happen if something was to happen to this organisation and I was no longer a member	0,606	0,624
Q18.3 I am dedicated to this organisation because I fear what I have to loose in it	0,595	0,650
Q18.4 I feel I owe this organisation quite a bit for what it has done for me	0,579	0,557
Q18.5 My organisation deserves my loyalty because of its treatment towards me	0,621	0,604
Q18.6 I feel I would be letting my co-workers down if I wasn't a member of this organisation	0,633	0,677
Q18.7 "I am loyal to this organisation because my values are largely its values"	0,722	0,775
Q18.8 "This organisation has a mission that I believe in and am committed to"	0,695	0,745
Q18.9 "I feel it is 'morally correct' to dedicate myself to this organisation"	0,674	0,740

Extraction Method: Principal Axis Factoring.

Table 6.14 present the extraction of factor loadings. A principal axis factor analysis with varimax was conducted to assess the underlying structure of 18 questions of the OC question of Allen and Meyer (1990). Every question has a weight or loading from every factor. Factors were allowed to correlate, and the extraction thereof is based on communalities ranging from 1 to 0. Figure 6.11 presents a scree plot of the extraction of factors.
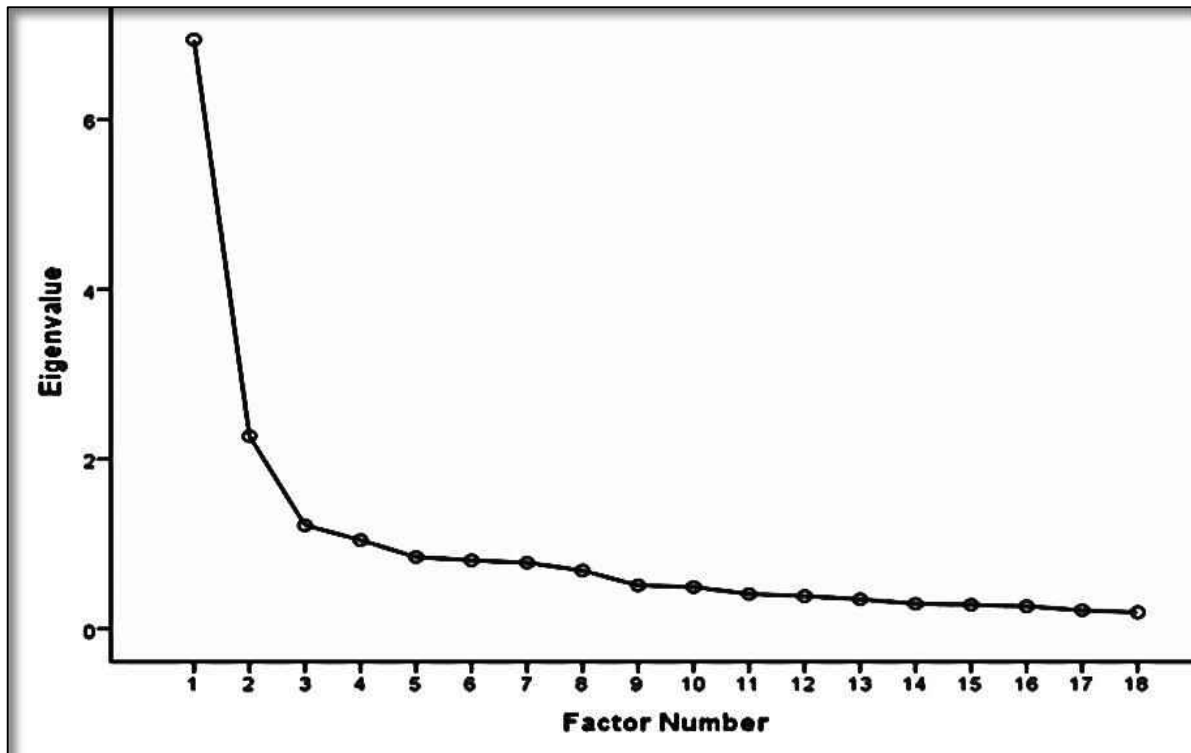
***Figure 6.11*. Scree plot for Organisational Commitment**

Figure 6.11 presents a Scree plot of the factor extraction. An initial analysis was run to obtain eigenvalues for each component of the data. Four components had eigenvalues exceeding Kaiser's criterion of 1 and in combination explained 63,77% of the variance. The scree plot was slightly ambiguous, however, showing inflexion that would justify retaining two of the factors.

A re-run consequently was done using varimax with Kaiser normalisation. Questions with loadings of 0,4 and greater were considered meaningful, while those with communalities of < 0,30 were viewed as low and therefore not considered. Thus, the following questions with low communalities were excluded: Q17.4, 17.7, and 17.5. The factor loading structures were reconsidered and, thus, Table 6.15 presents the new structure of factor loadings.

Table 6.15

Factor Matrix for Organisational Commitment

Rotated Factor Matrix[a]	Factor		
	1	2	3
	Continuance Commitment	Normative Commitment	Affective Commitment
Q18.3 I am dedicated to this organisation because I fear what I have to loose in it	0,815		
Q18.2 Sometimes I worry about what might happen if something was to happen to this organisation and I was no longer a member	0,793		
Q18.1 I often feel anxious about what I have to loose with this organisation	0,648		
Q18.6 I feel I would be letting my co-workers down if I wasn't a member of this organisation	0,605	0,435	
Q18.4 I feel I owe this organisation quite a bit for what it has done for me	0,525	0,373	0,331
Q17.8 If I was not a member of this organisation, I would be sad because my life would be disrupted	0,489		0,337
Q18.9 "I feel it is 'morally correct' to dedicate myself to this organisation"		0,790	
Q18.7 "I am loyal to this organisation because my values are largely its values"		0,774	0,347
Q18.8 "This organisation has a mission that I believe in and am committed to"		0,716	0,416
Q18.5 My organisation deserves my loyalty because of its treatment towards me	0,347	0,599	0,346
Q17.9 I am loyal to this organisation because I have invested a lot in it, emotionally, socially, and economically	0,378	0,406	0,382
Q17.6 This organisation has a great deal of meaning to me		0,304	0,672
Q17.1 I am very happy being a member of this organisation		0,308	0,655
Q17.2 I enjoy discussing about my organisation with people outside it			0,621
Q17.3 I really feel as if this organisation's problems are my own			0,552

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation.

Given the adequate sample size and the convergence of the scree plot, a rotated factor matrix was obtained. Table 6.15 shows factor loadings after rotation. The questions were designed to index three dimensions: Affective Commitment (AC), Continuance Commitment (CC), and Normative Commitment (NC). However, most questions had cross loadings, with the strongest weight being under the original dimension. In fact, most questions had factor loading of eigenvalues above .03, which is considered significant according to a criteria set by Kline (1999) and Pallant (2011). As such, the questions were not discarded.

Of significance here is the fact that CC rather than AC had the strongest factor weights and therefore was extracted as the first factor, followed by NC, and thus AC was extracted as the last factor. However, this was expected to some degree. The CC dimension is more valued by part-time jobholders who do not have job security. As such, their commitment is motivated mainly by the accrual of economic interest in exchange for their services (Shekarchizadeh et al., 2015).

Job security is more prevalent within the dimension of AC, which is experienced by fulltime employees (Slattery et al., 2010), while e-tutors provide their services on a part-time basis under independent contracts. Thus, job security is missing and therefore problematic in terms of AC (Wilkin, 2013). The dimension AC was extracted last in the final analysis, and the results could be attributed to a perceived lack of job security.

6.5   RELIABILITY

This section reports on the reliability of the scale items for the constructs under study. Internal reliability was assessed using the Cronbach's alpha (α) coefficient to check for consistency which is based on the inter-item correlations. Items with strong correlation will be interpreted based on the following *α* values (Pallant, 2011, p. 59):

- Values above 0.8 reliability are considered good.
- Values between 0.6 and 0.8 reliability are considered acceptable.
- Values below 0.6 reliability are considered unacceptable.

The reliability test of the first construct, the JCM, is presented in the next section.

6.5.1 Reliability test for Job Characteristics Model (JCM)

This section reports on the reliability test for the JCM construct. Table 6.17 presents the number of cases processed in order to conduct the reliability test.

Reliability test for Job Characteristics Model (First Test)

Table 6.17 presents the reliability analysis of the JCM construct. The statistical test presented in the table was fundamental to the initial reliability value for the JCM construct.

Table 6.17

Reliability Analysis for JCM (n = 279)

Scale Dimensions	Mean	SD	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Skill Variety 1	5,6726	0,93662	14,0741	7,197	0,475	0,379
Skill Variety 2	3,9032	1,41661	15,8435	6,822	0,220	0,566
Task Significance	5,8459	0,98050	13,9008	7,607	0,350	0,456
Feedback	4,3250	1,55280	15,4217	5,550	0,342	0,461

The values in Table 6.17 in the column labelled "Correlated Item-Total Correlation" are correlations (r) between each item and the total score. In terms of the second subset of skill variety, the values are low ($r < 0.30$) and indicate that particular items do not correlate well with the overall scale. This dimension was subjected to reverse item scoring to reduce response bias (Hof, 2012). However, the reverse items have the potential to lower the score and produce an incorrect Cronbach's alpha (Field, 2009). Table 6.18 reports on the reliability score for the dimensions of the JCM scale.

Table 6.18

Reliability Coefficients for Scale Dimensions of the JCM (n = 279)

Scale Dimensions	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Skill Variety 1	0.704	0.707	3
Skill Variety 2	0.611	0.611	2
Task Significance	0.678	0.683	3
Feedback	0.804	0.803	3

Table 6.18 presents the Cronbach's alpha values for the JCM scale. These values for the dimension of feedback were found to be highly reliable (3 items, *α* = 0.80). However, the second subset of skill variety had a low reliability score (2 items, *α* = 0.611). This value is attributed to the low correlations reported on the reliability analysis in Table 6.28. Additional to this, the two items on the subset were expected to lower the internal consistency of the JCM scale (Hof, 2012). Table 6.19 presents the reliability scores for the overall JCM construct.

Table 6.19

Reliability Value for the JCM (n = 279)

Overall Scale	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
JCM	0,536	0,578	4

As Table 6.19 indicates, correlations of the reversed items had low values of *r* = 0,22. The reliability statistics produced the overall value *α* = 0,578. Although this is deemed to be acceptable when dealing with psychological constructs, the score is below 0,6 and thus is generally unacceptable (Unwin, 2013). Moreover, the score is lower than the anticipated acceptable value for the current study, where *α*> 0,70 (Kline, 1999). This validates the fact that the second subset of the skill variety factor could not be retained in the factor analysis. Because the factor had a cross-validation, it was deleted and a re-run of the Cronbach's alpha test was conducted (Field, 2009). The next section also reports on reliability tests.

Reliability Test for the Job Characteristics Model (Second Test)

Table 6.20 presents the second reliability analysis for dimensions of the JCM scale. The reliability statistics were fundamental for re-running the reliability test for the JCM construct. This was conducted after the cross validation of the second subset of skill variety.

Table 6.20

Reliability Analysis for JCM (n = 279)

Scale Dimensions	Mean	SD	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Skill Variety	5,6726	0,93662	10,1708	4,079	0,475	0,346
Task Significance	5,8459	0,98050	9,9976	4,384	0,350	0,500
Feedback	4,3250	1,55280	11,5185	2,609	0,342	0,590

The values in Table 6.20 in the column labelled "Correlated Item-Total Correlation" are correlations (r) between each item and the total score. The correlation values for all the items are greater ($r > 0,30$). As such, these values indicate good correlations among the items. The values in the column labelled "Cronbach's Alpha If Item Deleted" are values of the overall α after the second subset of skill variety items was excluded from the calculations. Once deleted, these items increased the reliability.

The second test also showed an improvement in the dimension of feedback, with a higher reliability score of $\alpha = 5.90$, which indicates that the manner in which e-tutors carry out their job activities provide some degree of knowledge about the effectiveness of their performance (Oldham & Hackman, 2010). This improvement had a positive impact on the Cronbach's alpha value. Table 6.22 presents the Cronbach's alpha values based on the scale statistics for JC_3.

Table 6.21

Reliability Coefficients for Scale Dimensions of JCM (n = 279)

Scale Dimensions	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
Skill Variety	0,704	0,707	3
Task Significance	0,678	0,683	3
Feedback	0,804	0,803	3

Table 6.21 presents the Cronbach's alpha values based on the three dimensions of the JCM scale. The scale contains one dimension of skill variety with the alpha value of 0,70. The three dimensions improved the internal consistency of the scale and this improvement is reflected in the new reliability score presented in Table 6.22.

Table 6.22

Reliability Value JC_3 (n = 279)

Overall Scale	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
JC_3	0,566	0,610	3

The re-run of the reliability test for the JCM construct in the current study produced an acceptable value α = 0,61, as indicated in Table 6.23. This value is based on the overall scale statistics obtained after the second subset of skill variety was deleted. The deleted items scoring of SV2 definitely improved the alpha value (Hof, 2012). According to Pallant (2011), this value is acceptable. However, the value is lower than the anticipated value for the current research study, which was above 0,70. The value of α depends on the number of items in a scale (Field, 2009), thus the α value of 0,61 is attributed to the number of the remaining factors.

As indicated earlier, the original scale had five factors/dimensions. However, factor loading for task identity and autonomy was below 0,30 and thus could not be retained. The reverse items of the second subset of skill variety could not be retained either and were therefore deleted in order to produce the correct α value. As a result, only three factors in the construct were retained. Accordingly, of the 23 items, only nine were

extracted as representative for the population under study. Thus, the score for the new structure JC_3 affirms the α value of 0,61 as being acceptable for measures of reliability.

The alpha value is affected by the number of items in the questionnaire (Hof, 2012). "If the test is too short, the value of the alpha is reduced" (Tavakol & Dennick, 2011, p. 53). It is significant to note here that the new model (JC_3) produced the acceptable value (α = 0.61) from three factors instead of five. Hence, the model is still influential even in the virtual context!

6.5.2 Reliability Test for Job Satisfaction (JS)

This section reports on the reliability test for the JS construct. Table 6.23 presents the number of cases processed in order to conduct the reliability test.

Table 6.23

Reliability Analysis for JS (n = 279)

Scale Dimensions	Mean	SD	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Intrinsic JS	5,9521	0,75000	5,2115	0,933	0,576	-
Extrinsic JS	5,2115	0,96593	5,9521	0,562	0,576	-

The values in Table 6.26 relate to the dimensions of JS. The values in the column labelled "Corrected Item-Total Correlations" are > 0,30 which indicates fair consistency and is considered to be good. In the same table, the values in the column labelled "Cronbach's Alpha if Item Deleted" refer to values of the overall α if that item is not included in the calculations. Accordingly, none of the items here would increase the reliability if they were deleted. As the values will remain the same, all items contributed positively to the overall reliability. Table 6.24 presents the internal consistency of the dimensions for the JS scale.

Table 6.24

Reliability Coefficients for Scale Dimensions of JS (n = 279)

Scale dimensions	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
Intrinsic JS	0,87	0,87	8
Extrinsic JS	0,83	0,87	7

Table 6.24 presents the Cronbach's alpha values for the JS scale. The Cronbach's alpha values for both the dimensions intrinsic JS (8 items, α = 0,87) and extrinsic JS (8 items, α = 0,87) were found to be highly reliable. This indicates strong internal consistency for the items that form the dimensions of the scale (Creswell, 2014). Table 6.25 presents the reliability results for the overall JS construct.

Table 6.25:

Reliability Value for JS (n = 279)

Overall Scale	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
JS	0,717	0,731	2

The reliability test for JS produced an acceptable value based on the overall scale statistics. The overall Cronbach's alpha value (α = 0.731) in Table 6.25 was deemed satisfactory, thus indicating acceptable measures of reliability for the JS of e-tutors within their virtual context (Pallant, 2011).

6.5.3 Reliability Test for Organisational Commitment (OC)

This section reports on the reliability test for the OC construct. Table 6.26 presents the descriptive statistics for the number of cases processed in conducting the reliability test.

Table 6.26

Reliability Analysis of OC Dimensions (n =279)

Scale Dimensions	Mean	SD	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Affective OC	5,8737	0,89057	10,3564	5,003	0,560	0,805
Continuance OC	4,8596	1,26437	11,3704	3,451	0,634	0,734
Normative OC	5,4968	1,17966	10,7333	3,357	0,759	0,575

Table 6.26 presents the reliability of the OC scale based on the correlation statistics for the OC construct. The values in the column labelled "Corrected-Items Total Correlation" are all > 0,30, which is considered good. The values in the column labelled "Cronbach's Alpha if Item Deleted" are values of the overall α if some items were not included in the calculation. Some items within the sub-dimensions were thus deleted and all the retained items contributed positively to the alpha values. Table 6.27 presents the internal consistency of the dimensions of the OC scale.

Table 6.27

Reliability Coefficients for Scale Dimensions of OC (n = 279)

Scale Dimensions	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
Affective commitment	0,74	0,798	4
Continuance commitment	0,83	0,83	6
Normative commitment	0,88	0,89	5

Table 6.27 presents the Cronbach's alpha values for the OC scale. These values were found to be highly reliable for the dimension of NC (3 items, $\alpha = 0,80$). However, the second subset of skill variety had a low reliability score (2 items, $\alpha = 0,611$). This value is attributed to the low correlations reported on the reliability analysis in Table 6.28. Additionally, the two items in the subset were expected to lower the internal consistency of the JCM scale (Hof, 2012). Table 6.19 presents the reliability scores for the overall OC construct.

Table 6.28

R*eliability Statistics for Organisational Commitment (OC) (n = 279)*

	Cronbach's Alpha Based on	
Cronbach's Alpha	**Standardised Items**	**N of Items**
0,793	0,798	3

Table 6.28 shows the reliability test results for OC based on the overall scale statistics. The overall *α* is 0,798. This indicates that all items contributed positively to the overall reliability. The overall alpha value for the three dimensions indicates acceptable reliability with *α* = 0,79. This is a satisfactory score, which was expected.

6.6   DESCRIPTIVE STATISTICS OF RESEARCH CONSTRUCTS

This section reports on the descriptive statistics of the research construct. Item statistics will be used to describe and summarise the data sets (Welman, Kruger, & Mitchell, 2005).

6.6.1   Item Descriptive Statistics

The descriptive information of the scale construct will consist of means, standard deviations (SD) and graphical plots to show the distribution of scores in terms of skewness and kurtosis (β_2- 3). The skewness value will indicate the symmetry of the distribution, whereas β_2- 3 provides information about the shape/peakedness of distribution, thus indicating in this study that the sample data were taken from a normally distributed population (DeCarlo, 1997). The descriptive information of the JC_3 scale is shown in Table 6.29.

6.6.1.1 JC_3 Scale Items

Table 6.29

Descriptive Statistics for Scale Items: JC_3 (n = 279)

Scale items/ sub-dimensions	Mean	Std. Deviation	Skewness	Kurtosis
Q13.2 I have a chance to do a number of different tasks, using a wide variety of different skills and talent	5,92	1,101	-1,806	3,861
Q13.4 What I do affect the well-being of other people in very important ways	6,03	1,084	-1,788	4,659
Q13.5 My manager provides me with constant feedback about how I am doing	4,19	1,955	-0,351	-1,215
Q13.6 The work itself provides me with information about how well I am doing	4,72	1,707	-0,687	-0,534
Q13.8 I get to use the number of complex skills on this job	5,44	1,268	-1,074	1,001
Q14.1R What I do is of little consequence to anyone else [R]	5,76	1,364	-1,452	1,708
Q14.2 My job involves doing a number of different tasks	5,66	1,171	-1,525	2,279
Q14.3 Supervisors let us know how well they think we are doing	4,06	1,826	-0,196	-1,229
Q14.11 Many people are affected by the job I do	5,75	1,306	-1,457	2,101

Table 6.29 shows scale items for the JC_3 construct. The descriptive information consists of means and standard deviations. The mean scores represent the average ratings of 279 e-tutors per item on a 7-point scale. The scale items range from 7, indicating an extremely accurate statement, to 1, indicating an extremely inaccurate statement.

Q14.4 had the maximum ratings (M = 6.03, SD = 1.08). This item forms part of the task significance (TS) sub-dimension and thus suggests that e-tutors believe that provision of their services affects the wellbeing of students in very important ways (Kop et al., 2011; Oldham & Hackman, 2010). Q14.3 had the minimum rating (M = 4.06, SD = 1.82). On the 7-point scale, the average rating of 4 indicates that the statement is neither accurate nor inaccurate. This item forms part of the feedback sub-dimension,

thus suggesting that e-tutors do not get sufficient feedback from their supervisors. As a result, knowledge about the results of their work is to some degree limited (Gibson et al., 2011; Hautz, Gerken, Swolinsky, & Hautz,2015).

The standard deviation (SD) scores indicate the distribution of scores. The SD scores for the JC_3 items are all above 1. This suggests that data points are distant from the mean scores and do not show a symmetrical/normal distribution. Figure 6.12 presents a plot, indicating the distribution of mean scores per scale items.
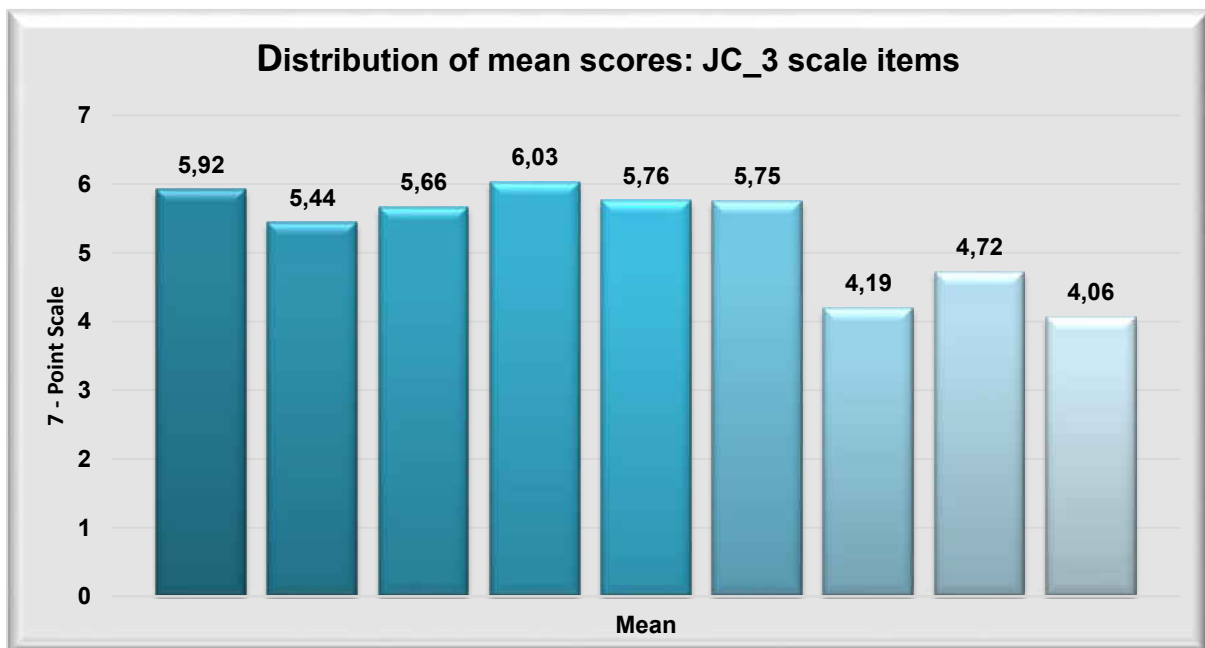
Figure 6.12. Distribution of mean scores for the JC_3 scale items.

Figure 6.12 is a graphical representation of the average rating of the JC_3 on the 7-point scale. Based on the measures of skewness and kurtosis (β_2- 3), a perfectly normal distribution should return a score of 0. A positive skewness value indicates a positive (right) skew while a negative value indicates a negative (left) skew. The statistics range from +1 to -1. The higher the absolute value (0.2), the greater the skewness (Pallant, 2011; Wuensch, 2011).

Observing the plot of average scores, the distribution is not symmetrical and, on checking skewness in Table 6.29, none of the items had exact scoring of 0; therefore, this does not represent a normal sample distribution for the average scores. The distribution scores indicate that JS items for intrinsic and extrinsic scales are non-

normally distributed. Examining further, all the values are negative and mostly above -1, thus indicating a negative skew to the left. However, the standard deviation for Q13.5, Q13.6, and Q14.3 is close to 0, with -0,196 being the closest. This value indicates that sample data for Q14.3 are drawn from a normally distributed population.

Similarly, a positive value indicates positive kurtosis while a negative one indicates negative kurtosis. The higher the absolute value, the greater the kurtosis. The kurtosis (β_2- 3) values for Q13.2, Q13.4, Q14.1, Q14.2 and Q14.11 are positive and greater than +1, thus indicating a relatively peaked distribution whereby many scores are situated away from the centre (shoulders) and clustered at the tails, producing a heavy-tailed/leptokurtic distribution (Field, 2009). Q13.8 has a positive value of 1,001, indicating that many scores are clustered at the shoulders and thus the sample data are distributed mainly around the centre.

The negative kurtosis values indicate a flat distribution with a thin tail/platykurtic distribution (Field, 2009). Q13.5 and Q14.3 have negative kurtosis values of β_2- 3 = -1,215 and β_2- 3 = -1,229, thus indicating bi-modality or uniform distribution concentrated at the shoulder with a thin tail (Rose, Sprinks, & Canhoto, 2015). Where the distribution approaches 0, it is unimodal (Brown, 1996). Thus, Q13.6 is unimodal at β_2- 3 = -0,534. Most scores are clustered away from the tail, indicating that sample data for Q13.6 is drawn from a population that is close to normal distribution. Table 6.30 presents the descriptive statistics for dimensions of JC_3.

6.6.1.2 JS Scale Items

Table 6.30 shows item statistics for the JS construct. The information is presented in terms of the mean and standard deviation, a plot of distribution scores indicating symmetry/skewness of a distribution and the shape/peakedness of the distribution.

Table 6.30

Descriptive Statistics for Scale Items: JS (n = 279)

	Mean	SD	Skewness	Kurtosis
Q15.1 Being able to keep busy all the time	5,62	1,154	-1,193	1,448
Q15.3 The chance to do different things from time to time	5,94	0,865	-1,461	3,803
Q15.4 The chance to be "somebody" in the community	5,93	1,067	-1,323	2,106
Q15.5 The way my boss handles his / her workers	5,25	1,298	-0,843	0,808
Q15.6 The competence of my supervisors in making the decisions	5,30	1,312	-0,959	1,062
Q15.9 The chance to do things for other people	6,19	0,881	-1,662	4,229
Q16.1 The chance to do something that make use of my abilities	6,26	0,803	-1,633	5,177
Q16.2 The way company policies are put in practice	5,47	1,196	-0,758	0,237
Q16.4 The chances for advancement on this job	4,70	1,655	-0,393	-0,778
Q16.5 The freedom to use my own judgement	5,84	1,133	-1,598	3,120
Q16.6 The chance to try my own methods of doing the job	5,91	1,065	-1,520	2,867
Q16.7 The working conditions	5,93	1,086	-1,546	3,356
Q16.8 The way co-workers get along with each other	5,09	1,330	-0,301	-0,421
Q16.9 The praise I get for doing a good job	4,75	1,617	-0,563	-0,287
Q16.10 The feeling of accomplishment I get from the job	5,93	1,175	-1,637	3,046

Table 6.30 shows scale items for the OC construct. The descriptive information consists of means and standard deviations. The mean scores represent the average ratings of 279 e-tutors per item on a 7-point scale. The scale items ranged from 7 – extremely satisfied, to 1 – extremely dissatisfied.

Q 16.1 had the maximum rating of $M = 6,26$; $SD = 0,80$. This item forms part of intrinsic JS and thus suggested that e-tutors experience high levels of satisfaction when they are given the opportunity to make use of their abilities (Nurmi & Hinds, 2016; Weiss, 2002). Q16.4 obtained the minimum rating of M = 4,70; SD = 1,65. This item forms part of extrinsic JS, thus suggesting that the chances of advancement in the job are not clear enough for high levels of JS to be experienced (De Vries et al., 2018; Ng, 2006). The item had an average rating of 4, indicating that e-tutors are neither satisfied nor dissatisfied with their progression in the job.

The SD indicates score distribution relative to the mean scores. The magnitude of deviance for SD scores for Q15.3 (*SD* = 0,86), Q15.9 (*SD* = 0,88), and Q16.1 (*SD* = 0,80) is relatively small, hence the scores are accurate representations of the mean scores. The SD scores above 1 indicate that the distribution of data is distant from the mean scores, therefore the distribution is asymmetrical. The distribution is plotted in Figure 6.13.

Figure 6.13. **Distribution of mean scores for JS scale items.**

Figure 6.13 is a graphical representation of the average rating of the JS on the 7-point scale. As the graph indicates, the plot of data is not symmetrical and therefore does not represent a normal distribution of average scores. Checking the statistic for skewness in Table 6.30, all values are negative and therefore indicate a negative skew to the left. Q16.4 has skewness of -0,393 and is thus close to 0. This skewness is acceptable and indicates that sample data for Q16.4 are drawn from a normally distributed population.

The kurtosis statistic for the construct has mainly positive values. Therefore, indicating a relatively peaked distribution whereby many scores are positioned away from the centre (shoulders) and clustered at the tails produces a heavy-tailed/leptokurtic distribution (Field, 2009). Q16.1 has a greater value where β_2- 3 = 5,17. This suggests

that there may be outliers that need further investigation. Q16.1 has the maximum average rating of 6,26 which explains the pointy distribution (Field, 2009).

Q16.4, 16.8, and 16.9 had negative values thus indicating flat/platykurtic distribution with a thin tail (Field, 2009). Where the distribution approaches 0, it is unimodal (Brown, 1996). Thus, Q16.9 is unimodal at β_2- 3= -0,287. Most scores are clustered away from the tail indicating that sample data for Q13.6 were drawn from a population that is close to normal distribution.

6.6.1.3 OC Scale Items

Table 6.31 shows item statistics for the JS construct. The information is presented in terms of means and standard deviations, skewness and kurtosis.

Table 6.31

Descriptive Statistics for Scale Items: Organisational Commitment (OC) (n= 279)

	Mean	Std, Deviation	Skewness	Kurtosis
Q17.1 I am very happy being a member of this organisation	6,42	0,749	-1,792	5,336
Q17.2 I enjoy discussing about my organisation with people outside it	5,98	1,117	-1,508	2,927
Q17.3 I really feel as if this organisation's problems are my own	5,22	1,519	-0,772	-0,039
Q17.6 This organisation has a great deal of meaning to me	5,87	1,218	-1,453	2,377
Q17.8 If I was not a member of this organisation, I would be sad because my life would be disrupted	4,65	1,740	-0,407	-0,725
Q17.9 I am loyal to this organisation because I have invested a lot in it, emotionally, socially, and economically	5,73	1,339	-1,262	1,546
Q18.1 I often feel anxious about what I have to loose with this organisation	4,34	1,782	-0,360	-0,905
18.5 My organisation deserves my loyalty because of its treatment towards me	5,49	1,444	-1,133	0,880

	Mean	Std, Deviation	Skewness	Kurtosis
Q18.6 I feel I would be letting my co-workers down if I wasn't a member of this organisation	4,75	1,751	-0,555	-0,472
Q18.7 "I am loyal to this organisation because my values are largely its values"	5,58	1,325	-1,046	0,985
Q18.8 "This organisation has a mission that I believe in and am committed to"	5,91	1,184	-1,364	2,265
Q18.9 "I feel it is 'morally correct' to dedicate myself to this organisation"	5,76	1,348	-1,331	1,721

Table 6. 31 shows scale items for the JS construct. The descriptive information consists of means and standard deviations, with the mean scores representing the average ratings of 279 e-tutors per item on a 7-point scale. The scale items range from 7, being strongly agree, to 1, being strongly disagree.

Q 17.1 had the maximum rating of $M = 6,42$; $SD = 0,74$. This item forms part of affective OC and thus suggests that e-tutors are committed to the goals and objectives of their ODL institution (Meyer & Allen, 2004). The magnitude of the deviance (SD) for the item is relatively small and therefore indicates that the average rating is an accurate representation.

Q18.1 had the minimum score with $M = 4,34$, $SD = 1,78$. This item forms part of continuance OC, thus suggesting that e-tutors are not necessarily committed to their organisation solely out of economic interests; the opportunity to gain work/life balance is significant here. However, they are not physically co-located with their supervisors, therefore in appreciation of the work/life balance opportunity, e-tutors show signs of commitment by reciprocating and working long hours (Gajendran et al., 2015; Li, 2013). Furthermore, validated by the high rating on Q17.1, economic interests are not the only side-bet (Gutierrez et al., 2012). Figure 6.14 depicts a graph which plots the distribution of mean scores per scale items.
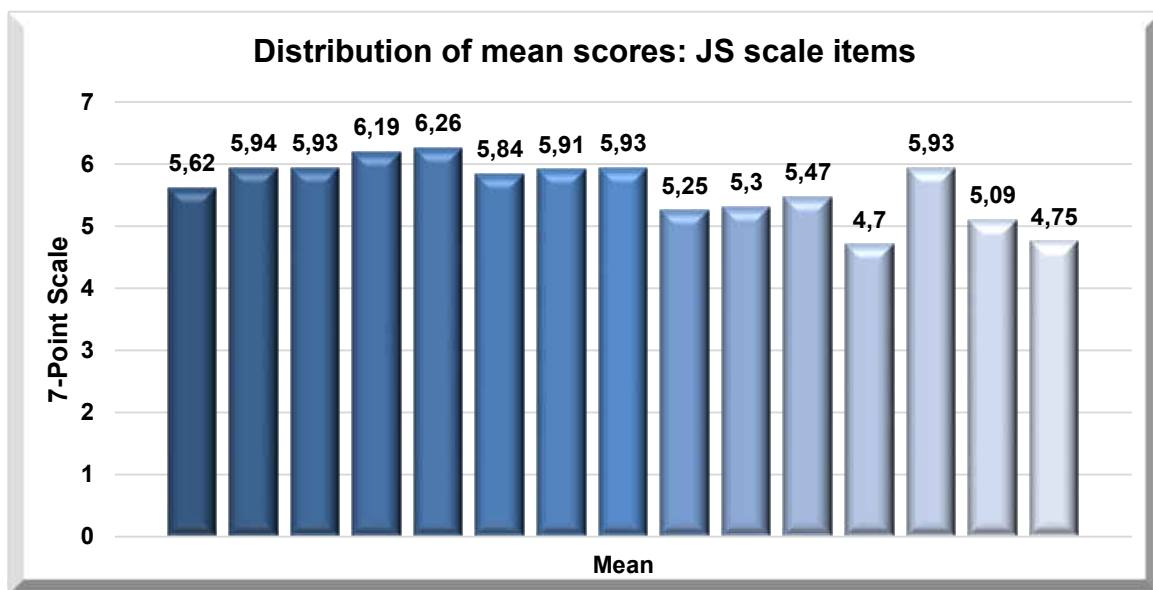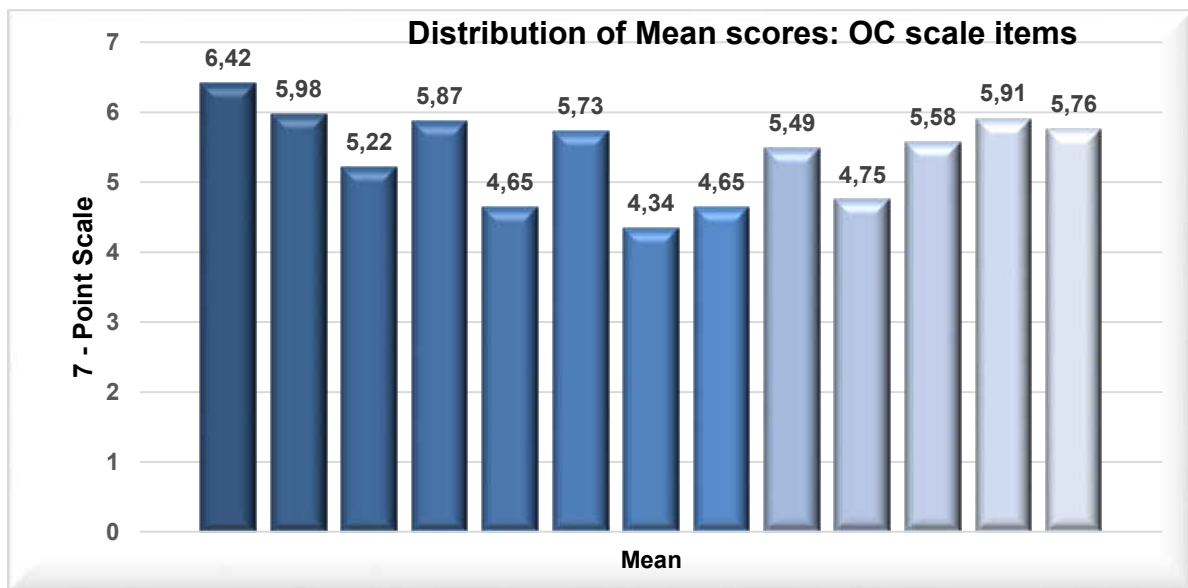
Figure 6.14. Distribution of mean scores for OC scale items.

Figure 6.14 is a graphical representation of the average rating of the OC on the 7-point scale. The standard deviation (SD) scores indicate the distribution of data and the magnitude of deviation. The SD scores for OC items are above 1 (except for Q17.1), thus indicating that data points are distant from the mean scores and that this is not a normal distribution.

The above distribution is therefore asymmetrical and does not represent a normal distribution of average sores. Checking the skewness statistic in Table 6.31, Q18.1 has skewness close to 0, thus indicating that sample data for Q18.1 are drawn from a normally distributed population. The values for skewness are all negative, and are therefore skewed to the left.

In Table 6.31, the statistic for kurtosis is mainly positive for Q17.1, having greater kurtosis (β_2- 3 = 5,33). The distribution is pointy/leptokurtic with a heavy tail (Field, 2009). Q17.1 had the highest average rating which explains the pointy distribution. Q17.3 had a kurtosis closer to 0, where β_2- 3 =-0,039. This suggests that the data sample was drawn from a population that is close to normal distribution.

6.6.2   Dimensions and total scores

This section reports on the descriptive statistics for variable constructs and the respective sub-dimensions based on population samples. Data properties will be presented in the form of means, standard deviations (SD) and standard error (SE) mean, skewness and kurtosis. The standard error (SE) indicates the sampling distribution from the population. The statistic therefore compares the mean scores for each data sample relative to the actual population.

The different mean scores therefore indicate sample variation relative to the degree of behaviour/perceptions of e-tutors representing the population. It is possible for some samples to have the same mean as the actual population, whereas some samples will have a different mean (sample variation). The descriptive statistics for JC_3 variables are presented in Table 6.32.

Table 6.32

Descriptive Statistics for Sub-dimensions: JC_3 (n = 279)

Scale Dimensions	Mean	SD	SE	Skewness	Kurtosis
Skill Variety	5,67	0,937	0,056	-1,432	2,868
Task Significance	5,85	0,981	0,059	-1,179	1,826
Feedback	4,33	1,553	0,093	-0,317	-0,865
JC_3	**5,28**	**0,871**	**0,052**	**-3,388**	**-0,231**

Table 6.32 show descriptive statistics and total scores on the 7-point scale for the dimensions of the JC_3 scale. Data are presented in the form of means, SD and SE mean, skewness and kurtosis. From the data it appears that the mean scores for the sample data are not the same as the standard error (SE) mean. Task significance obtained the maximum scores (*M* = 5,85, *SD* = 0,98), whereas feedback had the minimum scores (*M* = 4,32, *SD* = 1,55). The SD scores for skill variety (*SD* = 0,93) and task significance (*SD* = 0,98) show a relatively small deviance relative to the mean scores of 5,67 and 5,84 respectively. This is an accurate representation of the data.

The SD scores for feedback (*M* = 4,32, *SD* = 1,55) are above 1 and therefore show a relatively large deviance from the mean score of the sub-dimension. This suggests that the distribution of the rating scores for the dimension of feedback has deviated with a number of odd cases. However, compared to the 7-point scale, the average value of feedback is above 4. This score suggests that the frequency scores are clustered around the higher values with positive scores (Field, 2009).

The above presentation of data in Table 6.32 indicates variation in terms of the behaviour/perceptions of e-tutors as compared to the actual population. This variation is validated by the standard error mean (*SE* = 0,56, *SE* = 0,59, and *SE* = 0,93). Moreover, data variation is further observed in the total JC_3 (M = 5,28, SE = 5,2), where the mean scores are relatively similar to the SE mean. The magnitude of deviance is also relatively small (SD = 0,87) and therefore accurately represents variation in the data.

The above data based on a 5,67 mean score for skill variety suggest that, on average, teaching and facilitating learning inside virtual classrooms is complex and requires a variety of skills to get the job done. In relation to the high mean score of 5,84 for task significance, the average ratings suggest that e-tutors perceive their job to have major consequences for their students and affects them in very important ways (Oldham & Fried, 2016).

Table 6.33

Descriptive Statistics of Sub-dimensions: JS (n = 279)

Scale Dimensions	Mean	SD	SE	Skewness	Kurtosis
Intrinsic JS	5,95	0,750	0,045	-1.044	1,557
Extrinsic JS	5,21	0,966	0,058	-0,369	-0,292
JS	**5,58**	**0,763**	**0,046**	**-0,515**	**0,068**

Table 6.33 shows descriptive statistics and total scores on the 7-point scale for the dimensions of the JS. Data are presented in the form of means, SD and SE mean, skewness and kurtosis. The mean scores show the average ratings of e-tutors per

subscale (n = 279), whereas the SD indicates the distribution of scores per subscale. A normal distribution has a mean of 0 and the SD of 1 (Field, 2009).

None of the ratings for the sub-scale had a score of 0, thus indicating that all the scores were the same, and none had scores of 1, thus indicating normal distribution, which is usually difficult to get. Rating scores were distributed between 0 and 1. The standard deviations of both intrinsic JS (M = 5,95, SD = 0,75) and extrinsic JS (M = 5,21, SD = 0,96) are less than 1, thus indicating a relatively small deviation from the mean scores of 5,21 and 5,95.

In observing the data, the mean scores for the sample data are not the same as the standard error (SE) mean. As a result, the mean scores of M =5,95 for intrinsic JS and M =5,21 for the population sample show sample variation.

Data therefore indicate sample variation in terms of the behaviour/perceptions of e-tutors compared to the actual population with SE = 0,45 and SE = 0,58, respectively. However, when observing the scores for intrinsic (SD = 0,75) and extrinsic (SD = 0,96) JS, the magnitude of deviance is relatively small for the sub-dimensions. This is also the case for the total JS score (SD = 0,76). These scores validate the accurate representation of data. Accordingly, the scores offset the total JS variance seen in the mean (M = 5,58) and the standard error (SE = 0,46).

Given the above, the mean scores are an accurate representation of the data with the highest average rating being obtained from the dimension of intrinsic JS. Generally, the scores suggest that e-tutors were satisfied with the teaching activities they perform inside the virtual classroom (Thompson, 2014; Weiss, 2002). The next table presents the descriptive statistics for the dimensions of OC.

Table 6.34
Descriptive Statistics for Dimensions: OC (n = 279)

Scale dimensions	Mean	SD	SE	Skewness	Kurtosis
Affective Commitment	5,87	0,891	0,053	-0,807	0,582
Continuance Commitment	4,86	1,264	0,076	-0,385	-0,287
Normative Commitment	5,50	1,180	0,071	-0,946	1,262
OC	**5,41**	**0,944**	**0,057**	**-0,473**	**0,037**

Table 6.34 shows descriptive statistics and total scores on the 7-point scale for dimensions of the OC scale. The mean shows the average ratings for 279 e-tutors per subscale, whereas SD indicates the distribution of scores per subscale. No dimension had a score of 0, thus indicating that all the ratings were the same.

The SD scores confirmed deviation of distribution relative to the mean scores. In particular, the distribution score for the dimension of CC was M = 4,85, SD = 1,26 and the dimension of NC was M = 5,49; SD = 1,17. These dimensions have SD scores above 1, thus indicating a large standard deviation relative to the mean. This indicates that data points for both CC and NC are distant from the mean scores. These dimension scores may therefore be influenced by outliers.

Nonetheless, on the 7-point scale, the sub-dimensions OC_C had mean scores of close to 5, whereas OC_N had a mean score above 5. This suggests that the frequency scores are clustered around the higher values with positive scores (Field, 2009). On the other hand, the standard deviation for AC (OC_A) (M = 5,87, SD = 0,89) is below 1, thus indicating a good representation of data.

The standard error indicates the sampling distribution of the population. The different mean scores therefore indicate sample variation relative to the degree of perceptions of e-tutors representing the population. In observing the data, the mean scores for the sample data are not the same as the standard error mean. However, variation in the total scores – 5,41 for the mean and 0. 57 for the standard error mean – indicate that there are no significant differences among the population subsets or groups. This is furthermore confirmed by the SD values which show a relatively small deviance relative to the mean scores.

Ultimately, it was found that the dimensions had good ratings and were all retained. This implies that e-tutors still have the desire to continue working for the ODL institution because they have staked something of great value, and therefore they feel obligated to continue their services within the virtual context (Allen & Meyer, 1997; Allen et al., 2004). Table 6.31 shows the statistics for correlation structures of OC for e-tutors.

6.7 INFERENTIAL ANALYSIS

This section reports on the results of the inferential analysis of the study. The main variables in the study are the JCM as the independent variable, whereas JS and OC are the dependent variables. These variables were significant for answering the following research:

- **Research question 1**: What is the statistical nature of the relationship between JCM, JS, and OC in a virtual work environment?

In order to attain the objective of research question 1, an inferential analysis was conducted in three phases: correlational analysis, hypothesis testing and regression analysis using the ANOVA.

6.7.1 Correlational Analysis

Correlational analysis was conducted to examine the extent to which the variables (JCM, JS, and OC) are related to each other. Correlation coefficient r (Pearson correlation) was used to test the relationship between variables:

- the statistical nature of the relationship between JCM and JS
- the statistical nature of the relationship between JS and OC
- the statistical nature of the relationship between JCM and OC

The matrix provides the correlation coefficients for the three variables. Both the significance value and the sample size are displayed. The coefficients lie between -1 and +1, where variables are perfectly correlated when $r = 1$, and negatively correlated when $r = -1$. Tables 6.35 to 6.37 present the relationship between variables.

6.7.1.1 The Statistical Nature of the Relationship between JCM (JC_3) and JS

The critical dimensions of JCM were hypothesised as having a positive influence on critical psychological states. These in turn are good predictors of JS. The statistical nature of the relationship between the construct is presented in Table 6.35.

Table 6.35

Correlations between JC_3 and JS

		Intrinsic JS	Extrinsic JS	JS	Skill Variety	Task Significance	Feed-back	JC_3
Intrinsic JS	Pearson Correlation	1						
Extrinsic JS	Pearson Correlation	,576**	1					
JS	Pearson Correlation	,856**	,916**	**1**				
Skill Variety	Pearson Correlation	,588**	,419**	**,554****	1			
Task Significance	Pearson Correlation	,571**	,249**	**,438****	,419**	1		
Feedback	Pearson Correlation	,366**	,633**	**,580****	,377**	,232**	1	
JC_3	Pearson Correlation	,643**	,620**	**,708****	,740**	,664**	,817**	**1**

Notes: n = 279, ***$p < ,001$, **$p < ,05$, r= ,10 (small effect), r = ,30 (medium effect), r = ,50(large effect).

Table 6.35 shows the correlation matrix for JC_3 and JS variables. The significance value is quoted at one-tailed probability: p (one-tailed) < ,05, and the criteria probability is quoted at 0,0001 for all variables (all ps < ,001). The coefficients are reported as follows: There is a significant positive relationship between the number of dimensions for Job Characteristics (JC_3) and Job Satisfaction (JS) levels of e-tutors, r = ,708, p < ,05. The practical effect size of the dimensions is large for both r = ,50, however (Field, 2009, p. 57). JS_3 correlates strongly with intrinsic JS (r = ,643, p < ,05), as compared to extrinsic JS, where r = ,620, p < ,05.

The significant positive relationship found between JC_3 and JS confirms that the job dimension of skill variety, task significance and feedback stimulates the critical psychological state where e-tutors perceive their work as meaningful (Oldham & Fried, 2016). In this regard, e-tutors perceive their job activities to be satisfying. The relationship between JC-3 and intrinsic JS is even stronger than between JC-3 and extrinsic JS.

This finding suggests that skill variety and task significance make a large contribution to e-tutors' satisfaction levels, as these sub-dimensions form part of the intrinsic JS (Finch & Jacobs, 2012; Thompson, 2014). Feedback forms part of the external working conditions of e-tutors, thus extrinsic JS contributed less to e-tutors job satisfaction (Wegman et al., 2016). However, this is based on one dimension compared to the two dimensions under intrinsic JS. Feedback alone had a large effect size, hence a strong correlation, r = ,580, p < ,05.

6.7.1.2 The Statistical Nature of the Relationship between JS and OC

The degree of JS has been hypothesised as a determinant of OC. The statistical nature of the relationship between the constructs in presented in Table 6.41.

Table 6.36

Correlations between Job Satisfaction and Organisational Commitment

		Intrinsic JS	Extrinsic JS	**JS**	Affective OC	Continuance OC	Normative OC	**OC**
Intrinsic JS	Pearson Correlation	1						
Extrinsic JS	Pearson Correlation	,576**	1					
JS	Pearson Correlation	,856**	,916**	**1**				
Affective OC	Pearson Correlation	,541**	,536**	**,605****	1			
Continuance OC	Pearson Correlation	,278**	,307**	**,331****	,429**	1		
Normative OC	Pearson Correlation	,433**	,487**	**,521****	,602**	,675**	1	
OC	Pearson Correlation	,474**	,508**	**,555****	,756**	,862**	,907**	**1**

Notes: n = 279, ***p < ,001, **p < ,05, r= ,10 (small effect), r = ,30 (medium effect), r = ,50 (large effect).

Table 6.36 shows the correlation matrix for the variables JS and OC. The significance value is quoted at a one-tailed probability: p (one-tailed) of < ,05, and the criteria probability is quoted at ,0001 for all variables (all ps < ,001). The coefficients are reported as follows: there is a significant relationship between the number of dimensions for JS and OC of e-tutors (r = ,555, p < 0,5).

The practical effect size between the dimensions is depicted, where AC is large (r = ,605), CC has a medium effect (r = ,331), and NC also has a large effect r = ,521, (Field, 2009). Among all the dimensions, a strong significant relationship was found between JS and AC (r = ,605, p < .05). Although affective commitment was extracted last under EFA, the dimension was still validated, and the strength of the relationship was expected. In the South African context, strong affective responses have been reported for both JS and OC (Stander & Rothmann, 2008).

6.7.1.3 The Statistical Nature of the Relationship between JC_3 and OC

The JCM with core dimension is set to have a positive influence on JS. The statistical nature of the relationship between the construct in presented Table 6.42.

Table 6.37

The Statistical Nature of the Relationship between JC_3 and OC

		Skill Variety	Task Sig.	Feed-back	JC_3	Affective OC	Continuance OC	Normative OC	OC
Skill Variety	Pearson Correlation	1							
Task Sig.	Pearson Correlation	,419**	1						
Feedback	Pearson Correlation	,377**	,232**	1					
JC_3	Pearson Correlation	,740**	,664**	,817**	**1**				
Affective OC	Pearson Correlation	,428**	,362**	,412**	**,534****	1			
Continuance OC	Pearson Correlation	,272**	,122*	,275**	**,307****	0,000			
Normative OC	Pearson Correlation	,396**	,294**	,335**	**,451****	,602**	,675**		
OC	Pearson Correlation	,420**	,291**	,392**	**,493****	,756**	,862**	,907**	1

Notes: n = 279, ***p < ,001, **p < .05, r= .10 (small effect), r = .30 (medium effect), r = .50 (large effect).

Table 6.37 shows the correlation matrix for the variables JC_3 and OC. The significance value is quoted at a one-tailed probability: p (one-tailed) < ,05, and the criteria probability is quoted at ,0001 for all variables (all ps < ,001). The coefficients are reported as follows: there is a significant relationship between the number of dimensions for JC_3 and the OC of e-tutors (r = ,493).

The practical effect size of the dimensions of the construct is depicted, with AC having a large effect size (r = ,534), CC a medium effect (r = ,307, and NC also having a medium effect (r = ,451), (Field, 2009). The affective response is also stronger for the three-dimensional job characteristics model in the current study. The ability to induce the affective response from the three dimensions of the construct was also reported in a study conducted in the modern work context (Cleave, 1993).

Overall, the results of the current study suggest that e-tutors have the intention to persist in their roles in the virtual work environment. This intention is based mainly on their belief in the objective and mission of the ODL institution and their obligation to reciprocate as way of showing appreciation for the work/life balance opportunity (Li, 2013).

6.7.1 Summary of the Statistical Nature of the Relationship between (JC_3), JS and OC

The summary of the relationship between the three variables is depicted in the correlation matrix in Table 6.43, which shows the significant correlations.

Table 6.38
Correlations of Constructs: JC_3, JS, and OC

Control Variables		Pearson Correlations	JC_3	JS	OC
-none-	JC_3	Pearson correlation	.1		
	JS	Pearson correlation	**.708"**	1	
	OC	Pearson correlation	**.493"**	**.555"**	1

Notes: n = 279, ***p < ,001, **p < 05. r= ,10 (small effect), r = ,30 (medium effect), r = ,50(large effect).

Table 6.38 presents the matrix of correlation coefficients for all three variables. Both the significance value and the sample size are displayed. The coefficients lie between -1 and +1; the variables are perfectly correlated when $r = 1$, and negatively correlated when $r = -1$. The significance value is quoted at one-tailed probability: p (one-tailed) < ,05, and the criteria probability is quoted at ,0001 for all variables (all ps < ,001). The coefficients are reported as follows:

- There is a statistically significant positive relationship between a number of the dimensions for Job Characteristics (JC_3) and Job Satisfaction (JS) levels of e-tutors, $r = .71$ (large effect), and OC levels, $r = .50$ (large effect), p (one-tailed) <.05. Levels of JS were also correlated to OC, $r = .56$ (large effect), (all $ps < .001$).

6.6.2   Bivariate Correlation (partial)

Variance was accounted for using partial correlation (measuring the relationship between two variables while controlling the effect of one more variable) to ascertain the unique proportions of variance. Table 6.39 presents a correlation matrix showing the significant relationship between the two dependent variables (JS and OC), while holding the effect of JC_3 as and the independent variable (Field, 2009).

Table 6.39

Bivariate Correlation: JS and OC

Control Variables	Pearson Correlations		JS	OC
JC_3	JS	Pearson correlation	1	
		Sig. (1-tailed) df		
		Df	0	
	OC	Pearson correlation	,307"	1
		Sig. (1-tailed)	,003	
		Df	100	0

Notes: Cells Contain Zero-order (Pearson) Correlations, n = 279, ***p < ,001, **p < 05, r= ,10 (small effect), r = ,30 (medium effect), r = ,50).

Table 6.39 shows a partial correlation between JS and OC when JC_3. The relationship has a medium effect, r = ,307, when JC_3 is controlled. The effect of the relationship is considerably less than the effect of the correlation when job characteristics is not controlled for (r = ,555). Although this correlation is still statistically significant, p< ,05, in actual fact, the correlation is nearly half what it used to be, thus the relationship is diminished! In terms of variance, the value of R^2 is ,03, which means JS accounts for only 3% of OC. The predictive effect of the relationship will be rigorously tested in the regression analysis. The next section reports on the statistical t-test used to compare average scores of JC and OC.

T-test: Paired Samples

A statistical test t-test was conducted to compare the significant differences between two dependent variables (JS and OC), and the strength of the relationships (Pallant, 2017, p. 130). The results will furthermore affirm the results of the bivariate relationship that was reported earlier and the influence of the third predictor variable JC_3. The influence of the JC_3 will be investigated further under regression analysis. Table 6.40 presents the descriptive statistics for population sample, whereas Tables 6.41 and 6.42 present the strength of the relationship between JC_3 and JS as compared to the relationship between JC_3 and OC.

Table 6.40

Sample Statistics (n = 279)

One-Sample Statistics	Mean	Std. Deviation	Std. Error Mean
JCM_3	5,28	0,871	0,052
JS	5,58	0,763	0,046
OC	5,41	0,944	0,057

Table 6.40 shows the descriptive statistics for the sample data drawn from the population. The SE indicates the sampling distribution from the population. Thus, the SE compares the mean for each sample collected to the actual population. Accordingly, some samples may have the same mean as the actual population, whereas others may have a different mean (sample variation). Sample variation therefore indicates the behaviour of samples of the population.

The following Tables 6.41 and 6.42 display the correlations between the main construct, thus indicating whether there are any significant differences among population samples.

Table 6.41

Paired Samples Correlations: JC_3 & JS

Pair 1	N	Correlation	Sig.
JC_3	279	.708**	.000**
JS			

Table 6.41 indicates paired samples for correlations between JC_3 and JS.

The mean scores for the constructs are depicted in Table 6.40 JC_3 as M = 5,28, SD = 0,87, and JS as M = 5,58, SD = 0,76). Thus, the correlation between the construct is presented in Table 6.41 as *r* = .708. The next table, Table 6.43, will depict the strength of the relationship between JC_3 and OC.

Table 6.42

Paired Samples Correlations: JC_3 & OC

Pair 2	N	Correlation	Sig.
JC_3	279	,493**	,000*
OC			

Table 6.42 indicate paired samples for correlations between JC_3 and OC. The mean scores for the constructs are depicted in Table 6.40 as JC_3 (M = 5,28, SD = 0,87) and OC (M = 5,41, SD = 0,94). Thus, the correlation between the construct is presented in Table 6.42, as *r* = ,493. In Tables 6.41 and 6.42 it is observed that the relationship between JC_3 and JS is stronger than the relationship between JC_3 and OC. The relationships are therefore reported as follows:

- A significant correlation was also considered to test the strength of the relationship of between the construct. The practical effect size confirmed that the relationship between JCM and JS, *r* = 0,708 (large effect), is

stronger than the relationship between JCM and OC, r = 0,493 (medium effect), at the 95% level of confidence. The next table, Table 6.43, compares the significant differences between the variables using the statistical t-test.

Table 6.43

Sample Test

					95% Confidence Interval of	
One-Sample Test: test value						
			Sig. (2-	Mean	the Difference	
	t	Df	tailed)	Difference	Lower	Upper
JCM_3	24,579	278	0,000	1,28	1,18	1,38
JS	34,613	278	0,000	1,58	1,49	1,67
OC	24,937	278	0,000	1,41	1,30	1,52

Table 6.43 presents a one-sample t-test to compare the significant differences between perceptions of JS and OC for e-tutors. Observation of the data samples in Tables 6.40 to 6.42 indicate that the mean score of the JC_3 (M = 5,28, SD = 0,87), obtained from the three dimensions of the construct, relative to the mean scores for JS (M = 5,58, SD = 0,76), is stronger than the degree of OC (M =5,41, SD = 0,94) for a population sample of e-tutors. Furthermore, the magnitude of influence of JC_3 on e-tutors' perceptions of JS and OC is depicted in line with the one-sample t-test in Table 6.43. The t-test indicates that JC_3 has a stronger influence on JS (t(278) = 34,61, p < ,001) than on OC (t(278) = 24,94, p < ,001).

To assess whether a significant difference exists, the p-values (sig. 2-tailed) of 0,001 were taken into consideration. In Table 6.43, the p-values are smaller than 0,05, thus indicating that there is a significant difference between the scores of JS and OC at a 95% level of confidence. The next section reports on the significant differences for biographical variables.

6.7.3 Group Differences

This section reports on a planned contrast (comparison) in JCM, JS, and OC to test for significant mean differences for the following biographical variables: gender, educational background, job tenure and college. The planned contrast will test the following hypotheses:

H_{02}: Differences do not exist in JCM, JS, and OC in terms of demographical variables: gender, educational background, job tenure, and college.

H_{a2}: Differences do exist in JCM, JS, and OC in terms of demographical variables gender, educational background, job tenure, and college.

T-test: Gender

Table 6.44 below reports on the descriptive statistics for the variable of gender.

Table 6.44

Descriptive Statistics

Gender		N	Mean	Std. Deviation	Std. Error Mean
JC_3	1 Male	120	**5,32**	**0,822**	0,075
	2 Female	159	**5,25**	**0,907**	0,072
JS	1 Male	120	**5,59**	**0,737**	**0,067**
	2 Female	159	**5,57**	**0,785**	**0,062**
OC	1 Male	120	**5,48**	**0,815**	**0,074**
	2 Female	159	**5,35**	**1,030**	**0,082**

Table 6.44 presents the descriptive statistics in the form of the mean, standard deviation, and standard error mean in order to compare significant differences between male and female e-tutors regarding the perceptions of the constructs. The descriptive statistics will be used in conjunction with the Levene test to report on equality of sample variation in Table 6.45.

Table 6.45

Levene's Test for Equality of Sample Variances

| | | | | | | Sig. (2-tailed) | Mean Differ ence | Std. Error Differenc e | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df				Lower	Uppe r
JCM_ 3	Equal VR assumed	0,606	0,437	0,699	277	0,485	0,074	0,105	-0,134	0,281
	Equal VR not assumed			0,709	267,845	0,479	0,074	0,104	-0,131	0,278
JS	Equal VR assumed	0,068	0,794	**0,175**	**277**	**0,861**	**0,016**	**0,092**	**-0,166**	**0,198**
	Equal VR not assumed			**0,177**	**264,119**	**0,860**	**0,016**	**0,092**	**-0,164**	**0,197**
OC	Equal VR assumed	8,968	*0,003*	**1,123**	**277**	**0,262**	**0,128**	**0,114**	**-0,096**	**0,353**
	Equal VR not assumed			**1,160**	**276,355**	**0,247**	**0,128**	**0,111**	**-0,089**	**0,346**

Observing row "JCM_3" in Table 6.44, male e-tutors have a mean score of *M* = 5,32, *SD* = 0,82) and the females e-tutors (M =5,32, SD= 0,91). To assess whether a significant difference exists, in Table 6.45, where *t*(277) = 0,699, a p-value (sig. 2-tailed) of **0,485** was considered against *t*(277) = 0,709, a p-value of (sig. 2-tailed) of 0,479. **This p-val**ue **is larger than 0,05**, **indicating that there is no significant difference between the mean "JCM_3" scores of male and female e-tutors at a 95% level of confidence**. Considering that the first row p-value is used, equal VR (variance) is assumed. One of the assumption of the t-test is *equal variances*, thus the p-value for the Levene test is also larger than 0,05 (p = 0,437), thus indicating the assumption of equal variances between the groups.

Regarding the row "JS" in Table 6.44, male e-tutors have a mean score of *M* =5,59, *SD* = 0,74) and the females e-tutors (M =5,59, SD = 0,78). To ascertain whether a significant difference exists, *t*(277) = 0,175 a p-value (sig. 2-tailed) of **0,861** was considered against *t*(277) = 0,177 a p-value (sig, 2-tailed) of 0,860. **This p-value is larger than 0,05, indicating that there is no significant difference between the**

mean JS scores of male and female e-tutors at a 95% level of confidence. Considering that the first row p-value is used, the p-value for the Levene test is also larger than 0,05 (p = 0,794), thus indicating the assumption of equal variances.

In terms of the row "OC" in Table 6.44, the male e-tutors have a mean score of *M* = 5,48, *SD* = 0,815 and the female e-tutors (*M* = 5,48, *SD* = 1,030). To assess whether a significant difference exists, $t(277)$ =1,123 a p-value (sig. 2-tailed) of **0,262** was considered against $t(277)$ =1,160 a p-value (sig. 2-tailed) of 0,247. **This p-value is greater than 0,05, thus indicating that there is no significant difference between the mean OC scores of male and female e-tutors at a 95% level of confidence.**

Considering that the first row p-value is used, the p-value for OC in terms of gender proportions is **smaller** than 0,05 (p = 0,003). This indicates the Levene test for equality of variances was found to be violated. Thus, the independent t-test for the current analysis was done with unequal group sizes. The next table, Table 6.46, reports on the descriptive statistics for educational background.

T-test: Educational Background

Table 6.46

Group Statistics

Educational Background		N	Mean	Std. Deviation	Std. Error Mean
JC_3	1 UG/Hon	173	5,29	0,879	0,067
	2 M&D	106	5,27	0,861	0,084
JS	1 UG/Hon	173	5,69	0,738	0,056
	2 M&D	106	5,41	0,777	0,075
OC	1 UG/Hon	173	5,55	0,872	0,066
	2 M&D	106	5,17	1,013	0,098

Table 6.46 presents the descriptive statistics in the form of the mean, SD, and SE mean in order to compare significant differences between e-tutors with undergraduate and postgraduate qualifications. The descriptive statistics are used in conjunction with the Levene test to report on equality of sample variation in Table 6.47.

Table 6.47

Levene's Test for Equality of Variances and T-test for Equality of Means

						t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
JCM_3	Equal VR assumed	0,065	0,799	0,114	277	0,910	0,012	0,108	-0,200	
	Equal VR not assumed			0,114	225,738	0,909	0,012	0,107	-0,199	0,224
JS	Equal VR assumed	0,142	0,707	2,965	277	**0,003**	0,275	0,093	0,093	0,458
	Equal VR not assumed			2,928	213,349	**0,004**	0,275	0,094	0,090	0,461
OC	Equal VR assumed	1,645	0,201	3,314	277	**0,001**	0,379	0,114	0,154	0,605
	Equal VR not assumed			3,197	197,073	**0,002**	0,379	0,119	0,145	0,613

Looking at qualification of e-tutors, row "JCM_3" in Table 6.46, e-tutors with undergraduate and honours degrees have a mean score of M = 5,29, SD = 0,879, whereas e-tutors with master's and doctoral degrees have a mean score of M = 5,27, SD = 0,861).

To assess whether a significant difference exists, in Table 6.47 t(277) = 0,114 a p-value (sig. 2-tailed) of **0,910** was considered against t(277) = 0,114 a p-value (sig. 2-tailed) of 0,909. **This p-value is larger than 0,05, thus indicating that there is no significant difference between the mean JCM_3 scores of undergraduate and postgraduate degrees for e-tutors at a 95% level of confidence.** Considering that the first row p-value is used, the p-value for the Levene test is also larger than 0,05 (p = 0,799), thus indicating the assumption of equal variances for the distribution of educational background within the construct of JC_3.

In addition, regarding the same matters of qualifications and satisfaction levels, the JS in Table 6.46 indicates mean scores of M = 5,69, SD = 0,738) for undergraduate and

honours degrees, and *M* = 5,41, *SD* = 0,777 for masters and doctoral degrees. To assess whether a significant difference exists, in Table 6.47 *t*(277) = 2,965 a p-value (sig. 2-tailed) of **0,003** was considered, against *t*(277) = 2,928 a p-value (sig. 2-tailed) of 0,004. **This p-value is smaller than 0,05, thus indicating that there is a significant difference between the mean JS scores of e-tutors holding undergraduate degrees and postgraduate degrees at a 95% level of confidence**. Considering that the first row p-value is used, the p-value for the Levene test is larger than p > 0,05 (p = 0,707), thus indicating the assumption of equal variances for proportions of educational background.

The OC row in Table 6.46 indicates mean scores of *M* = 5,55, *SD* = 0,872 for undergraduate and honours degrees, and *M* = 5,17, *SD* = 1,013 for masters and doctoral degrees. To ascertain whether a significant difference exists, in Table 6.47 *t*(277) = 3,3314 a p-value (sig. 2-tailed) of **0,001** was considered against *t*(277) = 3,197 a p-value of (sig. 2-tailed) of **0,002**.

The above p-value is also smaller than 0,05 indicating that there is a significant difference between the mean OC scores of e-tutors holding undergraduate degrees and postgraduate degrees at a 95% level of confidence. Considering that the first row p-value is used, the p-value for the Levene test is also larger than 0,05 (p = 0,201), thus indicating the assumption of equal variances for the proportional distribution of educational background. Table 6.49 reports on descriptive statistics for job tenure.

T-test: Job Tenure

Table 6.48 below reports on the descriptive statistics for job tenure. These statistics are used in conjunction with the t-test to report the significance differences between job tenure.

Table 6.48

Descriptive Statistics for Job Tenure

Job Tenure		N	Mean	Std. Deviation	Std. Error Mean
JCM_3	1 2013/14	165	5,26	0,905	0,070
	2 2015/17	113	5,30	0,819	0,077
JS	1 2013/14	165	5,56	0,769	0,060
	2 2015/17	113	5,60	0,761	0,072
OC	1 2013/14	165	5,42	0,954	0,074
	2 2015/17	113	5,39	0,928	0,087

Table 6.48 presents the descriptive statistics in the form of the mean, SD, and SE mean in order to compare significant differences between years of service (i.e. job tenure) of e-tutors. The descriptive statistics are used in conjunction with the Levene test to report for equality of sample variation in Table 6.49.

Table 6.49

Levene's Test for Equality of Variances

						T-test for Equality of Means			95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
JCM_3	Equal VR assumed	1,802	0,181	-0,332	276	0,740	-0,035	0,106	-0,245	0,174
	Equal VR not assumed			-0,338	255,514	0,735	-0,035	0,104	-0,241	0,170
JS	Equal VR assumed	0,233	0,630	-0,412	276	0,681	-0,038	0,093	-0,223	0,146
	Equal VR not assumed			-0,413	242,422	0,680	-0,038	0,093	-0,222	0,145
OC	Equal VR assumed	0,126	0,722	0,260	276	0,795	0,030	0,115	-0,197	0,257
	Equal VR not assumed			0,261	245,113	0,794	0,030	0,115	-0,196	0,256

Considering the years of service for e-tutors, row "JCM_3" in Table 6.48 indicates a mean score of M = 5,26, SD = 0,905 for e-tutors who started working in 2013/14, and M = 5,30, SD = 0,819 for those who started in 2015/17. To assess whether a significant difference exists, in Table 6,49 t(276) = -0,332 a p-value (sig. 2-tailed) of **0,740** was considered against t(276) = -0,338 a p-value (sig. 2-tailed) 0,735. This p-value is larger than 0,05 indicating that **there is no significant difference** between the mean JCM_3 scores of e-tutors with four to five years of tenure and one to three years of tenure at a 95% level of confidence**.** The p-value for the Levene test is also larger than 0,05 (p = 0,181), indicating that the variances are equal. The distribution looked fairly normal.

In comprehending the levels of job satisfaction and years of service, the JS row in Table 6.48 indicates mean scores of M = 5,56, SD = 0,769 for e-tutors who have been providing their services for four to five years, and M = 5,60, SD = 0,761 for those who have been providing their services for between one and three years. To assess whether a significant difference exists, in Table 6.49, t(276) = -0,412 a p-value (sig. 2-tailed) of **0,681** was considered against t(276) = -.0413 a p-value (sig. 2-tailed) of 0,680. This p-value is larger than 0,05, indicating that **there is no significant difference** between the mean JS scores of e-tutors who have worked for four to five years and those who have worked one to three years at a 95% level of confidence. The p-value for the Levene test is also larger than 0,05 (p = 0,630), indicating that the variances are equal. The distribution looked fairly normal.

In terms of commitment, the OC row in table 6.48, indicates mean scores of M = 5,42, SD = 0,954 for e-tutors who have been providing their services for four to five years, and M = 5,39, SD = 0,819 for those who have been providing their services for one to three years. To assess whether a significant difference exists, in Table 6,49 t(276) = 0,260 a p-value (sig. 2-tailed) of **0,795** was considered against t(276) = 0,261 a p-value (sig. 2-tailed) of 0,794. This p-value is larger than 0,05, indicating that **there is no significant difference** between the mean OC scores of e-tutors who have four-five years' job tenure and those who have 1-3 years' job tenure. The p-value for the Levene Test is also larger than 0,05 (p = 0,722), thus indicating that the variances are equal. The distribution looked fairly normal.

6.8 ANALYSIS OF VARIANCE (ANOVA)

This section reports on multiple comparisons between colleges using one-way ANOVA. Table 6.50 reports on significant variance for the groups of e-tutors within different colleges in the ODL institution.

Table 6.50

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
JC_3	Between groups	1,281	2	0,641	0,813	0,445
	Within groups	199,391	253	0,788		
	Total	200,673	255			
JS	Between groups	0,038	2	0,019	0,031	0,969
	Within groups	152,580	253	0,603		
	Total	152,618	255			
OC	Between groups	1,572	2	0,786	0,927	0,397
	Within groups	214,623	253	0,848		
	Total	216,195	255			

Analysis of variance in Table 6.50 revealed the main effect of job characteristics, $F(2,253) = 0,813$, on levels of job satisfaction $F(2,253) = 0,031$ and OC, $F(2, 253) = 0,927$, thus there are homogeneous variances in job characteristics and OC within the various colleges. However, the analysis for JS, $F(2,253) = 0,031$, shows a low effect. Table 6.52 displays robust tests for the equality of means.

Table 6.51

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
JC_3	Welch	0,820	2	148,123	0,442
	Brown-Forsythe	0,821	2	225,470	0,441
JS	Welch	0,030	2	146,729	0,970
	Brown-Forsythe	0,031	2	217,764	0,969
OC	Welch	1,064	2	156,227	0,348
	Brown-Forsythe	0,992	2	241,311	0,373

a. **Asymptotically F distributed**

Table 6.51 depicts robust tests for the equality of mean scores. The F-test with 0,000 (Sig) is bigger than 0,05. Therefore, there are no significant differences between the job characteristics, JS and OC of e-tutors within the various colleges of the institution.

6.8.1 Homogeneous Tests

Table 6.52
Tukey Post Hoc Test

	Colleges				
				Subset for alpha = 0,05	
	Colleges	N	JC_3	JS	OC
Tukey	College of Economic & Management Sciences	113	5,26	5,55	5,34
HSD[a,b]	College of Education	82	5,35	5,56	5,45
	College of Accounting Sciences	61	5,16	5,58	5,54
	Sig.		0,362	0,966	0,379

Means for groups in homogeneous subsets are displayed. Uses Harmonic Mean Sample Size = 80,132.b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 6.52 presents the results of the post hoc comparisons using the Tukey HSD test. In order to determine which colleges differs significantly, the multiple comparisons tests were carried out. Colleges that had large proportions of e-tutors were selected for comparison. The College of Economic & Management Sciences (CEMS) was found to have the largest proportion of tutors at 44,14% compared to 32,03% in the College of Education (CEDU), and 24% in the College of Accounting Sciences (CAS). As a result, CEMS was selected as the control group for comparisons.

In this case, the Tukey HSD test indicated that the mean scores for JC_3 per college, namely, CEMS – M = 5,26, CEDU – M = 5,35 and CAS – = 5,16, did not differ significantly. The mean scores for JS were also compared, namely, CEMS – M = 5,55, CEDU – 5,56, and CAS – M = 5,58, but **no significant individual differences were found between colleges**. In retrospect, OC also produced similar results for the mean scores, that is, CEMS – M = 5,34, CEDU – 5,45, and CAS – M = 5,55, thus indicating

that there were no significant individual differences between the colleges. Overall, the p-values were found to be larger than 0,05.

6.9   REGRESSION ANALYSIS

This section reports on the regression analysis that was conducted. Hypothesis testing, which is based on the regression analysis, was also done to test how well the model had improved from the correlational analysis, as well as to ascertain the predictive effect of the model (Field, 2009). The positive test statistics are required to be at a 0,05 level of significance (Cohen, 1992).

6.9.1   Hypothesis Testing

The hypotheses below propose the following relationship:

H_{o1}: There is no statistically significant positive relationship between JCM, JS, and OC in a virtual working environment.
$H_{a}1$: There is a statistically significant positive relationship between JCM, JS, and OC in a virtual environment.

The results of the tests confirmed that the alternate hypothesis $H_{a}1$ tests under correlational analysis, and the predictive effect of the model is reported in Tables 6.53 to 6.57 below:

Table 6.53
Model & Variables

Model and Variables
Model   = 4
Y = OC
X = JS
M = JCM_3
Sample size: 279

Table 6.53 shows the variables in the proposed model, while Tables 6.54 and 6.55 indicate the nature of these variables.

Table 6.54

Model 1

	Coefficient	se	t	p
constant	1,5792	,3485	4,5318	,0000
JS	,6863	,0619	11,0955	,0000

Dependent Variable: OC, Predictors: (Constant), JS

In Table 6.54, JS is reported as a significant predictor of the outcome variable of OC.

Table 6.55

Model Summary

R	R-sq	MSE	F	df1	df2	p
,5547	,3077	,6197	123,1096	1,0000	277,0000	,0000

Dependent Variable: OC

Table 6.55 reveals that OC is the dependent variable.

Table 6.56

Model 2

	Coefficient	Se	t	p
Constant	1,4110	,3490	4,0436	,0001
JCM_3	,2175	,0758	2,8687	,0044
JS	,5106	,0865	5,9049	,0000

Dependent Variable: OC, Predictors: (Constant), JCM_3, JS

In Table 6.56, both job characteristics and job satisfaction are revealed as predictors of OC. The next table, Table 6.58, reports on the predictive effect of the variables.

Table 6.57

Model Summary

R	R-sq	MSE	F	df1	df2	p
,5725	,3277	,6040	67,2761	2,0000	276,0000	,0000

Dependent Variable: OC

There is a statistically significant positive relationship between JCM_3, JS and OC, where $r = 0,5725$, $F(2,276) = 67,27$, **$p < 01$, thus indicating a 95% level of confidence. The model confirms the alternate hypothesis, H_a1 with an improvement, where $R^2 = 3077$ and $\Delta R^2 = 0,3277$. Therefore, the predictive effect of the model suggests that OC in e-tutors is an outcome of both job characteristics and JS. Furthermore, the results are applicable to similar populations within the virtual work environment. The next section reports on the mediated regression to reveal the direct or indirect effect of the predictor variables.

6.10   MEDIATED REGRESSION ANALYSIS

Following the hypothesis testing, an analytical consideration takes precedence to report the regression model used for the study. JC_3 influences the relationship between JS and OC and therefore takes on the nature of an intervening variable.

- Analytical consideration: moderator/mediator

The nature of the intervening variable could take either the moderator mediator role. The mediator explains how external physical events take on internal psychological significance, whereas the moderator variable specifies when certain events occur (Baron & Kenny, 1986).

The study envisioned explaining how external physical events (dimensions of JCM) take on internal psychological significance (the three psychological states stimulating JS, thus influencing OC). Accordingly, the mediator model serves as the relevant analytical tool.

6.10.1 The Mediator Model

A variable function as a mediator to the extent that it accounts for the relationship between the predictor and the criterion. Hence, the mediator model will be used to describe the different ways in which conceptual variables may account for differences in participants' behaviour/outcomes.
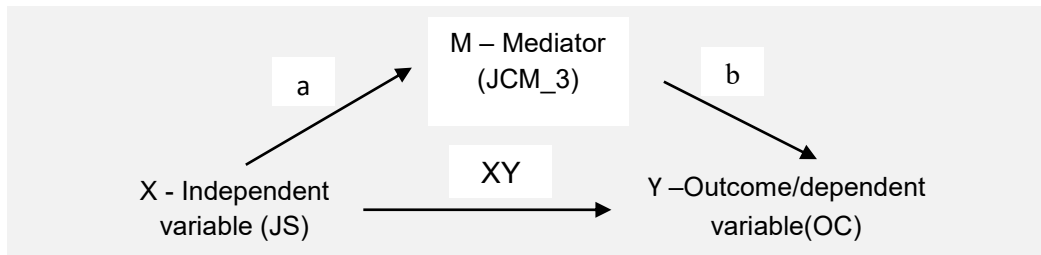
***Figure 6.15.* Mediator model**

Based on the regression model, the researcher purports that an independent variable (JS) is correlated with a dependent variable (OC). JS has a direct effect on OC, owing to changes in the intervening/mediating variable (JCM_3), which then causes changes in the dependent variable OC. Thus, mediation is referred to as the X→M →Y relationship, (Wuensch, 2011). According to Baron and Kenny (1986) and Howell (2012), the model follows the following series of regression:

1. Regressing JS on the JCM, thus allowing X to be correlated with M
2. Regressing JS on OC, thus allowing X to be correlated with Y
3. Regressing JCM on OC, thus allowing M to be correlated with Y, whilst holding constant the direct effect of X on Y.

The results for the regression analysis are presented as follows in Tables 6.59 to 6.63:

Table 6.58

Model and Variables

Model and Variables		
Model	= 4	
Y	= OC	
X	= JS	
M	= JCM_3	
Sample size: 279		

Table 6.58 shows the variables in the proposed regression model, where OC is a Y and is therefore considered to be an independent variable, JS is an X and, thus, an independent variable, while JC_3 is an M, and thus a mediator variable. The next table shows the first model of regression.

Table 6.59

Model 1

	Coeff	se	t	p	LLCI	ULCI
constant	,7729	,2726	2, 8352	,0049	,2363	1, 3096
JCM_3	,8077	,0484	16, 6902	,0000	,7124	,8081

Table 6.59 depicts the zero-order unstandardised regression coefficient as a first step in predicting the mediator JS from the independent variable (JC_3). The coefficient is $r = ,81$, and the SE = ,48. The next table, Table 6.61, reports on the summary of the model.

Table 6.60

Model Summary

R	R-sq	MSE	F	df1	df2	p
,7081	,5014	,3793	278, 5635	1,0000	277,0000	,0000

M = f (X), JC_3 = f (JS).

Table 6.60 reports on the summary of the model where the mediator (M) JC-3 is a function of JS (X), $F(1, 277) = 278,56$, $p < ,001$, R = ,71, 95%. Table 6.61 shows the second step of the regression.

Table 6.61

Model 2

	Coefficient	se	t	p	LLCI	ULCI
Constant	1,4110	,3490	4,0436	,0001	,7241	2,0980
JCM_3	,2175	,0758	2,8687	,0044	,0682	,3668
JS	,5106	,0865	5,9049	,0000	,3404	,6809

Table 6.61 reports on Model 2, which contains the partial unstandardised regression coefficient for predicting the dependent variable (OC) from the mediator (JC_3) holding the independent variable (JS). The regression coefficient = ,51, and the SE = ,08.

Table 6.62

Model Summary

R	R-sq	MSE	F	df1	df2	p
,5725	,3277	,6040	67,2761	2,0000	276,0000	,0000

Y = f (X; M)

OC = f (JS; JC_3)

As anticipated in step 1 of the mediation model, job characteristics (JCM_3) was significantly correlated with JS (β = ,8077, p < ,001 95%). A series of regression models were fitted, first to predict the independent variable JCM_3 as a possible mediator of the relationship between JS and OC.

In the step 2 of the mediation model, JS, which is now a significant predictor variable (X), was found to be related to OC which is the outcome variable (Y), therefore, β = ,5106, p < 001 95% CI [,34, ,68]. OC was found to be significantly related to a linear combination JC_3 and JS, $F(2, 276)$ = 67,27, p < ,001, β = ,5725, 95% CI [,07, ,37]. Neither Job Characteristics (β = ,2175, p =,004) nor JS (β = ,5106, p = ,000) had a significant partial effect on OC. When controlling for the mediator (JC_3), JS was found not to be a significant predictor of OC (b = ,5547, $F(1, 277)$ = 12,31).

The results were anticipated, therefore the framing of the alternate hypothesis H_a1 is confirmed in this study. Furthermore, the regression of the hypotheses helped to predict the relationship between the job characteristics, JS and OC of e-tutors in a virtual work environment within the ODL institution. The following Tables 6.64 to 6.67 report on the effect of the mediator variable. Table 6.64 is a presentation of the Sobel test that will confirm the effect of the mediator variable.

Table 6.63

Normal Theory Test for Indirect Effect (Sobel Test)

Effect	SE	Z	p
,1757	,0622	2,8223	,0048

A Sobel test was conducted (see Table 6.63) and subsequently evidence was found for the mediation model (z = 2,82, p = ,004). As a result, the test confirmed that job characteristics clearly mediate the relationship between JS and OC. The mediation is illustrated in Figure 6.16 below:

Figure 6.16: **The effects of the regression model**

Figure 6.16 depicts the regression model used in this study. Each arrow in the path diagram depicted represents a causal relationship between two variables to which a coefficient or weight is assigned. The coefficient represents the standardised regression/betas showing the direction or magnitude of the effect of one variable on the other. Table 6.65 shows the magnitude of X on Y.

Table 6.64

Direct Effects of X on Y

Effects	SE	t	p	LLCI	ULCI
,5106	,0865	5, 9049	,0000	,3404	,6809

Table 6.64 shows the magnitude of the effect of JS as an independent variable (X) on OC as the outcome variable (Y). Given the magnitude of the effect, JS has a direct effect on organisational commitment: β = ,510, p < ,001, 95% CI[34, 68]. However, the effect of JS on OC is transmitted through additional mediating links formed by the

dimensions of job characteristics.   Table 6.66 shows the magnitude of job characteristics.

Table 6.65

Indirect Effects of X on Y

	Effects	Boot SE	BootLLCI	BootULCI
JCM_3	,1757	,0632	,0505	,2943

Table 6.65 shows sequential correlation analysis to investigate the involvement of job characteristics as a possible mediator of the relationship between JS and OC, with job characteristics having a direct effect – β= ,1757, p < ,001, 95% CI [05, ,29]. The total effect is presented in Table 6.67 below.

Table 6.66

Total Effects of X on Y

Effects	SE	t	p	LLCI	ULCI
,6863	,0619	11,0955	,0000	,5645	,8081

The indirect effects of JC_3 on OC (,8077)(,5106) = 1757, whereas its direct effects through JS are β = ,5106, yielding a total effect coefficient of ,6863 (not coincidentally equal to the zero-order correlation between JS and OC). Accordingly, ,1757/,6863, 26% of the effect of JS on OC is mediated through JC_3.

The results of the regression model validate the bivariate correlation where the relationship between JS and OC diminishes slightly in the absence of JC_3. Therefore, the regression model confirms that the three dimensions of skill variety, task significance and feedback take on the internal psychological significance, which consequently indirectly influences the organisational commitment of e-tutors through JS within the virtual work context (Gibson et al., 2011). The results of the model are applicable to similar populations in virtual work environments (De Vries et al., 2018). Given all the statistical tests that were conducted, the regression model ends the empirical investigation conducted in this chapter.

6.11   CHAPTER SUMMARY

This chapter reported on the statistical results that were critical for this research. The empirical results were integrated with the findings of the literature study. Subsequently, the results provided supportive evidence for the stated hypothesis H_a1 based on the theoretical perspective of the study. Furthermore, the rigorous tests conducted in the chapter validated the theoretical reasoning based on the conceptual framework of the research study. The following chapter, Chapter 7, discusses the final phase of the research where meaningful conclusions will be drawn based on the literature study and the empirical results. The limitations of the study that were encountered will also be discussed and recommendations will be made for future research studies.

CHAPTER 7
CONCLUSION, RECOMMENDATIONS, AND LIMITATIONS

7.1   INTRODUCTION

Chapter 6 presented the results of the statistical data analysis as they pertained to the objectives of the research study. The aim of this chapter is to present the conclusions that have been reached based on the literature review and the empirical investigation. The limitations of the study are also discussed in this chapter. As a final point, the chapter will end with recommendations for future research studies guided by the integrated theoretical framework and the achieved empirical objectives.

7.2   CONCLUSIONS

The conclusions of the study are formulated on the basis of the literature review and the empirical study and in accordance with the aims of the research outlined in chapter 1.

7.2.1   Conclusion relating to the literature review

The general aim of this study was to examine the nature of the relationship between the perceptions of job characteristics, job satisfaction and organisation commitment of e-tutors in their virtual work environment at an ODL institution.

Conclusions were drawn on each of the specific aims as follows:

Research aim 1:

To conceptualise the three constructs, job characteristics, job satisfaction (JS) and organisational commitment (OC), from a theoretical perspective.

Construct 1: The Job Characteristics Model (JCM) was conceptualised in Chapter 2. Conceptualisation was based on the five dimensional model of Hackman and Oldham (1976, 1980). Subsequently, the following conclusions were drawn:

The JCM is a job design strategy which references the actual structure of the jobs that employees perform. This job design strategy is employed by organisations mainly in order to solve problems of productivity and employee alienation (Hackman & Oldham, 1976, 1980; Oldham & Fried, 2016). The job design process involves the creation and modification of the content of the job, as well as the organisation of the job characteristics in terms of tasks, activities, relationships, and responsibilities. Overall, the JCM approach is aimed at improving the essential nature of the work performed by enhancing the motivational properties that influence JS and OC. Accordingly, the model proposes the following five core dimensions as key motivational properties:

- *Skill variety –* entails the multiple skills required to perform a wide range of tasks.
- *Task identity* – compels the jobholder to complete the entire piece of work from start to finish, instead of a small section of the work.
- *Task significance* – refers to the impact that the job has on those who benefit from the services provided on the job and leads to greater meaningfulness.
- *Autonomy* – reflects the extent to which the job allows the jobholder freedom and independence in scheduling the work, making decisions, and choosing the methods used to perform tasks.
- *Feedback* – entails knowledge of the results of the work that was done.

The presence of these five core dimensions in any job would result in the jobholder experiencing their work as meaningful and feeling responsible for the outcomes. In the case of e-tutors, the online pedagogical skills, skills in the use of technological tools to facilitate learning, as well as the opportunity to claim an identifiable piece of work inside the virtual classroom equate to the dimensions of skill variety and task identity.

The two last-mentioned dimensions, skill variety and task identity, furthermore have an impact on autonomy and discretion in the choice of the technological tools used to

facilitate online learning, thus giving e-tutors control over their virtual work environment. In succession, the dimension of task significance is depicted inside the virtual classroom. Ultimately, the e-tutors acquire knowledge of the results of their work from students who benefit from their services.

If these dimensions are present, then the e-tutors will experience some level of JS. Given this, it is apparent that the JCM is still influential in the field of job design and particularly in light of the changing nature of work. In this study, this model was extended to the virtual work environment of e-tutors to test the presence of the five core dimensions.

Construct 2: The JS construct was conceptualised in Chapter 3. This conceptualisation was based on measures of intrinsic and extrinsic satisfaction which are obtained using the Minnesota Satisfaction Survey (MSQ) (Weiss et al., 1967). The following conclusions were drawn:

JS is an emotional response reflecting the extent to which people like (satisfaction) or dislike (dissatisfaction) their job. Generally, JS refers to an affective, positive emotional response to the job as whole. As may be seen from the MSQ (Weiss et al., 1967), this emotional response is influenced by a number of facets of the job, of which some are intrinsic while others are extrinsic to the jobholder. Intrinsic JS relates to job content factors entailing the task activities performed at work. In the case of e-tutors the task activities entail the teaching and facilitation of activities performed inside the virtual work environment.

In terms of extrinsic JS, satisfaction with the job relates to contextual factors which characterise the working conditions. Traditionally, these environmental facets/dimensions are linked to supervision–technical and supervision–human relations, company policies, recognition, compensation (pay) and co-workers.

The abovementioned dimensions need to be implemented with the elements of procedural and interactional justice. However, the structural evolution of the virtual work environment alters some of these dimensions. E-tutors are geographically dispersed and physically separated. As such, dimensions of technical and

technological support, as well as institutional support, are paramount to JS in a virtual environment (Thompson, 2014).

The use of ICT has great significance in terms of facilitating the way ODL institutions support their faculty members such as e-tutors. It is also crucial for improving human relations between e-tutors and their supervisors inside the virtual work environment (Boell, Cecez-Kecmanovic, & Campbell., 2016; Dawson-Howard, Standen, & Omari,2013).

Technical support should take the form of training such as that pertaining to the online teaching/pedagogical strategies suitable for the online environment and the use of technological tools (Donovan & Wright, 2013; Hynes, 2014). On the other hand, institutional support should take the form of implementation of policies that are in support of virtual work conditions and the provision of technological infrastructure that creates an effective virtual work environment (Ye, 2012). Overall, these forms of support create good working conditions that may potentially have a positive influence on the extrinsic JS of e-tutors (Donovan & Wright, 2013; Wheatley, 2012).

Construct 3: Organisational commitment (OC) was conceptualised in Chapter 4. Conceptualisation was based on Allen and Meyer's (1990) three-component model of organisational commitment. The following conclusions were subsequently drawn:

OC refers to the relative strength of an individual's identification with and involvement in a particular organisation. This form of commitment has an **affective** tone and is based on the nature and the quality of an employee's work experiences during his or her tenure at an organisation. Furthermore, this identification relates to the P-E fit described under JS. Given the P-E fit, e-tutors' congruency with the virtual work setting needs to be developed through a supportive organisational culture embedded in electronic collaboration and ongoing feedback.

Affective commitment suggests that the jobholder has a deep belief in the goals and values of the organisation and is therefore willing to contribute meaningfully to the organisation's mission and objectives. The willingness or obligation to contribute meaningfully is rooted in the component of **normative** commitment. In an ODL

institution, e-tutors can develop normative commitment by internalising the norms of the university. This is made possible by maintaining electronic contact which reinforces cognitive presence in the institution, thus satisfying the need for social affiliation (Donovan & Wright, 2013; Troup & Rose, 2012).

Subsequent to the experiencing of identification and P-E fit, the desire to maintain membership intensifies. Such employees work selflessly, make personal sacrifces thereby performing beyond their normal expectations and, thus, increase their investment in the organisation. E-tutors in particular place great value on the opportunity to gain work/life balance.

In appreciation of the opportunity to work from home and to balance personal responsibilities, e-tutors fulfil their feelings of obligation to reciprocate by working long hours (De Vries et al, 2018, Gajendran et al., 2015). As the result, the cost associated with finding an alternative organisation (employer) is high, thereby constricting future movement outside the organisation. This form of commitment is rooted in the component of **continuance** commitment.

Conclusively, OC is regarded as a psychological and emotional attachment to the organisation. This attachment is central to the enduring character of the individual and creates feelings of identification with the organisation (Meyer et al., 2002). The stimulus for feelings of attachment to the organisation are therefore rooted in meaningful work experiences (Oldham & Hackman, 2010).

Consequently, OC is a function of personal, role-related and structural characteristics, as well as situational factors related to the job setting. Within the work settings of e-tutors, individual experiences gained while performing online job activities inside the virtual work environment contribute to their commitment levels. Most importantly, the benefit of the work/life balance increases their obligation to reciprocate and commit to the goals of the ODL university.

Research aim 2:

To conceptualise the nature of the relationship between perceptions of job characteristics and JS.

The nature of the relationship between job characteristics and JS was conceptualised and explained in the summary of the conceptual framework. The following conclusions were drawn:

The JCM affects a wide variety of work-related outcomes such as JS. These are mediated by the motivational properties found in the five core dimensions of the job. These job dimensions stimulate critical psychological states in which jobholders perceive their work as meaningful, feel responsible for the outcomes and have feedback on their work.

Research aim 3:

To conceptualise the nature of the relationship between job satisfaction and organisational commitment (OC).

Conceptualisation of the nature of the relationship between JS and OC was achieved in the summary of the conceptual framework. The following conclusions were drawn:

The constructs of JS and OC reflect jobholders' affective responses to the job and the organisation. In support of the affective responses, researchers on organisational behaviour have established the relationship between the two constructs. Thus, employees who are satisfied with their jobs will show a greater propensity to stay in their organisation. The multiple facets of JS consequently have a causal relationship with the employee's attachment to the organisation.

Research aim 4: To conceptualise the nature of the relationship between job characteristics (JS) and organisational commitment (OC).

Conceptualisation of the nature of the relationship between job characteristics and organisational commitment was achieved in the summary of the conceptual framework. The following conclusions were drawn:

The nature of the job and the employee's experience in the workplace influence OC. Committed employees perform better, produce more, and are more involved. This is particularly true in the case of e-tutors who have gained work/life balance opportunities and therefore feel obligated to reciprocate by working long hours. Overall, this indicates that jobholders who are satisfied with conditions in their work environment develop cognitive bonds with their organisation

This concludes the findings gleaned from the literature review conducted in this research study.

7.2.2   Conclusion relating to the empirical results

The empirical aims of this study were to investigate the following:

Research aim 1:

To investigate the statistical nature of the relationship between JCM (represented by five core dimensions, namely: skill variety, task identity, task significance, autonomy and feedback), JS (represented by intrinsic and extrinsic job satisfaction), and OC (represented by affective, continuance and normative commitment) in a sample of participants working in the virtual environment for a South African ODL institution.

The empirical results provided supportive evidence for the research hypothesis H_a1.

Accordingly, the empirical results confirmed a significant and positive relationship between JCM, JS and OC. However, the exploratory factor analysis (EFA) conducted for the JCM revealed that the relationship is based on three dimensions only, namely: feedback, skill variety and task significance.

In the initial index, skill variety had strong factor weightings and feedback had the lowest factor weightings. However, under the three dimensional job characteristics, feedback had the strongest factor loading followed by skill variety. The factor extraction on the core dimension of autonomy and task identity revealed very low weightings and was therefore supressed in the final output.

Constructively, the results of the positive relationship suggest that the e-tutors' job characteristics have motivational properties; this was ascertained despite the missing multiplier effect of autonomy on the motivating potential (MPS) score. This is contrary to Casey and Robbins' (2010) findings. They found that if either autonomy or feedback were missing, the job offers no motivating potential because of the multiplier effect gained from the dimensions.

The positive results found in this study are attributed to feedback. This dimension had a strong factor loading which increased the multiplier effect of the overall MPS score and thus contributed to the positive correlation with JS. This suggests that feedback inside the virtual work environment is a critical success factor compensating for the lack of physical presence and enhancing social support, communication and trust. In conclusion, feedback channels need to be expanded to all the sources, including supervisors, co-workers and the service recipients (Collins, Hislop, & Cartwright, 2016; Parker, 2014; Taylor, 2014).

The new retained structure comprising three dimensions of job characteristics was also tested for reliability and it was subsequently found that the structure produced an acceptable reliability score. In conclusion, these job characteristics were found to be reliable and the scope of e-tutors' job in terms of the three factors (feedback, skill variety, and task significance) have motivational properties that manifest in JS in their virtual work environment.

Furthermore, the results confirm the e-tutors' motivation to achieve psychological growth, which refers to their growth need strength (GNS). According to Bakker and Demerouti (2014) and Parker (2014), the jobholder's GNS cannot function in an environment that is characterised by tight control. This suggests that, although autonomy has been limited in this study, the structural virtual transformation has

fostered cognitive development of e-tutors. Therefore, to some degree e-tutors have freedom to choose how they perform their job activities.

A partial correlation between JS and OC was conducted. This was done while holding the effect of job characteristics. Subsequently, a significant relationship was revealed. However, in terms of variance, the relationship almost disappeared in the absence of job characteristics. In conclusion, the job characteristics encompass the activities performed at work under the specific conditions, and as such, without the job characteristics, JS is not a strong predictor of OC.

A further investigation was conducted to test the relationship between job characteristics and OC. A significant positive relationship was subsequently revealed. The mean scores of JS and OC were observed in relation to the effect of job characteristics, and the degree of JS was found to be higher than the degree of OC. In conclusion, a significant positive relationship was found to exist between job characteristics, JS and OC. However, the relationship between job characteristic, JS and OC is stronger than the relationship between job characteristics and OC.

The strength of this relationship was confirmed by the regression analysis. This analysis was conducted to test the influence of job characteristics on the relationship between JS and OC. The results revealed that JS has a significant effect on OC, which is mediated by the three-dimensional job characteristics model.

In conclusion, the results explain how external events, in this case feedback, skill variety and task significance, take on internal psychological significance that stimulates JS in e-tutors, thus indirectly influencing their commitment to the institution. Stated differently, in order to commit to their employer, employees must first like their job, and affection for the organisation is dependent on the task activities performed and the nature of the working conditions.

Research aim 2:

To investigate what differences exist between job characteristics (skill variety, task identity, task significance, task identity, autonomy, and feedback), job satisfaction (JS)

(intrinsic job satisfaction and extrinsic job satisfaction), and organisational commitment (OC) (affective commitment, normative commitment, and continuance commitment) in terms of biographical details (gender, educational background, job tenure and geographic location). The hypotheses of the group differences were therefore framed as follows:

- H_{02}: Differences do not exist in job characteristics, job satisfaction, and organisational commitment in terms of the demographic variables gender, educational background, job tenure, and college.
- H_{a2}: Differences do exist in job characteristics, job satisfaction, and organisational commitment in terms of the demographic variables gender, educational background, job tenure, and college.

The results revealed no significant differences between the mean scores of the job characteristics, JS and OC of male and female e-tutors, and no significant differences between the e-tutors who have long and short job tenure in different colleges within the ODL institution. Thus, the null hypothesis was confirmed for the following demographical groups:

- H_{02}: Differences do not exist in job characteristics, job satisfaction, and organisational commitment in terms of the demographic variables gender, job tenure, and college.

The results revealed that the effect of the job characteristics that accompany virtual working conditions have no significantly different effect on levels of JS and OC in male and female e-tutors. This is despite research studies revealing that the benefits of work/life balance prevalent in the virtual work environment are mainly appreciated by female telecommuters who have responsibilities such as child care (Bae & Kim, 2016; Gajendran et al., 2015).

The conclusion may therefore be made that both male and female e-tutors in ODL institutions perceive the virtual working conditions similarly. Furthermore, the satisfaction levels of e-tutors who have long years of service do not differ significantly

from those with relatively short service on the e-tutor programme. Therefore, their identification and psychological attachment to the ODL institution do not differ significantly.

In contrast, the results differed significantly for the demographic variable of educational background. The results revealed that there are significant differences between the mean scores of JS and OC in e-tutors holding undergraduate and postgraduate degrees. Thus, the following alternative hypothesis was confirmed:

- *H_{a2}*: Differences do exist in job characteristics, job satisfaction, and organisational commitment in terms of the demographic variable educational background.

It is therefore concluded that JS in e-tutors holding junior degrees and honours degrees differs from that of e-tutors holding master's and doctoral degrees. As a result, their commitment levels to the ODL institution differ significantly. These differences might be attributed to opportunity to progress within the academic institution based on qualifications. E-tutors holding master's and doctoral degrees have extensive exposure to teaching, learning and research and thus better opportunities for progression are created (Khalid et al, 2012).

7.3   THE SIGNIFICANT CONTRIBUTION OF THE STUDY

This section discusses the conclusions of this research study in terms of contributions to the field of Human Resource Management. Accordingly, the contributions made in relation to theoretical, empirical and methodological as well as practical perspectives are discussed.

7.3.1   Theoretical contribution

This research study has been significant from a theoretical perspective. The study conceptualised the constructs of job characteristics, JS, and OC within the virtual context of ODL institutions. Thus, the study has made a significant contribution to the body of knowledge by espousing the changing nature of work and the theoretical

models contributing to the process of job design. In particular, the job design model of job characteristics has been fundamental in espousing the expected psychological states of virtual workers such as e-tutors.

The dimensions of the model were therefore critical for investigating the nature of the virtual work environment and thus shedding light on the way e-tutors in ODL in a South African university relate, work and communicate with their co-workers and supervisors. Taking from this theoretical contribution, critical stakeholders will have a significant understanding of how the isolated nature of the virtual work environment impacts on the JS and OC of telecommuters such as e-tutors in ODL institutions.

7.3.2   Empirical contribution

Methodologically, this research contributed by empirically testing the valid and reliable dimensions of the (JCM) within the virtual environment in ODL institutions. The measure revealed a statistically significant positive relationship between the job characteristics, JS and OC of e-tutors in a South African ODL university. The extracted three-dimensional model creates an opportunity for further research on the topic of job design and its impact on organisational behaviours such as JS and OC. The model could be extended to the virtual work environment and developed further.

7.3.3   Practical contributions

The results of this study make a significant practical contribution which can be applied to the field of Human Resource Management (HRM). Practitioners in the field of HRM can make reference to the research study and take cognisance of the psychological impact that job characteristics have within the virtual work environment.

The critical psychological states induced from job activities performed under virtual working conditions supported the tacit psychological contract of part-time telecommuters such as e-tutors. As such, the employment relationship that develops within the isolated nature of the virtual work environment results in new dimensions that influence the satisfaction and commitment levels of telecommuters. The results of this study prompt practical consideration of human resource approaches in terms of

support and policies that can increase JS in a virtual context, thus offsetting telecommuters' intention to leave. In a South African context, such approaches should therefore aim at increasing e-tutors' support and progression, job tenure and commitment to the ODL university.

7.4   LIMITATION

The limitations of the literature review and the empirical investigation are presented below.

7.4.1   Limitations of the literature review

Biographical data were aligned to research aim 2. Thus data was influential in the e-tutors' responses regarding their job characteristics, and subsequently their levels of JS and OC. However, for the purposes of this study, data were utilised to examine differences in the degree of perceptions of job characteristics, and consequently the levels of JS and OC. Therefore, the predictive effect of gender and educational background, and the significant effect of job tenure, were not under review. This was found to be a limiting factor in the literature study.

Although no significant differences were found between perceptions of job characteristics and JS and OC levels in male and female e-tutors, studies show differently. When it comes to virtual work environments, working arrangements are characterised by flexibility that creates a work/life balance. Jobholders who have caring and nurturing responsibilities such as child and elder care are generally keen to have benefits such as flexible working arrangements. Such arrangements give jobholders the opportunity to balance both work and personal responsibilities.

The aforementioned responsibilities are predominantly carried out by female workers. However, a review of the significant effects of flexible work arrangements and concurrent psychological commitments were limited in the literature study. Hence, the influence of benefits such as work/life balance on JS was not investment in the current study. Similarly, job tenure did not form part of the literature review. In addition,

experience gained inside virtual work environments was not reviewed in relation to e-tutors' commitment to the organisational.

In terms of age, chronological age has an influence in how jobholders respond to the structure of their work environment. Older and younger workers from different generational cohorts may react differently to the same job characteristics, particularly in a virtual work structure where technology plays a major role. However, there was no planned contrast when it comes to chronological age. As such, the predictive effect of generational cohorts such as generations X and Y, as well as baby boomers, was not under investigation for the main constructs of the study. This was also found to be limiting.

Career salience is linked to educational background and therefore espouses the jobholder's commitment to the profession as opposed to the employing organisation. Unfortunately, commitment to the profession was not under review, as this would have shed light on the mean differences between e-tutors holding undergraduate and postgraduate degrees.

The theoretical models under study have been operationalised mainly in traditional work environments. Therefore, some of the dimensions are perceived to be limited to the physical work environment. For example, the dimension of social support from supervisors and co-workers is a relational aspect forming part of working conditions is mainly perceived to exist in physical work settings. Consequently, the models were limited to capturing some of the salient aspects/characteristics of the modern work environment.

7.4.2 Limitations of the empirical study

The biographical results were only fundamental to the inferential analysis of data, and that was in terms of the planned contrast. Thus, there were limitations in terms of their influence on the main construct under study. The planned contrast for age revealed that 52% of e-tutors were between the ages of 35 and 49, thus falling within the cohort of generation X. However, the significant effect of chronological age relative to job characteristics, JS and OC inside the virtual work environment was not investigated.

Similarly, significant mean differences were found between e-tutors holding undergraduate degrees and those holding postgraduate degrees. This could be attributed to career salience; however, commitment to the profession was not examined. Additionally, 59,4% of e-tutors had four to five years of virtual work experience. However, job tenure was not investigated as a possible predictor of commitment of the organisation.

Extending the constructs into the virtual work environment and testing them in different structural settings came with some challenges. The results of the exploratory factor analysis were limiting in terms of extracting dimensions of the construct. Furthermore, the sample size is critical for factor analysis.

Although the sample size in this study was adequate, data were collected from 362 respondents. However, 83 questionnaires were not fully completed, thus leaving a sample of n = 279. The 83 spoilt questionnaires could have had more influence on the extraction of factors. As a result, only a three-factor JCM was extracted (JC_3), as the dimensions of task identity and autonomy were excluded.

The lack of task identity may suggest that e-tutors cannot claim responsibility for completing identifiable pieces of work from start to finish. However, this is limited to the design of the module content that is entwined with student satisfaction and pass rate. To a certain extent, this creates ambiguity and therefore suppresses role clarity.

The role of e-tutors in confined to that of content facilitators within their specific knowledge discipline. As such, completion of tasks inside virtual classrooms as well as effective communication via asynchronous discussions, announcements, feedback on course assignments and virtual collaboration seems to have been inhibited in the investigation of task identity.

Autonomy was also limited to methods for performing task activities. This reflects a global measure of the dimension. As a result, autonomous factors prevailing inside virtual work environments were parsimoniously investigated. Consequently, control and decision-making over work location, work schedule, work timing and sequencing were not clearly reflected (Gajendran et al., 2015; Spiegelaere et al., 2016).

Moreover, content facilitation inside virtual classrooms is mediated by technology and therefore requires diverse pedagogical strategies that enhance online learning (Kop et al., 2011). Such diverse strategies prompt e-tutors to be proactive and able to mould/craft their job. Job crafting has an element of autonomy; however, job crafting did not form part of the main construct under study (Nicholson, 2010). Therefore, consideration of the abovementioned suggests that the investigation of job autonomy was very limited in this study.

Institutional support in terms of technical and technological support is regarded as a successful predictor of JS inside virtual work environments. Such support assists in the creation of pleasant working conditions. However, in this study, the dimensions were not linked to the JS construct. This was also somehow inhibiting, and could be the reason why working conditions were internalised as intrinsic satisfaction as opposed to extrinsic satisfaction within the EFA.

7.5   RECOMMENDATIONS

The results of the study have revealed that the advancement of technology has altered job characteristics. Therefore, in order to capture the salient aspect of the changing nature of work, those who occupy the new jobs are in a better position to share valuable insight about the changing context and the outcomes of the new dimensions. Consequently, a number of recommendations are made in order to achieve the research aim specified below:

Research aim 1:

To make recommendations for further research on job design for virtual workers, as well as human resources approaches suitable for the virtual work environment of e-tutors.

7.4.1   Recommendation for further research on job design

Taking into consideration the limiting effects induced by the lack of all the core dimensions of the job, it is essential for organisations to contemplate the empirical

aspect of job design. The suppression of task identity and autonomy in the EFA suggests that the parameters of the JCM need to be expanded in order to suit a specific work context, in this case specifically the virtual work environment. This concurs with Grant and Parker (2009), Oldham and Hackman (2010) and Wood et al. (2012).

Task interdependence is a prevailing norm when structuring jobs. Thus, the interrelationship of different elements and the interplay of jobs might blur the enactment of roles within the broader task. This may consequently inhibit task identity when it comes to the individual jobholder. A lack of task identity potentially creates role ambiguity and detachment from the organisation. Hence, telecommuters most report high levels of isolation from co-workers and supervisors and therefore perceptions of professional isolation (Collins et al., 2016; De Vries et al., 2018).

The abovementioned role ambiguity could potentially be dealt with by opting to have an individual perform the entire job as opposed to having several jobholders perform parts of the job (Spiegelaere et al., 2012). The role enactment of e-tutors is interlinked to course/module content design. However, their role is only confined to online facilitation and teaching inside a virtual classroom.

Taking the lead from Spiegelaere et al. (2012), this role of online facilitation and teaching inside a virtual classroom should specifically be delineated to e-tutors as opposed to being shared with the supervisors (primary lecturers) who are responsible for the course design. Therefore, activities performed on the website by e-tutors should be clearly outlined and not be duplicated on the general site which is generally intended for giving guidelines.

Under conditions where there is no delineation of roles, the jobholder's creativity and performance might be hampered (Challenger et al., 2012). Hence, those who cannot experience task identity might perceive their role as being less significant. Consequently, a jobholder may begin to experience dissatisfaction, thereby diminishing the critical psychological states of meaningfulness and responsibility. In the long run, the individual might detach from the institutional objectives.

On the other hand, it would be difficult to have autonomy in the absence of task identity. Creating opportunities to complete a job from start to finish propels individuals to work smarter and to react in a flexible and efficient way to a changing environment. In this manner, institutions can minimise close supervision and augment this with some degree of control and decision-making over job aspects.

In an ODL environment, teaching inside virtual classrooms requires the effective use of diverse learning management system (LMS) tools. This requires e-tutors to adapt their pedagogical strategies and increase effective communication and learning (De Metz & Bezuidenhout, 2018). The correct use of instructional methods and the execution of the primary task requires a level of discretion and flexibility (Wood et al., 2012).

The abovementioned limitations necessitate an empirical approach to job design. Such an approach will allow several facets of the dimensions of task identity and autonomy to be expanded to suit the institutional context. Furthermore, evaluation of the dimensions will not be suppressed. Thus, the JCM can be extended into the virtual work design. A prerequisite for experiencing meaningfulness under specific environmental conditions is to have dimensions such as autonomy and task identity tailored or linked to role clarity.

Furthermore, it is recommended that the LMS system used to facilitate online education should be structured to produce task identity based on collaboration and support for teaching and learning management. The dimension of autonomy should also be outlined based on the instructional methods implemented through the use of media and educational technologies (Bolliger & Amier, 2011).

7.4.2   Recommendations for HRM approaches

The evolution of virtual work structures reiterates the need for different management approaches to deal with the changing nature of the work context. Accordingly, the dimensions contributing to the prediction of JS and OC in virtual work environment need to be expanded.

The lack of physical presence and the fact of not being co-located to supervisors and co-workers creates perceptions of professional isolation and career marginalisation (De Vries et al., 2018; Donovan & Wright, 2013). Hence, supervision of an independent remote worker needs specific management practices. Telecommuters, and in particular e-tutors, therefore need management practices that are based on creating clear role clarity, clear expectations and clear objectives, and less direct supervision.

Success working remotely is also dependent on social support inside the virtual work environment. Interaction and communication with subordinate's forms part of effective managerial behaviour, however the lack of physical presence increases the level of complexity. Maintaining electronic contact with an external workplace can improve interaction and satisfy the need for social affiliation.

As mentioned earlier, institutional support in terms of technical and technological issues is regarded as a successful predictor of JS and OC inside the virtual work context. The satisfaction and commitment of e-tutors therefore needs to backed up by policies that advocate support in terms of technological infrastructure, training and adequate course preparation time, as well as an equitable reward system. This includes institutional factors such as an institution's assessment practices, access to quality teaching resources, student load, inclusion in faculty decision-making, and institutional support.

7.5   CHAPTER SUMMARY

Chapter 7 achieved the following research aim, namely, the formulation of the research conclusion to outline the limitations of this research. It also made recommendations for further research on job design for virtual workers, as well as human resources approaches suitable e-tutors in a virtual work environment.

The aim of this research was to investigate the nature of the relationship between perceived job characteristics, job satisfaction and organisational commitment in e-tutors in virtual work environments. The results confirmed a significant and positive relationship between perceptions of job characteristics, JS and OC. This completes the research project.

BIBLIOGRAPHY

Agho, A. O., Mueller, C. W., & Price, J. L. (1993). Determinants of employee job satisfaction: An empirical test of a causal model. *Human Relations*, *46*(8), 1007–1027.

Ahmed, M. A. (2015). The role of self-esteem and optimism in job satisfaction among teachers of private universities in Bangladesh. *Asian Business Review*, *1*(2), 114–120.

Akram, M., Afzal, U., & Ramay, M. I. (2017). Mediating Role of Organizational Commitment in Relationship between Emotional Intelligence and Job Performance: Evidence from Higher Education Sector of Pakistan. *Global Management Journal for Academic & Corporate Studies*, *7*(1), 110.

Akuamoah-Boateng, C., & Boadu, K. (2013). Reducing distance learners' attrition rate at the University of Cape Coast: Tutors'/students' perception. *International Journal of Learning and Development, 3*(3), 214–229.

AlBattat, A. R. S., & Som, A. P. M. (2013). Employee dissatisfaction and turnover crises in the Malaysian hospitality industry. *International Journal of Business and Management*, *8*(5), 62.

Aldag, R. J., & Kuzuhara, L. W. (2002). *Organizational behavior and management: An integrated skills approach*. Mason, OH: South-Western/Thomson Learning.

Alderfer, C. P. (1968). Comparison of questionnaire responses with and without preceding interviews. *Journal of Applied Psychology*, *52*(4), 335.

Alexander, S., Sarrafzadeh, A., & Fan, C. (2003). Pay attention! The computer is watching: Affective tutoring systems. In *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education,* 1463–1466.

Allen, M., Mabry, E., Mattrey, M., Bourhis, J., Titsworth, S., & Burrell, N. (2004). Evaluating the effectiveness of distance learning: A comparison using meta-analysis. *Journal of Communication*, *54*(3), 402–420.

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, *63*(1), 1–18.

Allen, N. J., & Meyer, J. P. (1997). *Commitment in the workplace: Theory, research and application*. Thousand Oaks, CA: Sage Publications.

Alutto, J. A., Hrebiniak, L. G., & Alonso, R. C. (1973). On operationalizing the concept of commitment. *Social Forces*,*51*(4), 448–454.

Anderson, L., & Cartafalsa, J. (2012). Practical lens for teachers in their high tech learning environment. *Journal of Research in Innovative Teaching, 5*(1), 39–44.

Andrew, F. M., & Withey, S. B. (1976). Social indicators of well-being. *New York and London: Plenum*, 20-31.

Archer, M. P. (2013). *Perception of isolation in virtual organizations: A comparative analysis between distance education students and teleworkers* (Doctoral dissertation). Indiana State University.

Armstrong, M. (2010). Armstrong's essential human resource management practice: A guide to people management. London N1 9JN, UK: Kogan Page Publishers.

Arvey, R. D., Carter, G. W., & Buerkley, D. K. (1991). Job satisfaction: Dispositional and situational influences. *International Review of Industrial and Organizational Psychology*, *6*, 359–383.

Aziri, B. (2011). Job satisfaction: A literature review. *Management Research and Practice*, *3*(4), 77–86.

Babin, B. J., & Boles, J. S. (1996). The effects of perceived co-worker involvement and supervisor support on service provider role stress, performance and job satisfaction. *Journal of Retailing*, *72*(1), 57–75.

Bae, K. B., & Kim, D. (2016). The impact of decoupling of telework on job satisfaction in US federal agencies: Does gender matter? *The American Review of Public Administration*, *46*(3), 356–371.

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309–328.

Bakker, A. B., & Demerouti, E. (2014). Job demands–resources theory. *Wellbeing*.

Bambacas, M., & Patrickson, M. (2008). Interpersonal communication skills that enhance organisational commitment. *Journal of Communication Management*, *12*(1), 51–72.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173.

Barrick, M. R., Mount, M. K., & Li, N. (2013). The theory of purposeful work behavior: The role of personality, higher-order goals, and job characteristics. *Academy of Management Review*, *38*(1), 132–153.

Barry, A. E., Chaney, E. H., Stellefson, M. L., & Chaney, J. D. (2011). So you want to develop a survey: practical recommendations for scale development. American Journal of Health Studies, 26(2).

Bartling, B., Fehr, E., & Schmidt, K. M. (2012). Screening, competition, and job design: Economic origins of good jobs. *The American Economic Review*,*102*(2), 834–864.

Basfirinci, C., & Mitra, A. (2015). A cross cultural investigation of airlines service quality through integration of Servqual and the Kano model. *Journal of Air Transport Management*, *42*, 239–248.

Batura, N., Skordis-Worrall, J., Thapa, R., Basnyat, R., & Morrison, J. (2016). Is the Job Satisfaction Survey a good tool to measure job satisfaction amongst health workers in Nepal? Results of a validation analysis. *BMC Health Services Research*, *16*(1), 308.

Becker, H. S. (1960). Notes on the concept of commitment. *American Journal of Sociology*, *66*(1), 32–40.

Beer, M. (1964). Organizational size and job satisfaction. *Academy of Management Journal*, *7*(1), 34–44.

Beham, B., Baierl, A., & Poelmans, S. (2015). Managerial telework allowance decisions–a vignette study among German managers. *The International Journal of Human Resource Management*, *26*(11), 1385–1406.

Belovski, V. (2014). Employment contract for teleworking-working off the employer's premises. *Balkan Social Science Review*, *2*, 101–121.

Bentley, T. A., Teo, S. T. T., McLeod, L., Tan, F., Bosua, R., & Gloet, M. (2016). The role of organisational support in teleworker wellbeing: A socio-technical systems approach. *Applied Ergonomics*, *52*, 207–215.

Berg, J. M., Wrzesniewski, A., & Dutton, J. E. (2010). Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity. *Journal of Organizational Behavior*, *31*(2-3), 158–186.

Bettencourt, L. A., & Brown, S. W. (1997). Contact employees: Relationships among workplace fairness, job satisfaction and prosocial service behaviors. *Journal of Retailing*, *73*(1), 39–61. Beyth-Marom, R., Harpaz-Gorodeisky, G., Bar-Haim, A., & Godder, E. (2006). Identification, job satisfaction and work motivation among tutors at the Open University of Israel. *International Review of Research in Open and Distance Learning*, *7*(2), 1–13.

Beyth-Marom, R., Harpaz-Gorodeisky, G., Bar-Haim, A., & Godder, E. (2006). Identification, Job Satisfaction and Work Motivation among Tutors at the Open University of Israel. International review of Research in Open and Distance Learning, 7(2), 1-13.

Bezuidenhout, A. (2013). The changing role of the ODL academic: An auto-ethnographical account. *Progressio*, *35*(2), 19–33.

Bezuidenhout, A. (2015). Implications for academic workload of the changing role of distance educators. *Distance Education*, *36*(2), 246-262.

Birkinshaw, J., & Gibson, C. (2004). Building ambidexterity into an organization. *MIT Sloan Management Review*, *45*(4), 47.

Blood, M. R. (1969). Work values and job satisfaction. *Journal of Applied Psychology*, *53*(6), 456.

Boell, S. K., Campbell, J. A., Ćećez-Kecmanović, D., & Cheng, J. E. (2013). Advantages, challenges and contradictions of the transformative nature of telework: a review of the literature. In *Hyper connected World: Anything, Anywhere, Anytime: Proceedings of the 19th Americas Conference on Information Systems, 15-17 August, Chicago, Illinois, USA*.

Boell, S. K., Cecez-Kecmanovic, D., & Campbell, J. (2016). Telework paradoxes and practices: the importance of the nature of work. *New Technology, Work and Employment*,*31*(2), 114–131.

Boell, S.K., Cecez-Kecmanovic, D., & Campbell, J. (2014). Telework and the Nature of Work: An Assessment of Different Aspects of Work and the Role of Technology. *ECIS*.

Böll, S., Cecez-Kecmanovic, D., & Campbell, J. (2014). Telework and the nature of work: An assessment of different aspects of work and the role of technology.

Bolliger, D. U., & Des Armier, D. (2013). Active learning in the online environment: The integration of student-generated audio files. *Active Learning in Higher Education*, *14*(3), 201–211.

Boonzaier, B., Ficker, B., & Rust, B. (2001). A review of research on the Job Characteristics Model and the attendant job diagnostic survey. *South African Journal of Business Management*, *32*(1).

Bozeman, B., & Gaughan, M. (2011). Job satisfaction among university faculty: Individual, work, and institutional determinants. *The Journal of Higher Education*, *82*(2), 154–186.

Bratton, J., & Gold, J. (2012). *Human resource management: Theory and practice*. Basingstoke, UK: Palgrave Macmillan.

Brewster, C., Carey, L., Grobler, P., Holland, P., & Warnich, S. (2008). *Contemporary issues in human resource management: Gaining a competitive advantage*. Cape Town: Oxford University Press.

Brown, S. P., & Peterson, R. A. (1993). Antecedents and consequences of salesperson job satisfaction: Meta-analysis and assessment of causal effects. *Journal of Marketing Research*, *30*(1), 63.

Bruck, C. S., Allen, T. D., & Spector, P. E. (2002). The relation between work–family conflict and job satisfaction: A finer-grained analysis. *Journal of Vocational Behavior*, *60*(3), 336–353

Buchanan, B. (1974). Building organizational commitment: The socialization of managers in work organizations. *Administrative Science Quarterly*, 533–546.

Buitendach, J. H., & Rothmann, S. (2009). The validation of the Minnesota Job Satisfaction Questionnaire in selected organisations in South Africa. *SA Journal of Human Resource Management*, 7(1).

Buttigieg, S. C., & West, M. A. (2013). Senior management leadership, social support, job design and stressor-to-strain relationships in hospital practice. *Journal of Health Organization and Management*, 27(2), 171–192.

Byars, L. L., & Rue, L. W. (2011). *Human resource management* (10th ed.). New York, NY: McGraw-Hill.

Caillier, J. G. (2014). Do role clarity and job satisfaction mediate the relationship between telework and work effort? *International Journal of Public Administration*, *37*(4), 193–201.

Calvo, A. J. (2013). Where's the remote? Face time, remote work, and implications for performance management. *Cornel HR Review*.

Camilleri, E. (2006). Towards developing an organisational commitment-public service motivation model for the Maltese public service employees. *Public Policy and Administration*, *21*(1), 63–83.

Campion, M. A., & Thayer, P. W. (1985). Development and field evaluation of an interdisciplinary measure of job design. *Journal of Applied Psychology*, *70*(1), 29.

Casey, R. J., & Robbins, J. (2010). The Hackman and Oldham job characteristics model: Implications from four industries. *International Journal of Business and Public Administration*,*7*(2), 76–90.

Challenger, R., Leach, D. J., Stride, C. B., & Clegg, C. W. (2012). A new model of job design: Initial evidence and implications for future research. *Human Factors and Ergonomics in Manufacturing & Service Industries*, *22*(3), 197–212.

Champoux, J. E. (1991). A multivariate test of the job characteristics theory of work motivation. *Journal of Organizational Behavior*, *12*(5), 431–446.

Chen, C. Y., Yen, C. H., & Tsai, F. C. (2014). Job crafting and job engagement: The mediating role of person-job fit. *International Journal of Hospitality Management*, *37*, 21–28.

Chen, G., Ployhart, R. E., Thomas, H. C., Anderson, N., & Bliese, P. D. (2011). The power of momentum: A new model of dynamic relationships between job satisfaction change and turnover intentions. *Academy of Management Journal*, *54*(1), 159–181.

Choi, S. P. P., Cheung, K. I. N., & Pang, S. M. C. (2013). Attributes of nursing work environment as predictors of registered nurses' job satisfaction and intention to leave. *Journal of Nursing Management*, *21*(3), 429–439.

Christen, M., Iyer, G., & Soberman, D. (2006). Job satisfaction, job performance, and effort: A re-examination using agency theory. *Journal of Marketing*, *70*(1), 137–150.

Chu, H. C., & Kuo, T. Y. (2015). Testing Herzberg's two-factor theory in educational settings in Taiwan. *The Journal of Human Resource and Adult Learning, 11*(1), 54–65.

Cleave, S. (1993). A test of the job characteristics model with administrative positions in physical education and sport. *Journal of Sport Management*, *7*(3), 228–242.

Clegg, C., & Spencer, C. (2007). A circular and dynamic model of the process of job design. *Journal of Occupational and Organizational Psychology*, *80*(2), 321–339.

Cleveland-Innes, M., Stenbom, S., & Hrastinski, S. (2014). *The influence of emotion on cognitive presence in a case of online math coaching*. The 8th EDEN Research Workshop, 27-28 October 2014, Oxford UK, 87–94.

Coetzee, M., Schreuder, A. M. G., & Tladinyane, R. (2007). Organisational commitment and its relation to career anchors. *Southern African Business Review*, *11*(1), 65–86.

Cohen, A. (1999). Relationships among five forms of commitment: An empirical assessment. *Journal of Organizational Behavior*, 285–308.

Cohen, A. (2000). The relationship between commitment forms and work outcomes: A comparison of three models. *Human Relations*, *53*(3), 387–417.

Cohen, A. (2007). Commitment before and after: An evaluation and reconceptualization of organizational commitment. *Human Resource Management Review*, *17*(3), 336–354.

Colbert, A., Yee, N., & George, G. (2016). The digital workforce and the workplace of the future. *Academy of Management Journal*, *59*(3), 731–739.

Collins, A. M., Cartwright, S., & Hislop, D. (2013). Homeworking: Negotiating the psychological contract. *Human Resource Management Journal*, *23*(2), 211–225.

Collins, A. M., Hislop, D., & Cartwright, S. (2016). Social support in the workplace between teleworkers, office-based colleagues and supervisors. *New Technology, Work and Employment*, *31*(2), 161–175.

Cook, J., & Wall, T. (1980). New work attitude measures of trust, organizational commitment and personal need non-fulfilment. *Journal of Occupational and Organizational Psychology*, *53*(1), 39–52.

Crawford-Ferre, H. G., & Wiest, L. R. (2012). Effective online instruction in higher education. *Quarterly Review of Distance Education*, *13*(1), 11.

Creswell, J. W. (2014). A concise introduction to mixed methods research. United States of America: Sage Publications. ISNB 978-1-4833-5904-5

Cropanzano, R., Dasborough, M. T., & Weiss, H. M. (2017). Affective events and the development of leader-member exchange. *Academy of Management Review*, *42*(2), 233–258.

Culbertson, M. J. (2013). A Crash Course in Factor Analysis.

Cullinane, S. J., Bosak, J., Flood, P. C., & Demerouti, E. (2014). Job design under lean manufacturing and the quality of working life: a job demands and resources perspective. *The International Journal of Human Resource Management*, *25*(21), 2996–3015.

Currivan, D. B. (1999). The causal order of job satisfaction and organizational commitment in models of employee turnover. *Human Resource Management Review*, *9*(4), 495–524.

Curry, J. P., Wakefield, D. S., Price, J. L., & Mueller, C. W. (1986). On the causal ordering of job satisfaction and organizational commitment. *Academy of Management Journal*, *29*(4), 847–858.

Dahlstrom, T. R. (2013). Telecommuting and leadership style. *Public Personnel Management*, 0091026013495731.

Davis, L. E., Canter, R. R., & Hoffman, J. (1955). Current job design criteria. *Journal of Industrial Engineering*, *6*(2), 5–11.

Dawson-Howard, H., Standen, P. P., & Omari, M. (2013). *Telework: The role of social support*. 27th Australian and New Zealand Academy of Management Conference 2013: Managing on the Edge, 4–6 December, Hobart, Tasmania. Australian and New Zealand Academy of Management.

De Beer, L. T., Tims, M., & Bakker, A. B. (2016). Job crafting and its impact on work engagement and job satisfaction in mining and manufacturing. South African Journal of Economic and Management Sciences, 19(3), 400-412.

DeCarlo, L. T. (1997). On the meaning and use of kurtosis. Psychological methods, 2(3), 292.

Dede, C. (1996). The evolution of distance education: Emerging technologies and distributed learning. *American Journal of Distance Education*, *10*(2), 4–36.

De Jong, J. P., Parker, S. K., Wennekers, S., & Wu, C. H. (2015). Entrepreneurial behavior in organizations: does job design matter? *Entrepreneurship Theory and Practice*, *39*(4), 981–995.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499.

De Metz, N, & Bezuidenhout A. (2018). An importance–competence analysis of the roles and competencies of e-tutors at an open distance learning institution.

Australasian Journal of Educational Technology, 0. doi:https://doi.org/10.14742/ajet.3364

Deng, X., Joshi, K. D., & Li, Y. (2015, January). *Introduction to the Social Media and Enterprise Minitrack: Job and work design issues.* System Sciences (HICSS), 2015 48th Hawaii International Conference on (pp. 1818-1818). IEEE.

De Spiegelaere, S., Van Gyes, G., Vandekerckhove, S., & Hootegem, G. V. (2012). Job design and innovative work behavior: enabling innovation through active or low-strain jobs? Available at SSRN 2158618.

DeVaney, S. A., & Chen, Z. (2003). Job satisfaction of recent graduates in financial services. Retrieved from https://www.bls.gov/opub/cwc/cm20030522ar01p1.htm

DeVaro, J., Li, R., & Brookshire, D. (2007). Analysing the job characteristics model: New support from a cross-section of establishments. *The International Journal of Human Resource Management*, *18*(6), 986–1003.

De Vries, H., Tummers, L., & Bekkers, V. (2018). The benefits of teleworking in the public sector: Reality or rhetoric? *Review of Public Personnel Administration*, 0734371X18760124.

Dirani, K. M., & Kuchinke, K. P. (2011). Job satisfaction and organizational commitment: validating the Arabic satisfaction and commitment questionnaire (ASCQ), testing the correlations, and investigating the effects of demographic variables in the Lebanese banking sector. *The International Journal of Human Resource Management*, *22*(05), 1180–1202.

Döckel, A., Basson, J. S., & Coetzee, M. (2006). The effect of retention factors on organisational commitment: An investigation of high technology employees. *SA Journal of Human Resource Management*, *4*(2).

Doest, L., & Jonge, J. (2006). Testing causal models of job characteristics and employee well-being: A replication study using cross-lagged structural equation modelling. *Journal of Occupational and Organizational Psychology*, *79*(3), 499–507

Doest, L. T., Maes, S., Gebhardt, W. A., &Koelewijn, H. (2006). Personal goal facilitation through work: Implications for employee satisfaction and well-being. *Applied Psychology*, *55*(2), 192–219.

Donovan, D., & Wright, A. (2013). Teleworking: An examination of the Irish dichotomy. *International Journal of Business and Social Research*, *3*(3), 18–31.

Duncan, I., Miller, A., & Jiang, S. (2012). A taxonomy of virtual worlds usage in education. *British Journal of Educational Technology*, *43*(6), 949–964.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. San Diego, CA: Harcourt Brace Jovanovich College Publishers.

Eagly, A. H., & Chaiken, S. (1995). Attitude strength, attitude structure, and resistance to change. *Attitude Strength: Antecedents and Consequences*, *4*, 413–432.

Edwards, J. R., Scully, J. A., & Brtek, M. D. (1999). The measurement of work: Hierarchical representation of the Multimethod Job Design Questionnaire. *Personnel Psychology*, *52*(2), 305–334.

Ewen, R. B. (1964). Some determinants of job satisfaction: A study of the generality of Herzberg's theory. *Journal of Applied Psychology*, *48*(3), 161.

Fabry, D. L. (2012). Using student online course evaluations to inform pedagogy. *Journal of Research in Innovative Teaching*, *5*(1), 45–52.

Farrell, D., & Rusbult, C. E. (1981). Exchange variables as predictors of job satisfaction, job commitment, and turnover: The impact of rewards, costs, alternatives, and investments. *Organizational Behavior and Human Performance*, *28*(1), 78–95.

Fernández-Rodríguez, J. C., Muñoz, F. M., & Rainer, J. J. (2014). eLearning, TIC and the new teaching. *Pensee*, *76*(12).

Ferris, K. R., & Aranya, N. (1983). A comparison of two organizational commitment scales. *Personnel Psychology, 36*(1), 87–98.

Field, A. (2009). *Discovering statistics using SPSS*. Sage publications.

Finch, D., & Jacobs, K. (2012, September). Online education: Best practices to promote learning. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting,56*(1), 546–550. SAGE Publications.

Fleishman, E. A., Quaintance, M. K., & Broedling, L. A. (1984). *Taxonomies of human performance: The description of human tasks*. Academic Press.

Fonner, K. L., & Roloff, M. E. (2010). Why teleworkers are more satisfied with their jobs than are office-based workers: When less contact is beneficial. *Journal of Applied Communication Research*, *38*(4), 336–361.

Fonner, K. L., & Stache, L. C. (2012). All in a day's work, at home: Teleworkers' management of micro role transitions and the work–home boundary. *New Technology, Work and Employment*, *27*(3), 242–257.

Foss, N. J., Minbaeva, D. B., Pedersen, T., & Reinholt, M. (2009). Encouraging knowledge sharing among employees: How job design matters. *Human Resource Management*, *48*(6), 871–893.

Friedlander, F., & Brown, L. D. (1974). Organization Development. *Annual Review of Psychology*, *25*, 313.

Gajendran, R. S., Harrison, D. A., & Delaney-Klinger, K. (2015). Are telecommuters remotely good citizens? Unpacking telecommuting's effects on performance via i-deals and job resources. *Personnel Psychology*, *68*(2), 353–393.

Gantt, H. L. (1919). *Organizing for work*. Harcourt, Brace and Howe.

Geldenhuys, M., Laba, K., & Venter, C. M. (2014). Meaningful work, work engagement and organisational commitment. *SA Journal of Industrial Psychology*, *40*(1), 01–10.

Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, *47*(2), 209–226.

Gibson, C. B., & Gibbs, J. L. (2006). Unpacking the concept of virtuality: The effects of geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. *Administrative Science Quarterly*, *51*(3), 451–495.

Gibson, C. B., Gibbs, J. L., Stanko, T. L., Tesluk, P., & Cohen, S. G. (2011). Including the "I" in virtuality and modern job design: Extending the job characteristics model to include the moderating effect of individual experiences of electronic dependence and copresence. *Organization Science*, *22*(6), 1481–1499.

Goffin, R. D., & Gellatly, I. R. (2001). A multi-rater assessment of organizational commitment: are self-report measures biased?. *Journal of Organizational Behavior*, *22*(4), 437–451.

Goštautaitė, B., & Bučiūnienė, I. (2010). Integrating job characteristics model into the person-environment fit framework. *Economics & Management*, 505–511.

Grant, A. M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, *32*(2), 393–417.

Grant, A. M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, *93*(1), 108.

Grant, A. M., Campbell, E. M., Chen, G., Cottone, K., Lapedis, D., & Lee, K. (2007). Impact and the art of motivation maintenance: The effects of contact with beneficiaries on persistence behavior. *Organizational Behavior and Human Decision Processes*, *103*(1), 53–67.

Grant, A. M., Fried, Y., Parker, S. K., & Frese, M. (2010). Putting job design in context: Introduction to the special issue. *Journal of Organizational Behavior*, *31*(2-3), 145–157.

Grant, A. M., & Parker, S. K. (2009). 7 redesigning work design theories: the rise of relational and proactive perspectives. *The Academy of Management Annals*, *3*(1), 317–375.

Grobler, P. A., Warnich, S., Carrell, M. R., Elbert, N. F., & Hatfield, R. D. (2006). *Human resource management in South Africa.* Cornwall: Thomson Learning.

Gutierrez, A. P., Candela, L. L., & Carver, L. (2012). The structural relationships between organizational commitment, global job satisfaction, developmental experiences, work values, organizational support, and person-organization fit among nursing faculty. *Journal of Advanced Nursing*, *68*(7), 1601–1614.

Hackett, R. D., Lapierre, L. M., & Hausdorf, P. A. (2001). Understanding the links between work commitment constructs. *Journal of Vocational Behavior*, *58*(3), 392–413.

Hackman, J. R. (2009). The perils of positivity. *Journal of Organizational Behavior*, *30*(2), 309–319.

Hackman, J. R., & Lawler, E. E. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology*, *55*(3), 259.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, *60*(2), 159.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, *16*(2), 250–279.

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison Wesley.

Hancer, M., & George, R. T. (2003). Job satisfaction of restaurant employees: An empirical investigation using the Minnesota Satisfaction Questionnaire. *Journal of Hospitality & Tourism Research*, *27*(1), 85–100.

Hansen, D. E. (2008). Knowledge transfer in online learning environments. *Journal of Marketing Education*.

Hautz, S. C., Gerken, J., Swolinsky, J., & Hautz, W. E. (2015). A blended-learning format to support peer tutors. *Medical Education*, *49*(11), 1158–1159.

Hernaus, T., & Pološki Vokic, N. (2014). Work design for different generational cohorts: Determining common and idiosyncratic job characteristics. *Journal of Organizational Change Management*, *27*(4), 615–641.

Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work*. New York: Wiley.

Herzberg, F., Snyderman, B. B., & Mausner, B. (1966). *The motivation to work* (2nd ed.). New York: Wiley.

Hill, E. J., Ferris, M., & Märtinson, V. (2003). Does it matter where you work? A comparison of how three work venues (traditional office, virtual office, and home office) influence aspects of work and personal/family life. *Journal of Vocational Behavior*, *63*(2), 220–241.

Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, *21*(5), 967–988.

Hirschfeld, R. R. (2000). Does revising the intrinsic and extrinsic subscales of the Minnesota Satisfaction Questionnaire short form make a difference? *Educational and Psychological Measurement*, *60*(2), 255–270.

Hlosta, M., Herrmannova, D., Vachova, L., Kuzilek, J., Zdrahal, Z., & Wolff, A. (2014). *Modelling student online behaviour in a virtual learning environment*. Workshop: Machine Learning and Learning Analytics at Learning Analytics and Knowledge (LAK), Indianapolis

Hof, M. (2012). *Questionnaire evaluation with factor analysis and Cronbach's alpha: An example.* Seminar in Methodology and Statistics, Facultiet der Letteren.

Holman, D. (2013). Job types and job quality in Europe. *Human Relations*, *66*(4), 475–502.

Holman, D., Totterdell, P., Axtell, C., Stride, C., Port, R., Svensson, R., & Zibarras, L. (2012). Job design and the employee innovation process: The mediating role of learning strategies. *Journal of Business and Psychology*,*27*(2), 177–191.

Hornung, S., Rousseau, D. M., Glaser, J., Angerer, P., & Weigl, M. (2010). Beyond top-down and bottom-up work redesign: Customizing job content through idiosyncratic deals. *Journal of Organizational Behavior*, *31*(2-3), 187–215.

Howell, R. T., Pchelin, P., & Iyer, R. (2012). The preference for experiences over possessions: Measurement and construct validation of the Experiential Buying Tendency Scale. The Journal of Positive Psychology, 7(1), 57-71.

Hrebiniak, L. G., & Alutto, J. A. (1972). Personal and role-related factors in the development of organizational commitment. *Administrative Science Quarterly*, 555–573.

Hulin, C. L., & Blood, M. R. (1968). Job enlargement, individual differences, and worker responses. *Psychological Bulletin*, *69*(1), 41.

Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: a meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, *92*(5), 1332.

Hunton, J. E., & Strand Norman, C. (2015). Retraction: The impact of alternative telework arrangements on organizational commitment: Insights from a longitudinal field experiment. *Journal of Information Systems*, *29*(2), 231–231.

Hurst, D., Cleveland-Innes, M., Hawranik, P., & Gauvreau, S. (2013). Online graduate student identity and professional skills development. *The Canadian Journal of Higher Education*, *43*(3), 36.

Hynes, M. (2014). Telework isn't working: A policy review. *The Economic and Social Review*, *45*(4), Winter, 579–602.

Ilgen, D. R., & Hollenbeck, J. R. (1991). The structure of work: Job design and roles. *Handbook of Industrial and Organizational Psychology*, *2*, 165–207.

Ironson, G. H., Smith, P. C., Brannick, M. T., Gibson, W. M., & Paul, K. B. (1989). Construction of a Job in General scale: A comparison of global, composite, and specific measures. *Journal of Applied Psychology*, *74*(2), 193.

Islam, A. N. (2014). Sources of satisfaction and dissatisfaction with a learning management system in post-adoption stage: A critical incident technique approach. *Computers in Human Behavior*, *30*, 249–261.

Jackson, P. R., Wall, T. D., Martin, R., & Davids, K. (1993). New measures of job control, cognitive demand, and production responsibility. *Journal of Applied Psychology*, *78*(5), 753.

Jain, R., & Kaur, S. (2014). Impact of work environment on job satisfaction. *International Journal of Scientific and Research Publications*, *4*(1), 1–8.

Jaros, S. (2007). Meyer and Allen model of organizational commitment: Measurement issues. *The Icfai Journal of Organizational Behavior*, *6*(4), 7–25.

Jessen, J. T. (2015). Job satisfaction and social rewards in the social services. *Journal of Comparative Social Work*, *5*(1).

Johari, J., Yahya, K. K., & Omar, A. (2011). The construct validity of organizational structure scale: Evidence from Malaysia. World, 3(2), 131-152

Johns, G. (2010). Some unintended consequences of job design. *Journal of Organizational Behavior*, *31*(2-3), 361–369.

Johnson, J. (2004). Flexible working: changing the manager's role. *Management Decision*, *42*(6), 721–737.

Judge, T. A., Bono, J. E., & Locke, E. A. (2000). Personality and job satisfaction: the mediating role of job characteristics. *Journal of Applied Psychology*, *85*(2), 237.

Judge, T. A., & Hulin, C. L. (1993). Job satisfaction as a reflection of disposition: A multiple source causal analysis. *Organizational Behavior and Human Decision Processes*, *56*(3), 388–421.

Judge, T. A., Hulin, C. L., & Dalal, R. S. (2012). Job satisfaction and job affect. In S. W. J. Kozlowski (Ed.), *Oxford library of psychology. The Oxford handbook of organizational psychology,* Vol. 1, pp. 496-525). New York, NY, US: Oxford University Press.

Kain, J., & Jex, S. (2010). Karasek's (1979). Job demands-control model: A summary of current issues and recommendations for future research. In *New developments in theoretical and conceptual approaches to job stress* (pp. 237–268). Emerald Group Publishing Limited: Bingley.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, *39*(1), 31–36.

Kalleberg, A. L. (1977). Work values and job rewards: A theory of job satisfaction. *American Sociological Review*, 124–143.

Kano, N. (1984). Attractive quality and must-be quality. *Hinshitsu: Quality, The Journal of Japanese Society for Quality Control*,*14*, 39–48.

Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 285–308.

Karasek's (1979) job demands-control model: A summary of current issues and recommendations for future research. In New developments in theoretical and conceptual approaches to job stress (pp. 237-268). Emerald Group Publishing Limited.

Katzell, R. A. (1964). Personal values, job satisfaction, and job behavior. In H. Borrow (Ed.), *Man in a world of work* (pp. 341–363). Boston, MA: Houghton Mifflin.

Kaur, K., & Sandhu, H. S. (2010). Career stage effect on organizational commitment: Empirical evidence from Indian banking industry. *International Journal of Business and Management*, *5*(12), 141.

Kelly, M. W., Sanford, E., & Grosberg, R. K. (2012, January). Limited potential for adaptation to climate change in a broadly distributed marine crustacean. In *Proc. R. Soc. B,279*(1727), 349–356. The Royal Society.

Khalid, S., Irshad, M. Z., & Mahmood, B. (2012). Job satisfaction among academic staff: A comparative analysis between public and private sector universities of Punjab, Pakistan. *International Journal of Business and Management*, *7*(1), 126.

Kline, T. J. (1999). The team player inventory: Reliability and validity of a measure of predisposition toward organizational team-working environments. *Journal for specialists in Group Work*, *24*(1), 102–112.

Knafl, G. J., & Grey, M. (2007). Factor analysis model evaluation through likelihood cross-validation. Statistical methods in medical research, 16(2), 77-102.

Koch, J. L., & Steers, R. M. (1978). Job attachment, satisfaction, and turnover among public sector employees. *Journal of Vocational Behavior*, *12*(1), 119–128.

Konradt, U., Hertel, G., & Schmook, R. (2003). Quality of management by objectives, task-related stressors, and non-task-related stressors as predictors of stress and job satisfaction among teleworkers. *European Journal of Work and Organizational Psychology*, *12*(1), 61–79.

Kooij, D. T., Tims, M., & Kanfer, R. (2015). Successful aging at work: The role of job crafting. In *Aging workers and the employee-employer relationship* (pp. 145–161). New York: Springer International.

Kop, R., Fournier, H., & Mak, J. S. F. (2011). A pedagogy of abundance or a pedagogy to support human beings? Participant support on massive open online courses. *The International Review of Research in Open and Distributed Learning*, *12*(7), 74–93.

Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. Personnel psychology, 49(1), 1-49.

Kumar, R. (2011). Research Methodology-A Step-by-Step Guide for Beginners. London EC1Y1SP, UK: Sage Publications.

Lange, T. (2012). Job satisfaction and self-employment: autonomy or personality? *Small Business Economics*, *38*(2), 165–177.

Larsen, K. R., & McInerney, C. R. (2002). Preparing to work in the virtual organization. *Information & Management*, *39*(6), 445–456.

Lavy, S., & Littman-Ovadia, H. (2016). My better self: Using strengths at work and work productivity, organizational citizenship behavior, and satisfaction. *Journal of Career Development*. doi:0894845316634056.

Law, K. S., & Wong, C. S. (1999). Multidimensional constructs in structural equation analysis: An illustration using the job perception and job satisfaction constructs. *Journal of Management*, *25*(2), 143–160.

Lawler, E. E., & Hall, D. T. (1970). Relationship of job characteristics to job involvement, satisfaction, and intrinsic motivation. Journal of Applied psychology, 54(4), 305.

Lawler, E. E., & Porter, L. W. (1967). The effect of performance on job satisfaction. Industrial relations: A journal of Economy and Society, 7(1), 20-28

Lazaroiu, G. (2015). Work motivation and organizational behavior. *Contemporary Readings in Law and Social Justice*, *7*(2), 66.

Le, H., Robbins, S. B., & Westrick, P. (2014). Predicting student enrollment and persistence in college STEM fields using an expanded PE fit framework: A large-scale multilevel study. *Journal of Applied Psychology*, *99*(5), 915.

Leana, C., Appelbaum, E., & Shevchuk, I. (2009). Work process and quality of care in early childhood education: The role of job crafting. *Academy of Management Journal*, *52*(6), 1169–1192.

Lee, K., Allen, N. J., Meyer, J. P., & Rhee, K. Y. (2001). The three-component model of organisational commitment: An application to South Korea. *Applied Psychology*, *50*(4), 596–614.

Leedy, P. D., & Ormrod, J. E. (2013). The nature and tools of research. Practical research: Planning and design, 1, 1-26.

Leong, S. M., Randall, D. M., & Cote, J. A. (1994). Exploring the organizational commitment – Performance linkage in marketing: A study of life insurance salespeople. *Journal of Business Research*, *29*(1), 57–63.

Leopold, J., & Harris, L. (2009). *The strategic managing of human resources*. Harlow, UK: Pearson Education.

Leslie, L. M., Manchester, C. F., Park, T. Y., & Mehng, S. A. (2012). Flexible work practices: A source of career premiums or penalties? *Academy of Management Journal*, *55*(6), 1407–1428.

Lévy-Garboua, L., Montmarquette, C., & Simonnet, V. (2007). Job satisfaction and quits. *Labour Economics*, *14*(2), 251–268.

Li, W. D., Zhang, Z., Song, Z., & Arvey, R. D. (2016). It is also in our nature: Genetic influences on work characteristics and in explaining their relationships with well-being. *Journal of Organizational Behavior*.

Li, W. E. I. (2013). Learning assistants' functions and effects: All-round tutoring in online learning community. *International Journal of Engineering Research and Development*, *6*(7), 1–5.

Ligthelm, A. A., Martins, J. H., & Van Wyk, H. D. J. (2005). *Marketing research in practice* (pp. 1–749). Pretoria: Unisa Press.

Limbu, Y. B., Jayachandran, C., & Babin, B. J. (2014). Does information and communication technology improve job satisfaction? The moderating role of sales technology orientation. *Industrial Marketing Management*, *43*(7), 1236–1245.

Lindsay, C. A., Marks, E., & Gorlow, L. (1967). The Herzberg Theory: a critique and reformulation. Journal of Applied Psychology, 51(4, Pt.1), 330–339. http://dx.doi.org/10.1037/h0024868

Locke, E. A. (1969). What is job satisfaction? *Organizational Behavior and Human Performance*, *4*(4), 309–336.

Locke, E. A. (1996). Motivation through conscious goal setting. *Applied and Preventive Psychology*, *5*(2), 117–124.

Lofquist, L. H., & Dawis, R. V. (1969). Adjustment to work: A psychological view of man's problems in a work-oriented society. New York: Appleton-Century-Crofts.

Lumley, E. J., Coetzee, M., Tladinyane, R., & Ferreira, N. (2011). Exploring the job satisfaction and organisational commitment of employees in the information technology environment. *Southern African Business Review*, *15*(1).

Lunenburg, F. C. (2011). Motivating by enriching jobs to make them more interesting and challenging. *International Journal of Management, Business, and Administration*, *15*(1), 1–11.

Lurey, J. S., & Raisinghani, M. S. (2001). An empirical study of best practices in virtual teams. *Information & Management*,*38*(8), 523–544.

Mabunda, P. L. (2010). Information and communication technologies for teaching and learning: Challenges and implications for ODL universities. *Progressio*, *32*(2), 222–244.

Maher, A. (2013, January). Remote employment: Advantages and challenges for Egypt's Labor Force (After the 25thJanuary Revolution). In *Proceedings of World Academy of Science, Engineering and Technology* (No. 78, p. 1197). World Academy of Science, Engineering and Technology (WASET).

Manetje, O., & Martins, N. (2009). The relationship between organisational culture and organisational commitment. *Southern African Business Review*, *13*(1), 87–111.

Maree, K. (2016). First steps in research. Hatfield, Pretoria: Van Schaik Publishers. ISBN 978 0 627 033698.

Marinova, S. V., Peng, C., Lorinkova, N., Van Dyne, L., & Chiaburu, D. (2015). Change-oriented behavior: A meta-analysis of individual and job design predictors. *Journal of Vocational Behavior*, *88*, 104–120.

Mark, S., Philip, L., & Adrian, T. (2009). *Research methods for business students*. Harlow, UK: Prentice Hall.

Marsh, R. M., & Mannari, H. (1977). Organizational commitment and turnover: A prediction study. *Administrative Science Quarterly*, 57–75.

Martin, A., & Roodt, G. (2008). Perceptions of organisational commitment, job satisfaction and turnover intentions in a post-merger South African tertiary institution. *SA Journal of Industrial Psychology*, *34*(1), 23–31.

Martin, S., Diaz, G., Sancristobal, E., Gil, R., Castro, M., & Peire, J. (2011). New technology trends in education: Seven years of forecasts and convergence. *Computers & Education*, *57*(3), 1893–1906.

Martins, H., & Proença, T. (2012). Minnesota Satisfaction Questionnaire–Psychometric properties and validation in a population of Portuguese hospital workers. FEP Journal–Economics & Management: Working Paper, 471(1).

Martins, L. L., Gilson, L. L., & Maynard, M. T. (2004). Virtual teams: What do we know and where do we go from here? *Journal of Management*, *30*(6), 805–835.

Maslow, A. H. (1970). New introduction: Religions, values, and peak-experiences. Journal of Transpersonal Psychology,2(2), 83-90

Masuda, A. D., Poelmans, S. A., Allen, T. D., Spector, P. E., Lapierre, L. M., Cooper, C. L., ... & Lu, L. (2012). Flexible work arrangements availability and their relationship with work-to-family conflict, job satisfaction, and turnover intentions: A comparison of three country clusters. *Applied Psychology*, *61*(1), 1–29.

Mathews, B. P., & Shepherd, J. L. (2002). Dimensionality of Cook and Wall's (1980) British organizational commitment scale revisited. *Journal of Occupational and Organizational Psychology*, *75*(3), 369–375.

Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, *108*(2), 171.

Maylor, H., & Blackmon, K. (2005). *Researching business and management: A roadmap for success*. Basingstoke: Palgrave Macmillan.

McDonald, D. J., & Makin, P. J. (2000). The psychological contract, organisational commitment and job satisfaction of temporary staff. *Leadership & Organization Development Journal*, *21*(2), 84–91.

McGee, G. W., & Ford, R. C. (1987). Two (or more?) dimensions of organizational commitment: Re-examination of the affective and continuance commitment scales. *Journal of Applied Psychology*, *72*(4), 638.

Meyer, J. P., & Allen, N. J. (1984). Testing the" side-bet theory" of organizational commitment: Some methodological considerations. *Journal of Applied Psychology*, *69*(3), 372.

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, *61*(1), 20–52.

Montes, S. D., Rousseau, D. M., & Tomprou, M. (2015). Psychological Contract Theory. In *Wiley Encyclopedia of Management*. Wiley.

Moorman, R. H., Niehoff, B. P., & Organ, D. W. (1993). Treating employees fairly and organizational citizenship behavior: Sorting the effects of job satisfaction, organizational commitment, and procedural justice. *Employee Responsibilities and Rights Journal*, *6*(3), 209–225.

Morganson, V. J., Major, D. A., Oborn, K. L., Verive, J. M., & Heelan, M. P. (2010). Comparing telework locations and traditional work arrangements: Differences in work-life balance support, job satisfaction, and inclusion. *Journal of Managerial Psychology*, *25*(6), 578–595.

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, *91*(6), 1321.

Morrow, P. C. (1983). Concept redundancy in organizational research: The case of work commitment. *Academy of Management Review*, *8*(3), 486–500.

Morrow, P. C. (2011). Managing organizational commitment: Insights from longitudinal research. *Journal of Vocational Behavior*, *79*(1), 18–35.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, *14*(2), 224–247.

Myers, M. P., & Schiltz, P. M. (2012). Use of Elluminate in online teaching of statistics in the health sciences. *Journal of Research in Innovative Teaching*, *5*(1), 53–62.

Nagar, K. (2012). Organizational commitment and job satisfaction among teachers during times of burnout. Vikalpa,37(2), 43-60.

Nel, M. W., Gerber, P. D., Van Dyk, P. S., Haasbroek, G. D., Schultz, H. B., & Sono, T. W. A 2001. *Human resources management*. Cape Town: Oxford University Press.

Ng, C. F. (2006). Academics telecommuting in open and distance education universities: Issues, challenges and opportunities. *The International Review of Research in Open and Distributed Learning*, *7*(2).

Nicholson, N. (2010). The design of work—an evolutionary perspective. *Journal of Organizational Behavior*, *31*(2-3), 422–431.

Nickson, D., & Siddons, S. (2012). *Remote Working*. London: Routledge.

Nilles, J.M., Carlson F., R., Jr., Gray, P., Hanneman, G.J. (1976). The Telecommunications-Transportation Trade off: Options for Tomorrow. New York, USA: John Wiley and Sons. ISBN:047101507A

Nurmi, N., & Hinds, P. J. (2016). Job complexity and learning opportunities: A silver lining in the design of global virtual work. *Journal of International Business Studies*.

O'Driscoll, M. P., & Randall, D. M. (1999). Perceived organisational support, satisfaction with rewards, and employee job involvement and organisational commitment. *Applied Psychology*, *48*(2), 197–209.

Olafsen, A. H., Halvari, H., Forest, J., & Deci, E. L. (2015). Show them the money? The role of pay, managerial need support, and justice in a self-determination theory model of intrinsic work motivation. *Scandinavian Journal of Psychology*, *56*(4), 447–457.

Oldham, G. R., & Fried, Y. (2016). Job design research and theory: Past, present and future. *Organizational Behavior and Human Decision Processes*,*136*, 20–35.

Oldham, G. R., & Hackman, J. R. (2010). Not what it was and not what it will be: The future of job design research. *Journal of Organizational Behavior*, *31*(2-3), 463–479.

O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *The Academy of Management Perspectives*, *27*(4), 324–338.

Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive load theory and instructional design: Recent developments. *Educational Psychologist*, *38*(1), 1–4.

Pallant, J. (2011). Non-parametric statistics. SPSS survival manual, 4th edn. Allen & Unwin, Crows Nest, 213-238.

Pallant, J. (2011). SPSS Survival manual: a step by step guide to data analysis using SPSS. Crows Nest. New South Wales: Allen & Unwin.

Parker, S. (2000). From passive to proactive motivation: The importance of flexible role orientations and role breadth self-efficacy. *Applied Psychology*, *49*(3), 447–469.

Parker, S. K. (2014). Beyond motivation: Job and work design for development, health, ambidexterity, and more. *Annual Review of Psychology*,*65*, 661–691.

Parker, S. K., Wall, T. D., & Cordery, J. L. (2001). Future work design research and practice: Towards an elaborated model of work design. *Journal of Occupational and Organizational Psychology*, *74*(4), 413–440.

Peng, Y., & Mao, C. (2015). The impact of person–job fit on job satisfaction: the mediator role of Self efficacy. *Social Indicators Research*, *121*(3), 805–813.

Peschke, J. (2014). Where is the teacher in online learning: Centre stage or cameo appearance? *Challenges for Research into Open & Distance Learning*.

Peters, P., & Batenburg, R. (2015). Telework adoption and formalisation in organisations from a knowledge transfer perspective. *International Journal of Work Innovation*, *1*(3), 251–270.

Peters, P., Poutsma, E., Van der Heijden, B. I., Bakker, A. B., & Bruijn, T. D. (2014). Enjoying new ways to work: An HRM-process approach to study flow. *Human Resource Management*, *53*(2), 271–290.

Petrou, P., Demerouti, E., Peeters, M. C., Schaufeli, W. B., & Hetland, J. (2012). Crafting a job on a daily basis: Contextual correlates and the link to work engagement. *Journal of Organizational Behavior*, *33*(8), 1120–1141.

Phipps, D. L., Malley, C., & Ashcroft, D. M. (2012). Job characteristics and safety climate: the role of effort-reward and demand-control-support models. *Journal of Occupational Health Psychology*, *17*(3), 279.

Pinho, C. J., Rodrigues, P. A., & Dibb, S. (2014). The role of corporate culture, market orientation and organisational commitment in organisational performance: the case of non-profit organisations. *Journal of Management Development*,*33*(4), 374–398.

Pousette, A., & Hanse, J. J. (2002). Job characteristics as predictors of ill-health and sickness absenteeism in different occupational types: A multigroup structural equation modelling approach. *Work & Stress*, *16*(3), 229–250.

Powell, D. M., & Meyer, J. P. (2004). Side-bet theory and the three-component model of organizational commitment. *Journal of Vocational Behavior*, *65*(1), 157–177.

Quinn, F. F., & Thorne, D. M. (2014). The influence of organizational effectiveness and other correlates on the job satisfaction of staff employees at four year institutions of higher education. *Business Studies Journal*, *6*.

Radebe, P. Q., & Dhurup, M. (2014). The relationship between job satisfaction, intention to stay, and organisational citizenship behaviour among employees

in a provincial sport and recreation government department: sport administration. *African Journal for Physical Health Education, Recreation and Dance: Health, physical activity and sport in South Africa: issues and challenges: Supplement 2*(20), 282–295.

Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization science*, *20*(4), 685–695.

Ramdhani, A., Ramdhani, M. A., & Ainissyifa, H. (2017). Conceptual framework of corporate culture influenced on employees' commitment to organization. *International Business Management*, *11*(3), 826–830.

Ranasinghe, S., & Fonseka, M. (2011). *Research in management: A guide to practice*. Postgraduate Institute of Management, University of Sri Jayewardenepura.

Randall, D. M., & Cote, J. A. (1991). Interrelationships of work commitment constructs. *Work and Occupations*, *18*(2), 194–211.

Raub, S. P. (2016). Perceived Insider Status and Job Design Predict Job Attitudes and Work Performance of Restaurant Employees. *Journal of Hospitality & Tourism Research*. doi:1096348016654974

Reed, K., Goolsby, J. R., & Johnston, M. K. (2016). Extracting meaning and relevance from work: The potential connection between the listening environment and employee's organizational identification and commitment. *International Journal of Business Communication*, *53*(3), 326–342.

Ritzer, G., & Trice, H. M. (1969). An empirical study of Howard Becker's side-bet theory. *Social Forces, 475–478.*

Roberts, K. H., & Glick, W. (1981). The job characteristics approach to task design: A critical review. *Journal of Applied Psychology*, *66*(2), 193.

Roethlisberger, F. J., & Dickson, W. J. (1964). *Management and the worker: An account of a research program conducted by the Western Electric Company, Hawthorne Works, Chicago*. FJ Roethlisberger and William J. Dickson, with the assistance and collaboration of Harold A. Wrigh*t*. Harvard Univ. Press.

Rose, S., Spinks, N., & Canhoto, A. I. (2015). Tests for the assumption that a variable is normally distributed. Management research: Applying the principles.

Rothmann, S., & Jordaan, G. M. E. (2006). Job demands, job resources and work engagement of academic staff in South African higher education institutions. *SA Journal of Industrial Psychology*, *32*(4), 87–96.

Rounds, J. B., Dawis, R., & Lofquist, L. H. (1987). Measurement of person-environment fit and prediction of satisfaction in the theory of work adjustment. *Journal of Vocational Behavior*, *31*(3), 297–318.

Rousseau, D. M. (1977). Technological differences in job characteristics, employee satisfaction, and motivation: A synthesis of job design research and sociotechnical systems theory. *Organizational Behavior and Human Performance*, *19*(1), 18–42.

Rousseau, D. M. (2001). The idiosyncratic deal: flexibility versus fairness? *Organizational Dynamics*, *29*(4), 260–273.

Rousseau, D. M. (2005). *I-deals, idiosyncratic deals employees bargain for themselves*. New York: ME Sharpe.

Saari, L. M., & Judge, T. A. (2004). Employee attitudes and job satisfaction. *Human Resource Management*, *43*(4), 395–407.

Saeed, K., & Farooqi, Y. A. (2014). Examining the relationship between work life balance, job stress, and job satisfaction among university teachers (A case of University of Gujarat). *International Journal of Multidisciplinary Sciences and Engineering*, *5*(6), 9–14.

Saunders, M. N. (2011). *Research methods for business students* (5th ed.). India: Pearson Education.

Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research methods for business students* (3rd ed.). New York: Prentice Hall.

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Pearson education.

Scarpello, V., & Campbell, J. P. (1983). Job satisfaction: Are all the parts there?. *Personnel psychology*, *36*(3), 577–600.

Schaffer, R. H. (1953). Job satisfaction as related to need satisfaction in work. Psychological Monographs: General and Applied, 67(14), 1.

Schwartz, D. A. (2012). Effectiveness of learning in online versus on-campus accounting classes: A comparative analysis. *Journal of Research in Innovative Teaching*, *5*(1), 63–77.

Seashore, S. E., & Taber, T. D. (1975). Job satisfaction indicators and their correlates. *The American Behavioral Scientist*, *18*(3), 333.

Shafer, A., Dazzi, F., & Ventura, J. (2017). Factor structure of the Brief Psychiatric Rating Scale–Expanded (BPRS-E) in a large hospitalized sample. *Journal of Psychiatric Research*.

Shah, R., & Ward, P. T. (2007). Defining and developing measures of lean production. *Journal of Operations Management*, *25*(4), 785–805.

Shantz, A., Alfes, K., Truss, C., & Soane, E. (2013). The role of employee engagement in the relationship between job design and task performance, citizenship and deviant behaviours. *The International Journal of Human Resource Management*, *24*(13), 2608–2627.

Shekarchizadeh, A., Ghasemi, L., Tadi, M. J., Soltani, A., & Nili, M. (2015). Teleworking and Its Impact on institutional Control in Organizations. *Sains Humanika*, *5*(2).

Simons, J. C., & Buitendach, J. H. (2013). Psychological capital, work engagement and organisational commitment amongst call centre employees in South Africa. *SA Journal of Industrial Psychology*, *39*(2), 1–12.

Sistek-Chandler, C. (2012). Connecting the digital dots with social media and web 2.0 technologies. *Journal of Research in Innovative Teaching, 5*(1), 78.

Slattery, J. P., Selvarajan, T. T., Anderson, J. E., & Sardessai, R. (2010). Relationship between job characteristics and attitudes: A study of temporary employees. *Journal of Applied Social Psychology*, *40*(6), 1539-1565.

Sloan, L. (2015). *Effective supervision: Teacher perceptions regarding the influence of feedback on job satisfaction and career decisions* (Doctoral dissertation, California State University, Northridge).

Smit, P. J., Cronje, G. D. J., Brevis, T., & Vrba, M. J. (Eds.). (2011). *Management principles: A contemporary edition for Africa*. Cape Town: Juta.

Smith, M. J., & Sainfort, P. C. (1989). A balance theory of job design for stress reduction. *International Journal of Industrial Ergonomics*, *4*(1), 67–79.

Smith, T. W. (2007). Job satisfaction in the United States. Chicago, IL: University of Chicago, National Opinion Research Center.

Solinger, O. N., Van Olffen, W., & Roe, R. A. (2008). Beyond the three-component model of organizational commitment. *Journal of Applied Psychology*, *93*(1), 70.

Somers, M. J. (1995). Organizational commitment, turnover and absenteeism: An examination of direct and interaction effects. *Journal of Organizational Behavior, 16*(1), 49–58.

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology, 13*(6), 693–713.

Spector, P. E. (1992). *Summated rating scale construction: An introduction* (No. 82). California: Sage.

Spiegelaere, S., Gyes, G., & Hootegem, G. (2016). Not all autonomy is the same. Different dimensions of job autonomy and their relation to work engagement & innovative work behavior. *Human Factors and Ergonomics in Manufacturing & Service Industries, 26*(4), 515–527.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*(5), 1442–1465.

Stander, M. W., & Rothmann, S. (2008). The relationship between leadership, job satisfaction and organisational commitment: empirical research. *SA Journal of Human Resource Management, 6*(3), 7–13.

Steers, R. M. (1977). Antecedents and outcomes of organizational commitment. *Administrative Science Quarterly*, 46–56.

Strauss, W., & Howe, N. (1991). Generation Z.

Stredwick, J., & Ellis, S. (1998). *Flexible working practices: techniques and innovations*. CIPD Publishing.

Subramanya, S. R. (2012). Enhancing digital educational content consumption experience. *Journal of Research in Innovative Teaching, 5*(10), 106.

Taber, T. D., & Taylor, E. (1990). A review and evaluation of the psychometric properties of the Job Diagnostic Survey. *Personnel Psychology, 43*(3), 467–500.

Taródy, D. (2016). Organizational ambidexterity as a new research paradigm in strategic management. *Vezetéstudomány/Budapest Management Review, 47*(5), 39–52.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53.

Taylor, F. W. (1914). *The principles of scientific management*. New York: Harper.

Taylor, J. (2014). Public service motivation, relational job design, and job satisfaction in local government. *Public Administration*, *92*(4), 902–918.

Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: path analyses based on meta-analytic findings. *Personnel Psychology*, *46*(2), 259–293.

Theorell, T., & Karasek, R. A. (1996). Current issues relating to psychosocial job strain and cardiovascular disease research. *Journal of Occupational Health Psychology*, *1*(1), 9.

Theron, A. (2006). Attitudes and values. *Psychology in the Work Context*, 173–187.

Thomas, L., Herbert, J., & Teras, M. (2014). A sense of belonging to enhance participation, success and retention in online programs. *The International Journal of the First Year in Higher Education*, *5*(2), 69.

Thompson, B. (2014). Faculty satisfaction in an online learning environment: A Caribbean university perspective. *Challenges for Research into Open & Distance Learning*.

Thompson, E. R., & Phua, F. T. (2012). A brief index of affective job satisfaction. *Group & Organization Management*, *37*(3), 275–307.

Tims, M., Derks, D., & Bakker, A. B. (2016). Job crafting and its relationships with person–job fit and meaningfulness: A three-wave study. *Journal of Vocational Behavior*, *92*, 44–53.

Tong, C., Tak, W. I. W., & Wong, A. (2015). The impact of knowledge sharing on the relationship between organizational culture and job satisfaction: The perception of information communication and technology (ICT) practitioners in Hong Kong. International Journal of Human Resource Studies, 5(1), 19-47.

Tooksoon, H. M. P. (2011). Conceptual framework on the relationship between human resource management practices, job satisfaction, and turnover. *Journal of Economic and Behavior Studies*, *2*, 41–49.

Trist, E. (1981). *The evolution of socio-technical systems* (Occasional paper2). Toronto: Ontario Quality of Working Life Centre.

Trist, E. L., & Bamforth, K. W. (1951). Some social and psychological consequences of the Longwall method. *Human Relations*, *4*(3), 3–38.

Troup, C., & Rose, J. (2012). Working from home: Do formal or informal telework arrangements provide better work–family outcomes? *Community, Work & Family*, *15*(4), 471–486.

Truxillo, D. M., Cadiz, D. M., Rineer, J. R., Zaniboni, S., & Fraccaroli, F. (2012). A lifespan perspective on job design: Fitting the job and the worker to promote job satisfaction, engagement, and performance. *Organizational Psychology Review*, *2*(4), 340–360.

Turner, A. N., & Lawrence, P. R. (1965). *Industrial jobs and the worker: An investigation of response to task attributes*. Harvard University, Division of Research, Graduate School of Business Administration.

Turney, C. S. M., Robinson, D., Lee, M., & Soutar, A. (2009). Using technology to direct learning in higher education: The way forward?. Active Learning in Higher Education, 10(1), 71-83.

Tustin, D. H. (2014). Telecommuting academics within an open distance education environment of South Africa: More content, productive, and healthy? *The International Review of Research in Open and Distributed Learning*, *15*(3).

Uma, S., & Roger, B. (2003). Research methods for business: A skill building approach. Chichester, UK: Wiley.

Unisa. 2012 Guidelines for conducting research involving Unisa staff, students or data. http://head.unisa.ac.za/filearchive/guidelines_Research%20Involving_UNISA staff.pdf

Unwin, A. (2013). Discovering Statistics Using R by Andy Field, Jeremy Miles, Zoë Field. *International Statistical Review*, *81*(1), 169-170.

Van Dyk, J., & Coetzee, M. (2012). Retention factors in relation to organisational commitment in medical and information technology services. *SA Journal of Human Resource Management*, *10*(2).

Van Saane, N., Sluiter, J. K., Verbeek, J. H. A. M., & Frings-Dresen, M. H. W. (2003). Reliability and validity of instruments measuring job satisfaction: A systematic review. *Occupational Medicine*, *53*(3), 191–200.

Van Schalkwyk, S., Du Toit, D. H., Bothma, A. S., & Rothmann, S. (2010). Job insecurity, leadership empowerment behaviour, employee engagement and intention to leave in a petrochemical laboratory. *SA Journal of Human Resource Management*, *8*(1).

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 425–478.

Wall, T. D., Jackson, P. R., Mullarkey, S., & Parker, S. K. (1996). The demands—control model of job strain: A more specific test. *journal of Occupational and Organizational Psychology*, *69*(2), 153–166.

Walsh, K., & Gordon, J. R. (2008). Creating an individual work identity. *Human Resource Management Review*, *18*(1), 46–61.

Wanous, J. P., & Lawler, E. E. (1972). Measurement and meaning of job satisfaction. *Journal of Applied Psychology*, *56*(2), 95.

Wanous, J. P., Reichers, A. E., & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology*, *82*(2), 247.

Waters, K. A. (2015). Teleworking in higher education: What managers should know before developing teleworking policies. *College and University*, *90*(3), 28.

Wegman, L. A., Hoffman, B. J., Carter, N. T., Twenge, J. M., & Guenole, N. (2016). Placing job characteristics in context: cross-temporal meta-analysis of changes in job characteristics since 1975. *Journal of Management*, *44*(1), 352–386.

Weiss, D. J., Dawis, R. V., & England, G. W. (1967). Manual for the Minnesota Satisfaction Questionnaire. *Minnesota Studies in Vocational Rehabilitation*.

Weiss, H. M. (2002). Deconstructing job satisfaction: Separating evaluations, beliefs and affective experiences. *Human Resource Management Review*, *12*(2), 173–194.

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw, & L. L. Cummings (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews* (pp. 1–74). Greenwich, CT: JAI Press.

Weiss, H. M., Nicholas, J. P., & Daus, C. S. (1999). An examination of the joint effects of affective experiences and job beliefs on job satisfaction and variations in affective experiences over time. Organizational behavior and human decision processes, 78(1), 1-24.

Welman, C., Kruger, F., & Mitchell, B. (2005). Research methodology (pp. 35-40). Cape Town: Oxford University Press

Wheatley, D. (2012). Good to be home? Time-use and satisfaction levels among home-based teleworkers. *New Technology, Work and Employment*, *27*(3), 224–241.

Wiener, Y. (1982). Commitment in organizations: A normative view. *Academy of Management Review*, *7*(3), 418–428.

Wilkin, C. L. (2013). I can't get no job satisfaction: Meta-analysis comparing permanent and contingent workers. *Journal of Organizational Behavior*, *34*(1), 47–64.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*,*17*(3), 601–617.

Witting, M. (2006). *Relations between organizational identity, identification and organizational objectives: An empirical study in municipalities* (Master's thesis). University of Twente.

Wong, A., & Tong, C. (2014). Evaluation of organizational commitment models and their components in Asian cities. *International Journal of Human Resource Studies*, *4*(2), 66–96.

Wood, S., Van Veldhoven, M., Croon, M., & de Menezes, L. M. (2012). Enriched job design, high involvement management and organizational performance: The mediating roles of job satisfaction and well-being. *Human Relations*, *65*(4), 419–445.

Wright, B. E., Christensen, R. K., & Pandey, S. K. (2013). Measuring public service motivation: Exploring the equivalence of existing global measures. *International Public Management Journal*, *16*(2), 197–223.

Wright, T. A. (2006). The emergence of job satisfaction in organizational behavior: A historical overview of the dawn of job attitude research. *Journal of Management History*, *12*(3), 262–277.

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, *26*(2), 179–201.

Wrzesniewski, A., LoBuglio, N., Dutton, J. E., & Berg, J. M. (2013). Job crafting and cultivating positive meaning and identity in work. *Advances in Positive Organizational Psychology*, *1*(1), 281–302.

Wuensch, K. L. (2011). Skewness, kurtosis, and the normal curve in Karl Wuensch's Statistical Lesson.doi: http://core. ecu. edu/psyc/wuenschk/docs30/Skew-Kurt. doc.

Ye, L. R. (2012). Telecommuting: Implementation for success. *International Journal of Business and Social Science*, *3*(15).

Yusoff, W. F. W., Kian, T. S., & Idris, M. T. M. (2013). Herzberg's two-factor theory on work motivation: Does its work for today's environment? *Global Journal of Commerce and Management*, *2*(5), 18–22.

Zaniboni, S., Truxillo, D. M., & Fraccaroli, F. (2013). Differential effects of task variety and skill variety on burnout and turnover intentions for older and younger workers. European Journal of Work and Organizational Psychology,22(3), 306-317.

Zhang, Y. L., & Bi, R. F. (2017). Studying on enhancing readers' satisfaction model of electronic service quality in library based on LibQUAL+ and Kano. *Procedia Engineering*, *174*, 260–266.

ADDEXURE A: RESEARCH INSTRUMENT

JOB CHARACTERISTICS PERCEPTIONS, JOB SATISFACTION AND
ORGANISATIONAL COMMITMENT OF E- TUTORS AT A SOUTH AFRICAN ODL
UNIVERSITY

Dear e-tutor

Welcome to the research study

We are interested in understanding the elements of job characteristics perceptions, job satisfaction and organisational
commitment inside the virtual work environment within the open distance learning environment. The study will be used
for the Masters Dissertation and publication by the researchers. Furthermore, the study will benefit the university to
improve implementation of best practices. Please note the following information regarding your participation in this
study:

Confidentiality of information received from you will be highly observed.

Your name will not appear in the research and you cannot be identified in person on the basis of your answers. The
researchers do not foresee any risks or discomforts for you as a participant in this research project. You will not be
required to make any financial contribution to the study.

Your participation in this study is voluntary, and it will only take at least 20 minutes of your time.

You have the right to withdraw at any point during the study, for any reason, and without any prejudice.

You are free to contact the researchers at any time during the research if you have any questions or if you need
more information about this study:

kolamd1@unisa.ac.za   Tel: 012 429 2068
bezuia@unisa.ac.za   Tel: 012 429 3941

In order to indicate that you have read and understand the information given above click either of the two choices:

I consent, begin the study   I do not consent, I do not wish to participate

SECTION A: DEMOGRAPHIC INFORMATION

Q2.   Please indicate your gender:

- o   Male
- o   Female

Q3.   How old are you?

Q4:   Please indicate your highest qualification:

- o   Undergraduate degree
- o   Honours degree

- o Masters
- o Doctorate

Q5.   Please indicate your college:

- o Accounting Sciences
- o Agriculture & Environmental Sciences
- o Economic and Management Sciences
- o Education
- o Graduate Studies
- o Human Sciences
- o Science, Engineering & Technology
- o Law

Q6.   Please indicate your regional centre (where relevant, please mark more than one option):

- o Eastern Cape
- o Gauteng
- o KwaZulu Natal
- o Limpopo
- o Midlands
- o Mpumalanga
- o Western Cape

SECTION B: INSTITUTIONAL & TECHNOLOGICAL SUPPORT

Q8.   Which of the following facilities/resources do you have to access to (where relevant, please mark more than one option):

- o Library Services
- o Course Material (e.g. prescribed book)
- o Unisa e-mail address
- o Temporary staff card

Q9.   Which of the following devices do you have access to (where relevant, please mark more than one   option)?

- o Landline (home) telephone
- o Work telephone
- o Cell phone
- o Personal Computer incl. laptop
- o Work computer/laptop
- o Tablet
- o Photocopying machine/printer

Q10.   How do you connect to the internet (where relevant, please mark more than one option)?

- o Own reliable internet connection (home WiFi/modem)
- o Other reliable internet connection (work/school)
- o Other reliable internet connection (internet café/WiFi hotspots)

Q11.   Please indicate how soon are you typically activated on myUnisa to start facilitation of e-tutorials?

- o First week of the semester
- o Second week of the semester
- o More than two weeks

Q12.   Which of the following student details are you typically provided with (where relevant, mark more than one option)?

- o Group allocation list per semester/year
- o myLife e-mail list
- o Cellphone numbers

SECTION B: EVALUATION OF THE JOB CHARACTERISTICS

Q13.   Use the scale below to indicate whether each statement is an accurate or inaccurate description of your present job as an e-tutor:

	Extremely inaccurate	Inaccurate	Slightly inaccurate	Neither accurate nor inaccurate	Slightly accurate	Accurate	Extremely accurate
I have almost complete responsibility for deciding how and when the work is to be done	○	○	○	○	○	○	○
I have a chance to do a number of different tasks, using a wide variety of different skills and identifiable	○	○	○	○	○	○	○
I do a complete task from start to finish. The results of my efforts are clearly visible and identifiable	○	○	○	○	○	○	○
What I do affect the well-being of other people in very important ways.	○	○	○	○	○	○	○
The manager provides me with constant feedback about how I am doing	○	○	○	○	○	○	○
The work itself provides me with information about how well I am doing	○	○	○	○	○	○	○
I make insignificant contributions to the final product or service	○	○	○	○	○	○	○
I get to use the number of complex skills on this job	○	○	○	○	○	○	○
I have very little freedom in deciding how the work is to be done	○	○	○	○	○	○	○
Just doing the work provides me with the opportunity to figure out how the work is to be done	○	○	○	○	○	○	○
The job is quite simple and repetitive	○	○	○	○	○	○	○
My supervisor or co-worker rarely give me feedback on how well I am doing the job.	○	○	○	○	○	○	○

Q14.   Use the scale below to indicate whether each statement is an accurate or inaccurate description of your present job as an e-tutor:

	Extremely inaccurate	Inaccurate	Slightly inaccurate	Neither accurate nor inaccurate	Slightly accurate	Accurate	Extremely accurate
I have almost complete responsibility for deciding how and when the work is to be done	○	○	○	○	○	○	○
I have a chance to do a number of different tasks, using a wide variety of different skills and identifiable	○	○	○	○	○	○	○
I do a complete task from start to finish. The results of my efforts are clearly visible and identifiable	○	○	○	○	○	○	○
What I do affect the well-being of other people in very important ways.	○	○	○	○	○	○	○
The manager provides me with constant feedback about how I am doing	○	○	○	○	○	○	○
The work itself provides me with information about how well I am doing	○	○	○	○	○	○	○
I make insignificant contributions to the final product or service	○	○	○	○	○	○	○
I get to use the number of complex skills on this job	○	○	○	○	○	○	○
I have very little freedom in deciding how the work is to be done	○	○	○	○	○	○	○
Just doing the work provides me with the opportunity to figure out how the work is to be done	○	○	○	○	○	○	○
The job is quite simple and repetitive	○	○	○	○	○	○	○
My supervisor or co-worker rarely give me feedback on how well I am doing the job.	○	○	○	○	○	○	○

SECTION C: EVALUATION OF JOB SATISFACTION

Q15.   Please indicate your job satisfaction level in terms of the following job component:

	Extremely inaccurate	Inaccurate	Slightly inaccurate	Neither accurate nor inaccurate	Slightly accurate	Accurate	Extremely accurate
Being able to keep busy all the time	○	○	○	○	○	○	○
The chance to work alone on the job	○	○	○	○	○	○	○
The chance to do different things from time to time	○	○	○	○	○	○	○
The chance to be "somebody" in the community	○	○	○	○	○	○	○
The way my boss handles his/her workers	○	○	○	○	○	○	○
The competence of my supervisors in making the decisions	○	○	○	○	○	○	○
Being able to do things that don't go against my conscience	○	○	○	○	○	○	○
The way my job provides for steady employment	○	○	○	○	○	○	○
The chance to do things for other people	○	○	○	○	○	○	○
The chance to tell other people what to do	○	○	○	○	○	○	○

Q16.   Please indicate your job satisfaction level in terms of the following job component:

	Extremely inaccurate	Inaccurate	Slightly inaccurate	Neither accurate nor inaccurate	Slightly accurate	Accurate	Extremely accurate
The chance to do something that make use of my abilities.	○	○	○	○	○	○	○
The way company policies are put in practice	○	○	○	○	○	○	○
My pay and the amount of work that I do	○	○	○	○	○	○	○
The chances for advancement on this job	○	○	○	○	○	○	○
The freedom to use my own judgment	○	○	○	○	○	○	○
The chance to try my own methods of doing the job	○	○	○	○	○	○	○
The working conditions	○	○	○	○	○	○	○
The way co-workers get along with each other	○	○	○	○	○	○	○
The praise I get for doing a good job	○	○	○	○	○	○	○
The feeling of accomplishment	○	○	○	○	○	○	○

SECTION D: EVALUATION OF ORGANISATIONAL COMMITMENT

Q17.   Use the scales below to indicate your level of agreement or disagreement with each statement:

	Extremely inaccurate	Inaccurate	Slightly inaccurate	Neither accurate nor inaccurate	Slightly accurate	Accurate	Extremely accurate
I am very happy being a member of this organization.	○	○	○	○	○	○	○
I enjoy discussing about my organization with people outside it.	○	○	○	○	○	○	○
I really feel as if this organisation's problems are my own.	○	○	○	○	○	○	○
I think that I could easily become as attached to another organization as I am with this one	○	○	○	○	○	○	○
I do not feel like "part of the family" at my organization.	○	○	○	○	○	○	○
This organization has a great deal of meaning to me.	○	○	○	○	○	○	○
Worry about the loss of investment I have made in this organization.	○	○	○	○	○	○	○
If I was not a member of this organization, I would be sad because my life would be disrupted.	○	○	○	○	○	○	○
I am loyal to this organization because I have invested a lot in it, emotionally, socially and economically.	○	○	○	○	○	○	○

Q18.   Use the scales below to indicate your level of agreement or disagreement with each statement:

	Extremely inaccurate	Inaccurate	Slightly inaccurate	Neither accurate nor inaccurate	Slightly accurate	Accurate	Extremely accurate
I often feel anxious about what I have to loose with this organization.	○	○	○	○	○	○	○
Sometimes I worry about what might happen if something was to happen to this organization and I was no longer a member.	○	○	○	○	○	○	○
I am dedicated to this organization because I fear what I have to loose in it.	○	○	○	○	○	○	○

I feel I owe this organization quite a bit for what it has done for me.	○	○	○	○	○	○	○
My organization deserves my loyalty because of its treatment towards me.	○	○	○	○	○	○	○
I feel I would be letting my co-workers down if I wasn't a member of this organization.	○	○	○	○	○	○	○
"I am loyal to this organization because my values are largely its values".	○	○	○	○	○	○	○
"This organization has a mission that I believe in and am committed to".	○	○	○	○	○	○	○
"I feel it is "morally correct" to dedicate myself to this organization".	○	○	○	○	○	○	○

ADDITIONAL COMMENTS

Q19.   Do you have any suggestions on how Unisa can improve the condition of e-tutor system?

Q20.   How long did it take you to complete the questions?

Q21   Which, if any, questions were not clear enough and needed more explanation to answer properly?

Q22.   Which, if any, questions made you feel uneasy about answering?

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RESEARCH PERMISSION SUB-COMMITTEE (RPSC) OF THE SENATE RESEARCH, INNOVATION, POSTGRADUATE DEGREES AND COMMERCIALISATION COMMITTEE (SRIPCC)

19 July 2017

| **Decision: Research Permission Approval from 19 July 2017 until 30 June 2018.** | Ref #: 2017_RPSC_047
Ms. Matumelo Kola
Student #: N/A
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A study titled: "Job characteristics perceptions, job satisfaction and organisational commitment of e-tutors at a South African ODL university."

Your application regarding permission to conduct research involving UNISA employees, students and data in respect of the above study has been received and was considered by the Research Permission Subcommittee (RPSC) of the UNISA Senate , Research, Innovation, Postgraduate Degrees and Commercialisation Committee (SRIPCC) on 17 July 2017.

It is my pleasure to inform you that permission has been granted for the study. You may send a survey to e-tutors through the gatekeeping assistance of ICT.

You are requested to submit a report of the study to the Research Permission Subcommittee (RPSC@unisa.ac.za) within 3 months of completion of the study.

The personal information made available to the researcher(s)/gatekeeper(s) will only be used for the advancement of this research project as indicated and for the purpose as described in this permission letter. The researcher(s)/gatekeeper(s) must take all appropriate precautionary measures to protect the personal information given to him/her/them in good faith and it must not be passed on to third parties. The dissemination of research instruments through the use of electronic mail should strictly be through blind copying, so as to protect the participants' right of privacy. The researcher hereby indemnifies UNISA from any claim or action arising from or due to the researcher's breach of his/her information protection obligations.

Note:

The reference number **2017_RPSC_047** *should be clearly indicated on all forms of communication with the intended research participants and the Research Permission Subcommittee.*

We would like to wish you well in your research undertaking.

Kind regards,

[signature: RVisagie]

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