WORK STRESS, WORK ENGAGEMENT AND SERVICE DELIVERY WITHIN ZIMBABWE'S CHANGING DISTANCE-LEARNING ENVIRONMENT

by

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PROMOTER: PROFESSOR ADELE BEZUIDENHOUT

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DECLARATION

I, Dominic Uzhenyu, student number 55788084, hereby declare that this thesis **entitled, 'Work stress, work engagement and service delivery within Zimbabwe's changing distance-learning environment''** is my own work, and that all the sources that I have used and quoted have been indicated and acknowledged by means of a complete list of references.

I further declare that I submitted the thesis to originality checking software. The result summary is attached.

I further declare that the thesis has not in part or in whole been previously submitted for any other degree or examination at this or any other university.

I further declare that ethical clearance to conduct the research has been obtained from the department of Human Resource Management, University of South Africa. I took great care in ensuring that I adhere to the ethical obligations and principles of research ethics as prescribed by the UNISA Code of Ethics and Conduct, during all phases of the research process.

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ACKNOWLEDGEMENTS

DEDICATION

I dedicate this thesis to Cenciana, Tinashe Dominic Jnr, Tariro Leocardia and Taonanyasha Joseph.

ABSTRACT

WORK STRESS, WORK ENGAGEMENT AND SERVICE DELIVERY WITHIN ZIMBABWE'S CHANGING DISTANCE-LEARNING ENVIRONMENT

by
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This research was conducted from the perspective of a positive human behaviour paradigm in the context of human resource management. It investigated the interrelationships between work stress, work engagement and service delivery of academics in a changing distance-learning environment in Zimbabwe, for which there is a paucity of research. A descriptive, cross-sectional survey design was applied to a sample of 83 academics at the largest distance-learning university, against the background of their ever-changing roles. A sample of 101 students was also included, so that the students provided balanced data for analysis regarding their perception of service delivery by academics. Confirmatory and exploratory analysis revealed a four-construct measurement model for work stress, a three-construct measurement model for work engagement and a four-construct measurement model for service delivery. Correlational analysis and structural equation modelling revealed some significant relationships between these constructs. Tests for significant differences among different groups of academics and students based on socio-demographic variables were revealed and showed some interesting differences among these variables. The t-test did not reveal significant differences in service delivery perceptions between the academics and the students on the dimensions of responsiveness and assurance. The study makes a valuable contribution to the organisational behaviour literature in terms of how work stress and work engagement influence academics' service delivery in a distance-learning university. On a theoretical level, the study did well to expand on available literature

on the constructs of work stress, work engagement and service delivery provided by higher education distance-learning universities. The statistical techniques that were utilised expanded previous empirical studies by studying the interrelationship dynamics andoverall relationship dynamics between work stress, work engagement and service delivery provided by distance-learning universities. On a practical level, this study should bring new knowledge to managers at distance- learning universities by improving their understanding of how academics are affected by increasing, new job demands, which in turn increase their workload. Distance- learning universities thus should adapt their people management practices accordingly. Provision of adequate resources at both individual and organisational levels should be prioritised in order to minimise work stress and improve work engagement, and subsequently service delivery.

KEY TERMS

Academics, changing learning environment, delivery mode, e-learning, higher educational institution, human resource management, open and distance learning, work engagement, work stress, service delivery.

OPSOMMING

WERKSTRES, WERKSBETROKKENHEID EN DIENSLEWERING IN ZIMBABWE SE VERANDERENDE AFSTANDSLEEROMGEWING

deur

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PROMOTOR : Prof Adele Bezuidenhout

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Hierdie navorsing is vanuit die perspektief van 'n positiewe menslike-gedragsparadigma in die konteks van menslikehulpbronbestuur uitgevoer. Dit het die onderlinge verhoudings tussen werkstres, werksbetrokkenheid en dienslewering van akademici in 'n veranderende afstandsleeromgewing in Zimbabwe, waaroor daar 'n gebrek aan navorsing is, ondersoek. 'n Beskrywende, deursnee-ondersoekontwerp is op 'n steekproef van 83 akademici by die grootste afstandsleeruniversiteit, teen die agtergrond van hulle voortdurend veranderende rolle, gedoen. 'n Steekproef van 101 studente is ook ingesluit sodat die studente gebalanseerde data vir ontleding rakende hulle persepsie van dienslewering deur die akademici kon verskaf. Bevestigende en verkenningsontleding het 'n vierkonstruk-metingsmodel vir werkstres, 'n driekonstruk-metingsmodel vir werksbetrokkenheid en 'n vierkonstruk-metingsmodel vir dienslewering aangetoon. Korrrelasie-ontleding en strukturele vergelykingsmodellering het betekenisvolle verhoudings tussen hierdie konstrukte uitgewys. Toetse vir beduidende verskille tussen die verskillende groepe akademici en studente, gegrond op sosio-demografiese veranderlikes, het interessante verskille tussen hierdie veranderlikes aangetoon. Die *t*-toets het nie beduidende verskille ten opsigte van diensleweringspersepsies tussen die akademici en die studente oor die dimensies van gevoeligheid en gerusstelling aangetoon nie. Die studie het 'n waardevolle bydra gelewer tot die literatuur oor organisatoriese gedrag en oor hoe werkstres en werksbetrokkenheid akademici se dienslewering by 'n afstandsleeruniversiteit kan beïnvloed. Op 'n teoretiese vlak het die studie 'n goeie

bydra gelewer tot die beskikbare literatuur wat betref die konsepte van werkstres, werksbetrokkenheid en dienslewering wat deur hoëronderwys-afstandsleeruniversiteite verskaf word. Die statistiese tegnieke wat gebruik is, het voortgebou op vorige empiriese studies deur die onderlingeverhoudingsdinamika en algehele verhoudingsdinamika tussen werkstres, werksbetrokkenheid en dienslewering wat deur afstandsleeruniversiteite verskaf word, te bestudeer. Op 'n praktiese vlak behoort hierdie studie nuwe kennis verskaf aan bestuurders by afstandsleeruniversiteite deur hulle begrip te verbeter van hoe akademici deur toenemende, nuwe eise by die werk, wat op hulle beurt hul werkslading verhoog, beïnvloed word. Afstandsleeruniversiteite moet dus hulle mensebestuurspraktyke ooreenkomstig aanpas. Om voorsiening te maak vir voldoende hulpbronne op individuele sowel as organisatoriese vlakke, moet prioriteit daaraan gegee word om werkstres te verminder en werksbetrokkendheid, en uiteindelik dienslewering, te verbeter.

SLEUTELTERME

Akademici, veranderende leeromgewing, afleweringsmetode, e-leer, hoër onderwysinstelling, menslikehulpbronbestuur, oop- en afstandsleer, werksbetrokkenheid, werkstres, dienslewering

IQOQA

INGCINDEZI YOMSEBENZI, UKUSEBENZA NGOKUZIKHANDLA KANYE NOKUHLINZEKA NGEZINSIZA NGAPHANSI KWESIMO ESIGUQUKAYO SOHLELO LOKUFUNDA UKUDE   E-ZIMBABWE

Ilotshwe ngu
Uzhenyu Dominic

UMQAMBI	:	Prof Adele Bezuidenhout
UMNYANGO	:	Human Resource Management
IZIQU	:	DCom: Business Management

Lolu cwaningo lwenziwa ngokohlelo lomqondo wokuziphatha kahle komuntu, lokhu kwenzeka ngaphansi kohlelo lwezokuphathwa kwabasebenzi. Ucwaningo luye lwaphenya izinhlelo zobudlelwano obuphakathi kwengcindezi yomsebenzi, ukusebenza ngokuzikhandla kanye nokuhlinzeka ngemisebenzi yezifundiswa mayelana nesimo esiguqukayo sohlelo lokufunda ukude eZimbabwe, naphezu kokwentuleka kocwaningo. Idizayini yesaveyi echazayo naleyo yohlobo lwe-*cross-sectional*zasetshenziswa kusampuli yezifundiswa ezingama-83 yezifundiswa enyuvesi enkulu yohlelo lokufunda ukude, phakathi kwezindima zenyuvesi ezihlala ziguquka njalo. Kuye kwafakwa isampuli yabafundi aba 101, ukuze abafundi banikeza uhlaziyo lwedatha elingene mayelana nomqondo wezokuhlinzeka ngezinsiza wezifundiswa. Izinhlelo zokuhlaziya eziqinisekisayo kanye nalezo ezihlolayo ziye zaveza imodeli elinganisayo yokwakha embaxa-zinne, okuyimodeli yokuhlinzeka ngezinsiza. Izinhlelo zokuhlaziya, phecelezi (correlation analysis) kanye nohlelo lokumodeli, phecelezi, (*i-structural equation*) ziye zaveza ubudlelwano obusemqoka obuphakathi kwalezi zakhiwo. Kuye kwavezwa izinhlelo zokuhlola ezahlukahlukene hlangana namaqembu ahlukahlukene ezifundiswa nabafundi, lokhu kususelwe phezu kwezimpawu zedemogilafi yezenhlalakahle yabantu, kanti lokhu kukhombise umehluko ohehayo hlangana nalezo zimpawu. Uhlelo lokuhlola, phecelezi i(*t*-test) aluzange luveze izimpawu ezehlukile ezimayelana nemiqondo yokuhlinzekwa ngezinsiza phakathi kwezifundiswa kanye nabafundi mayelana

nemikhakha yendlela yokuphendula kanye nokuqinisekisa. Ucwaningo lwenze umsebenzi omkhulu omuhle mayelana nombhalo wokuziphatha kwenhlangano, mayelana nokuthi ingcindezi yomsebenzi kanye nokusebenza ngokuzikhandla kunomthintela muni phezu kokuhlinzeka ngomsebenzi kuzifundiswa enyuvesi yohlelo lokufunda ukude. Ngokwesigaba esiphathekayo, lolu cwaningo kufanele lulethe ulwazi olusha kubaphathi emanyuvesi ohlelo lokufunda ukude ngokuthuthukisa ulwazi lwabo mayelana nokuthi izifundiswa zithinteka kanjani ngokwengeza, izidingo ezintsha zomsebenzi, eziphinde zingeze umthwalo womsebenzi. Wazo. Ngalokho-ke, amanyuvesi ohlelo lokufunda ukude, kufanele ajwayele izingqubo zawo zokuphathwa kwabantu ngendlela efanele. Ukuhlinzekwa ngemithombo eyanele ezigabeni ezimbili, somuntu ngamunye nesigaba senhlangano kufanele kuqalwe ngakho ukuze kuncishiswe ingcindezi yomsebenzi kanye nokuthuthukisa indlela yokusebenza ngokuzikhandla, kanye nangokuhlinzeka ngezinsiza.

AMAGAMA ASEMQOKA

Izifundiswa, isimo sokufunda esiguqukayo, indlela yokuhlinzeka ngezinsiza, uhlelo lwemfundo ye-inthanethi, iziko lemfundo eliphakeme, uhlelo lokuphatha abasebenzi, uhlelo oluvulekile lokufunda ukude, ukusebenza ngokuzikhandla, ingcindezi yomsebenzi, ukuhlinzeka ngezinsiza.

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ABBREVIATIONS

CFA	:	Confirmatory Factor Analysis
e-learning	:	Electronic learning
EU	:	European Union
GZU	:	Great Zimbabwe University
HIT	:	Harare Institute of Technology
HRM	:	Human resource management
JD-R	:	Job Demands Resources
KMO	:	Kaiser Meyer Olkin
LSU	:	Lupane State University
MSU	:	Midlands State University
NIOSH	:	National Institute for Occupational Safety and Health
NUST	:	National University of Science and Technology
ODL	:	Open Distance Learning
P-E	:	Person Environment
RATER	:	Reliability, Assurance, Tangibles, Empathy and Responsiveness
RSMEA	:	Root Mean Square of Approximation
SEM	:	Structural Equation Modelling
SERVQUAL	:	Service quality
SPSS	:	Statistical Package for Social Sciences
STEM	:	Science, Technology, Engineering and Mathematics
SU	:	Solusi University
UNISA	:	University of South Africa
USA	:	United States of America
UWES	:	Ultrecht Work Engagement Scale
UZ	:	University of Zimbabwe
WUA	:	Women University in Africa
WWW	:	World Wide Web
ZAOGA	:	Zimbabwe Assemblies of God Africa
ZOU	:	Zimbabwe Open University

CHAPTER 1: OVERVIEW OF THE SCIENTIFIC RESEARCH

1.1   INTRODUCTION

This chapter gives an overview of the scientific background to the study. It also outlines what the research entailed.   There are changing trends in the work of distance learning academics in open and distance learning (ODL) universities, as ODL, is in the transition phase of moving towards electronic learning (e-learning) delivery mode. The traditional modes of delivery in ODL in Zimbabwe have not yet been phased out, and in this report, the Zimbabwe Open University (ZOU) is the institution that was used to conduct the study. The transition phase has brought additional roles to academics. This has culminated in increased work stress (represented by negative characteristics arising from job demands), work engagement challenges (represented by vigour, dedication and absorption) and less desirable levels of service delivery (represented by service quality and student satisfaction).   The statement of the problem, research aims, research objectives, research questions and hypotheses are outlined. Lastly, the research design and methodology, the ethical considerations that guided the empirical study, and the report outline, are covered in this chapter.

1.2   BACKGROUND AND MOTIVATION TO THE STUDY

Education is concerned primarily with human learning**,** irrespective of where, when and how the learning takes place (Courtney, 2013; Shora, 2012). In ODL, however as opposed to a conventional face-to-face mode of delivery, teaching and learning occurs in a situation in which most or all of the teaching is conducted by a teacher separated in space and time from the learner (Barkhuizen, Rothmann & Vijver, 2014). Simonson, Smaldino, Albright and Zvacek (2012), as well as, Gaskell (2017), define ODL as formal education that is institution based where students are separated from their tutors (academics) but thrives on extensive use of interactive telecommunications systems that connect the learners, tutors and resources. A recent definition by Silverman and Hoyos (2018) treats ODL as instruction that separates students and instructors during the entire period of learning.

ODL has gone through a lot of transformation since the 18th century (Caruth & Caruth, 2013). This transition has brought additional roles to academics and that is increasing their workload (Englund, Olofsson & Price, 2017). This increasing workload in turn, seems to be causing increased work stress and even work engagement problems within ODL academics (Gregory & Lodge, 2015; John, Kenny & Fluck, 2014). These negative work outcomes seem to be contributing to less than desirable levels of service delivery within the university. This may be a result of academics having to do a lot of work under pressure, which reduces their efficiency and effectiveness. For the purpose of this study, the term ''academics'' would be used to refer to all university lecturers (assistants, tenured and senior lecturers), research supervisors, professors, programme leaders, departmental chairpersons and faculty deans. The evolution of ODL as enunciated below, shows that many changes have occurred, culminating in a lot of emerging academic roles.

1.2.1   Evolution of Open distance learning

Open distance learning has a very long history. In 1728, the first well-documented example of a correspondence course was said to have been initiated by a man named Caleb Phillipps, who offered to teach shorthand to students anywhere in America by exchanging letters(Miller, 2014). Significant strides in ODL have been made over the past 180 years (Schlosser & Simonson, 2009). For such a long time, the prevalent model of distance learning has been the use of correspondence especially in institutions of higher education (Shifter, 2000). There is now growing transformation from the correspondence model to the phenomenon of electronic learning (e-learning) (Panda & Mishra, 2007). Correspondence distance education started in Europe. The evolution of distance education can also be understood from the metaphor of generations, which represent major changes also known as models of distance education (Bates, 2014, 2015), as well as, Moore's Transactional Distance theory (Moore, 1993, 2009).

1.2.1.1 Generations of Open distance learning

- **Generation 1**

According to Guglielmo (1998), the period covered 1451 to 1916. This very long period was characterised largely by use of the printing press to produce printed learning material, which was then used through correspondence and the mail delivery system. The content was compiled in the form of letters, books, and images and later improved to filming. There was minimal student-tutor contact. This phase is largely known as the *correspondence model* (Higher Education, 2010).

- **Generation 2**

The period covered 1918 to 1955 (Purdy, 1980). The major developments were the use of correspondence and media, which saw the use of radio and then later, the television. There was use of audio and video tapes complimented by use of the printed learning material. The period is known as the *Multimedia model* (Higher Education, 2010). Learning was still largely student centred with minimal interaction between the student and the tutor (academic).

- **Generation 3**

This period was from 1956 to 1968 (Horton, 2000). This saw a new era in distance learning as characterised by the development of computers. There was improved use of technology that embraced the use of audio-teleconferencing, video-conferencing and audio-graphic communication. This is known as the *Tele-learning model* (Higher Education, 2010). Students began to access the material at their own time of convenience and pace, but still two-way communication was still not efficient between the student and the tutor or institute due to distance.

- **Generation 4**

This period stretched from 1969 to 2005 (Barnett, 2004; Taylor, 1995). This saw improvement in communication by incorporating online group communication such

as chats, forums through interactive multimedia and internet based access to e-resources as collaborative learning took centre stage. This saw advanced use of technology and its known as the *Flexible-learning model* (Higher Education, 2010).

- **Generation 5**

This period started in 2006 and is still the one being used today (Naidu, 2014). This was named the intelligent flexible learning model by Taylor (2001) which has seen phenomenal growth of online education due to extensive use of the internet and the World Wide Web (WWW). Technology is used to record conversations through the use of You-Tube video-sharing websites, teleconferencing and other interaction forms among students and tutors. There is flexibility and adaptability to curriculum demands and learning, viewed as user friendly, unlike older forms of ODL (Haughey, 2010; Tait, 2010). However, this contemporary generation, has brought some complications in the operations of higher education, especially institutions like universities. This has also affected the work roles of academics.

1.2.2   Global patterns in open distance learning

Information and communication technology has become pivotal to enable competitive advantage in enhancing organisational performance in light of the changing world economy. This applies even to distance learning institutions (Baijnath, 2012; Roberts, 2018; Simonson, Smaldino & Zvasek, 2014). Technological innovation has become a key success factor to organisational success and its inadequacy may lead to demise of an organisation (Davies, 2018; Veldsman, 2002). It is important to also know that distance education is based on the 5 generations and usually varies from country to country or region to region (Higher education, 2010). This section focuses on ODL in different economic and geographical settings.

1.2.2.1 Open distance learning in first world countries

Nearly each of the over 4130 colleges and universities in the United States of America and those in the United Kingdom, provide to students some form of distance education (Olcott, 2008). The scenario is almost the same to most European

countries and even in Australia, there has been phenomenal transformation in higher education in which conventional learning has been a dominant force (Lee, 2017; Naidu, 2014).

Boker (2012) identifies the five key forces, which have influenced the operations of international universities. Figure 1.1 shows these drivers or forces that have transformed international higher education.

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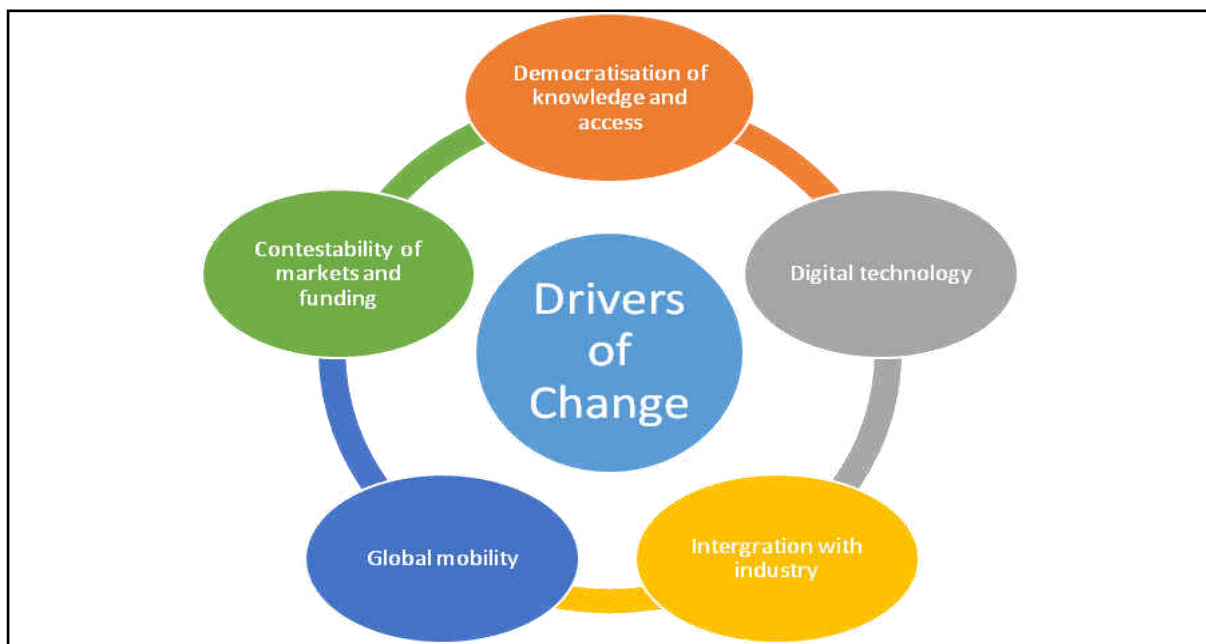
Figure 1.1   Drivers of change(Boker, 2012)

These five drivers suggested by Boker (2012) are explained as follows:

1.   Democratisation of knowledge and access

The widespread increase in attaining online knowledge has enhanced access to university education. This in turn has transformed the work roles of academics.

2.   Contestability of markets and financing

Changes in higher education has brought stiff competition among international universities including the different strategies of funding university education.

5

3.   Digital technologies

This has transformed the operations of universities, as well as, work roles of academics. This has enhanced the rise of online learning.

4.   Global mobility

Thrust for attaining university education has made competition stiffer, thereby, enabling academics to look for greener pastures outside their countries of origin and students seeking education at any institution worldwide due to globalisation.

5.   Integration with industry

Universities need to establish strategic alliances and partner industry and commerce in order to come up with market driven curricular, as well as, establishing synergies to drive innovation and growth.

1.2.2.2   Open distance learning in developing countries

Demand for ODL has been on the increase in Asia. Asia has the largest number of online and distance learning institutions of about 70 (Latchem & Jung, 2010). About 20% of all students in tertiary institutions are enrolled at Indira Gandhi Open University in India (Kang & Song, 2007). China, the largest country in the world has about 10% of university students using the online learning mode (Latchem & Jung, 2010). Use of distance education is increasing the demand for higher education because it has become relatively affordable and accessible.

1.2.2.3   Open distance learning in Africa

Whilst demand for higher education is on the increase in Africa, only about 6% of Africans have access to such education compared to the world average of about 26% (Kokutsi, 2011). The low uptake is largely attributable to major constraints of ODL, which include the shortage of computers, lack of internet access, that is exacerbated by low internet bandwidth and skills shortages. However, in Africa, ODL

is transforming at what seems to be growing workloads of academics. A study conducted in South Africa, revealed that 34% of academics contemplated resigning from their work because of increased workloads causing burnout and job dissatisfaction (Theron, Barkhuizen & Du Plessis, 2013). In addition, academics become work disengaged (Poalses & Bezuidenhout, 2018). It is prudent that higher education institutions providing ODL come up with staff retention strategies for academics to avoid brain drain (Miller, 2016; Ndudzo, 2012).

1.2.2.4 The Zimbabwe higher education scenario and Open distance learning

The Zimbabwean higher education sector is changing drastically, especially over the past decade (Nyenya & Bukaliya, 2015). The number of universities has risen from about seven in 2007 to 13 as of 2016 and in 2019 is likely to reach 22 (Ministry of Higher and Tertiary Education, Science and Technology Development, 2018).

In this study, the focus was on the Zimbabwean ODL context. In Zimbabwe there are 13 conventional state universities namely: the University of Zimbabwe (UZ), National University of Science and Technology (NUST), Midlands State University (MSU), Chinhoyi University of Technology (CUT), Harare Institute of Technology (HIT), Bindura University of Science Education (BUSE), Great Zimbabwe University (GZU), Solusi University (SU), Gwanda State University, Manicaland State University of Applied Sciences, National Defense University, Marondera University of Agricultural Sciences and Technology and Lupane State University (LSU). In addition, there are also four church universities namely, the Africa University (United Methodist), Catholic University (Roman catholic church), Ezekiel Guti University (Zimbabwe Assemblies of God Africa (ZAOGA) and Dutch Reformed University (Dutch reformed church). Finally, there is one independent university, the Women's University of Africa (WUA) (Ministry of Higher and Tertiary Education, Science and Technology Development, 2018).

The ZOU, where this study was conducted, is the largest ODL in Zimbabwe and the only one mandated to do so. However, a number of conventional universities are indirectly making inroads into ODL through opening of different campuses in other towns and through block release programmes. ZOU, which used to serve many of

these students who were largely adults and working, has been forced to cast its net wider in light of shrinking enrolment, by targeting also school leavers. Since the government of Zimbabwe ceased to provide students grants in 2010, there has been stiff competition among universities in Zimbabwe as the major thrust has been to target the working class, the domain that used to be the preserve of ZOU. Over the years, distance education has developed and taken different delivery approaches such as, correspondence, broadcasts, podcasts, computers, video conferencing, digital technologies and internet (Conceicao, 2006; Kaplan & Haenlein, 2016). This has redefined the technological and communication competencies required for a contemporary ODL academic (Heydenrych & Prinsloo, 2010).

In Zimbabwe, the ODL challenges are becoming more complex since the new crop of students are relatively younger and unemployed (Musingafi, Mapuranga, Chiwanza & Zebron, 2015). Such students have unique needs, attitudes, expectations and morals. The ODL academic has to embrace two categories of students simultaneously, that is, the young and immature school leaver and the more mature usually employed adult student. The two have different attributes and expectations and that makes the process of knowledge facilitation complicated (Heydenrych & Prinsloo, 2010).

1.2.2.5   Synopsis of environmental challenges in Zimbabwe's higher education

Higher education in Zimbabwe is affected by a plethora of challenges. The economic hardships which are largely due to forex shortages because of an underperforming manufacturing sector (low exports) and a heavy government budget deficit, have largely affected the availability of training resources in universities, which are inadequate (Mhlanga, 2018). Funding is the major problem affecting the maintenance and expansion of existing infrastructure, acquisition of enough computers and staff retention, due to brain drain of highly qualified academics to neighbouring countries like Botswana and South Africa, where conditions of service are much better (Masuku & Muchemwa, 2016; Moyo & Hadebe, 2018, Vutete & Uzhenyu, 2016). Although there seems to be no official statistics on the number of academics who are part of the brain drain band wagon since the new millennium, studies by Gwaradzimba and Shumba (2010), Majoni (2014) including Pride and

Tatenda (2017), reflect a bleak situation of Zimbabwe losing experienced and highly qualified academics to neighbouring countries and abroad.

The Zimbabwean government declared in May 2015, that it planned to wean state universities from public funding (Zulu, 2015) and even to date it remains a topical issue. This change in the funding system would include payment of about 60% of staff salaries by the government and the other 40% would be met by the respective university. This, in turn, is likely to affect staff motivation and their jobs security, as well as, work engagement and service delivery (Ngokwana, 2015).

Zimbabwe has been under economic sanctions since 2001. The United States of America (USA) and the European Union (EU) imposed these sanctions (Ogbonna, 2017, Portela, 2005). The sanctions were imposed in order to improve democracy, promote human rights and enhance the rule of law in Zimbabwe especially after the landmark decision by government to implement land reforms at the end of the last century (Eriksson, 2018;Thomas, 2003). The land reforms culminated in the eviction of about 90% of white commercial farmers from their farms and resettling mainly black (indigenous) farmers on those farms (Stoneman, 2017). To date, these sanctions have literally affected support programmes provided by foreign donors to Zimbabwe's entire educational sector including universities (Ogbonna, 2017).

1.2.2.6   The recent open distance learning academic model

With the advent of the new millennium, Anderson, Rourke, Garrison and Archer (2001) suggested three online roles for academics that should facilitate discourse and direct instruction. These are:

1.   Instructional design and organisation,
2.   Facilitating discourse, and
3.   Direct instructions.

Johnson, Anderson and Saha (2002) suggest that in order to attain meaningful and effective learning outcomes, an academic's presence is based on the design,

facilitation and providing direct instruction of both cognitive and social processes. For synergy, it is also encouraged that all ODL environment participants should also actively be involved in the facilitation responsibilities (Baran, Correia & Thompson, 2011).

A number of authorities have also given different roles of an ODL academic. Goodyear, Salmon, Spector, Steeples and Tickner (2001) state these as designer, process facilitator, content facilitator, technologist, counsellor, assessor, researcher and manager/administrator. Aydin (2005) adds such roles as content expert, instructional designer and materials provider. Bawane and Spector (2009) described an academic as an advisor, researcher, evaluator, administrator and technologist, who should be professional and pedagogical.

1.2.2.7   Recent open distance learning transformation in Zimbabwe

Despite Zimbabwe facing economic challenges that have culminated in the shortage of learning resources, she was rated the most literate nation in Africa (Rosenthal, 2013). This poor economic performance of the government and a lack of sufficient resources at its state universities, are affecting the education delivery system negatively (Majoni, 2014, Uzhenyu, 2017). As a result, government support has decreased and the provision of research grants and students' loans have dwindled since the dollarisation of the economy in 2009 (Chitora, 2010; Zulu, 2015). The dollarisation currency regime came after the Zimbabwean dollar had been heavily depreciated owing to the hyperinflation of 2007. This forced the government to abandon its national currency in favour of the United States Dollar and other stronger currencies.

When the context of the study is considered, ZOU is the only state university providing ODL in Zimbabwe since becoming a fully-fledged university in 2000 (ZOU, 2016). It is found in all ten provinces of the country with each province having a Regional centre. The eleventh one is referred to as the Virtual region that caters mainly for students in other countries and utilises mainly an e-learning delivery mode. Those in Zimbabwe attend face-to-face tutorials in the other ten regional centres. The student population is around 15 000, drawn from five faculties, housing

about 20 departments. The number of full time academic staff is approximately 280 and support staff 600 (ZOU, 2018a`).

In the past, ZOU has largely been using the hard copy (printed) module as the dominant delivery mode, complimented by six hours of classroom tutorials for each course in a semester. ZOU is now in the transition stage of slowly moving away from the printed mode of delivery, towards an e-learning delivery mode, in line with international best practices (Hovenga & Bricknell, 2006) and globalisation. As a result, ZOU's interim plans to combine the contact classes delivery mode and e-learning are now at an advanced stage. This change should contribute to the changing roles and potential increased workload for the academics. The increased workload comes from the slow transition phase from the contact classes' delivery mode to e-learning as academics have to use both modes possibly for a very long time. Increases in workload affect work engagement and cause work stress (Di Biase, 2000; Rennie & Morrison, 2013). It appears as if there were no plans at ZOU to increase the number of academics (ZOU, 2015a). This may most likely have an adverse effect on work engagement and work stress of the ZOU academics. This may in turn adversely affect service delivery to ODL learners (Barkhuizen et al., 2014; Fernet, Austin & Vallerand, 2012; Stedman & Coaldrake, 1999).

1.3   STATEMENT OF THE PROBLEM

The transformation phase in ODL of moving from the traditional modes of delivery of using both the printed modules and contact classes (Phase I and II) to virtual learning (Phase III and IV) at the ZOU (ZOU, 2008), has introduced many changes to the work roles of academics. This transformation has culminated in increased workload as academics have to use both modes of delivery and this is making their jobs more complicated and time consuming. The correspondence mode is taking long to be phased out as minimal progress has been made on e-learning. E-learning is supposed to make ZOU more competitive and to move in tandem with a lot of other ODL universities which have become a force to reckon with.

That transition period at ZOU has taken longer than expected, as progress has been very slow, due to what appears to be a shortage of resources (Ndudzo, 2012; Vutete & Uzhenyu, 2016). A lack of adequate preparation for this change in the mode of

delivery has been observed according to the evaluation report of ZOU's strategic plan (ZOU, 2014). There has not been much proactive training and development of academics for the online environment (communicating and marking assignments on-line). Training opportunities have been delivered mostly to full time academics, yet the full time/part time ratio is 1:3.

A sizeable number of ZOU students live in rural areas (ZOU, 2014). It is also known that the majority of those living in the rural areas do not have access to Internet facilities (Zimbabwe National Statistics Agency (ZNSA), 2013). Ironically, these same students are expected to move towards an e-learning mode of delivery. There has not been much acquisition of adequate computers at the ZOU for both staff and students. In addition, there is also a shortage of computer laboratories and even appropriate software to have fully fledged virtual learning (e-learning facilities). This also confirms that job resources are scarce, showing a very real contextual problem that is putting additional strain on the academics.

It is this transition period where both modes of delivery are being used (class contact and e-learning) which is taking very long at ZOU, due to a perceived lack of resources. This is increasing the academics workload. This is likely to lead to increased work stress levels and decreased work engagement in academics (Gregory & Lodge, 2015; John et al., 2014). Because of the articulated above challenges facing academics in Zimbabwe, they have been frustrated culminating in serious brain drain.

A review of the current literature on the changing roles of academics in ODL universities indicates the following research problems:

(i) Academics in ODL universities perform many administrative work tasks, previously conducted by non-academics (Courtney, 2013; Pickersgill, 1998; Ruth & Sammons, 2007). This could adversely affect service delivery at the ZOU, due to work overload and lack of some administrative skills that could be different from those of teaching.

(ii)   Transition phase from a correspondence to an e-learning mode in ODL, requires new approaches to be used by the academics. However, adequate proactive training and development for academics to acquaint themselves with these approaches may be lacking (Briggs, 2005; Roberts, 2018). This is the same scenario at the ZOU that is likely to affect service delivery, as the transition is not smooth, as well as, not being properly planned and cordinated.

(iii)   Work role over load in ODL academics has been identified as a large number of tasks and commitments within a limited period resulting in unrealistic deadlines and multiple competing priorities for academics (Barkhuizen et al., 2014; Kamuka, 2006). This statement shows that service delivery at ZOU may be compromised and this was even raised in a faculty meeting (ZOU, 2013b).

(iv)   The multiple role expectations involved in online learning may be causing increased stress and decreased work engagement in ODL academics (Briggs, 2005; Mashile, 2014; Moller, 2012). This could also be a strong indicator of the ZOU service delivery, which could be affected due to its academics increased, stress, burnout and decreased work engagement.

(v)   ODL academics in their expected role of being responsible for online course delivery, face many challenges in terms of integrating applicable teaching practice, digital literacy, availability of equipment and effective student support (Berge, 2008; Courtney, 2013; Madikizela-Madiya & Le Roux, 2017). The changes being brought by online courses in the ZOU are adding more roles/duties for academics and may affect service delivery.

(vi)   The workload of academic staff in ODL needs to be reduced to allow time to reflect and pay attention to students and support them academically (Bates & Kaye, 2014). This is true even at the ZOU if service delivery is to improve, since the academics need more time to do research and develop learning materials. Thus, lack of proper service delivery to students at the ZOU

seems to be a combination of job demands (workload) that appear to be unrealistically high and inadequate preparation for implementing e-learning due to what appears to be a shortage of resources.

All of the above concerns point to the fact that changing work roles may affect service delivery by ODL institutions like the ZOU. Academics could be failing to adequately provide student support due to increasing workload and lack of training resources (Chen, 2017; Kurebwa, 2017). This may in turn lead to dissatisfaction among students, as their expectations are not met. Furthermore, what appears to be low quality tuition could culminate in low pass rates. As a result, enrolment figures may decrease and possibly even the ODL institution's (ZOU) reputation and image could suffer (Chadamoyo, 2016). A decrease in enrolment figures could have severe consequences, such as the ZOU collapsing (bankruptcy) due to the likelihood of its inability to break even and sustain its operations. This is against the backdrop of government intending to wean state universities from funding them so that they fend for themselves (Zulu, 2015).

1.3.1 Research questions

From the above problem statement, the following research questions were formulated in terms of the literature review and empirical study respectively.

1.3.1.1 *Research questions relating to the literature review*

A number of research questions were formulated to guide the literature review.

Research question 1
How are the constructs; work stress, work engagement and service delivery in ODL academics conceptualised and explained by theoretical models in the literature?

Sub-question 1.1: What is the theoretical relationship between work stress and service delivery in ODL academics?

Sub-question 1.2: What is the theoretical relationship between work engagement and service delivery in ODL academics?

Sub-question 1.3: What is the theoretical relationship between work stress and work engagement in ODL academics?

Research question 2

How do work stress, work engagement and service delivery of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*) as explained by literature?

Research question 3

Do academics and students have different perceptions on service delivery in ODL as explained by literature?

Research question 4

What evidence can be supported by existing literature that shows that there is close association between work stress, work engagement and service delivery?

1.3.1.2   Research questions relating to the empirical study

A number of research questions were formulated to guide the empirical phase of the study and were addressed.

Research question 1

What is the nature of the interrelationships between work stress, work engagement and service delivery in ODL?

Sub-question 1.1:   Does a relationship exist between work stress and service delivery of ODL academics?

Sub-question 1.2:   Does a relationship exist between work engagement and service delivery of ODL academics?

Sub-question 1.3: Does a relationship exist between work stress and work engagement of ODL academics?

Research question 2

How does work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based onage, gender, educational qualification, job title, administrative position, work experience, employment status, years of learning*) as determined by statistical analysis?

Research question 3

Do academics and students have significant differences in their perceptions of service delivery in ODL?

Research question 4

What are the empirical elements of the framework that manifested from the constructs results and do they have a good fit with the data?

1.3.1.3   Research question integrating the literature review and the empirical study

What recommendations could formulate a framework to redesign the work role (job) of an academic to reduce work stress and improve work engagement in an ODL institution in order to provide effective management of human resources (academics) and service delivery?

1.4   AIMS OF THE RESEARCH

The following aims were formulated based on the above research questions:

1.4.1 General aim

The general aim of this study was to determine how work stress and work engagement (*independent variables*) are affecting ODL service delivery (*dependant variable*) in a changing distance-learning environment (**Quantitative aim**).

1.4.2 Specific aims

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

1.4.2.1   Theoretical aims of the literature review

Four aims of which one had three sub-aims, guided the literature review of this study. These are:

Research aim 1
To conceptualise and explain theoretical models of the constructs: work stress, work engagement and service delivery in ODL academics as explained by literature.

Sub-aim 1.1
To conceptualise the theoretical relationship between work stress and service delivery in ODL academics.

Sub-aim 1.2
To conceptualise the theoretical relationship between work engagement and service delivery in ODL academics.

Sub-aim 1.3
To conceptualise the theoretical relationship between work stress and work engagement in ODL academics.

Research aim 2
To conceptualise how work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

Research aim 3

To conceptualise if academics and students have different perceptions on service delivery in ODL as explained by literature.

Research aim 4
To conceptualise if academics' work stress, work engagement and service delivery have good relationships as explained by literature.

1.4.2.2   In terms of the empirical study, the specific aims were:

Research aim 1
To determine the interrelationships between work stress, work engagement and service delivery in ODL.

Sub-aim 1.1
To determine the relationship between work stress and service delivery in ODL academics.

Sub-aim 1.2
To determine the relationship between work engagement and service delivery in ODL academics.

Sub-aim 1.3
To determine the relationship between work stress and work engagement in ODL academics.

Research aim 2
To determine if work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based on age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

Sub-aim 2.1
To determine if work stress, work engagement and service delivery of academics in the ODL context differ for respective socio-demographic groups (*based on age,*

gender, educational qualification, job title, administrative position, work experience and employment status).

Sub-aim 2.2

To determine if service delivery in the ODL context differ for respective socio-demographic groups of students (*based on age, gender and years of learning*).

Research aim 3

To determine if academics and students have different perceptions on service delivery in ODL.

Research aim 4

To determine if academics' work stress, work engagement and service delivery have a good fit with the data.

1.4.3 Research aim integrating the theoretical aims (literature review) and the empirical study

To recommend a framework of redesigning the work role (job) of an academic that should reduce work stress and improve work engagement in an ODL institution in order to provide effective management of human resources (academics) and service delivery.

1.5 STATEMENT OF SIGNIFICANCE

The concept of ODL is increasingly becoming an area of interest, particularly, in the higher education sector, nationally and internationally. The constructs of work stress (represented by organisational support, overload, job insecurity, relationships, growth and advancement) and work engagement (represented by vigour, dedication and absorption) of ODL academics in this study seem to have an influence on service delivery (represented by reliability, assurance, tangibles, empathy and responsiveness) provided by higher education distance learning universities. This scenario is largely attributable to the ever-changing distance-learning environment.

This research aims to shed more light on the effect of the ever-increasing work roles of ODL academics because of emerging trends in ODL modes of delivery. These changes are largely brought by significant developments in Information Technology (Abdullah, 2015; Berge, 2008). Many studies have focused on work engagement, work stress and burnout with emphasis on individual and group behaviour (organisational behaviour). The studies have not really focused on the resultant effect on every organisation's key stakeholder, the customer, who in this case is the student.

No study particularly in Zimbabwe seems to have been conducted having the three constructs, work stress, work engagement and service delivery in institutions of higher learning. Previous studies have mostly focused on problems/challenges facing the ZOU ODL in general (Chabaya, Chadamoyo & Chiome, 2011; Ndudzo, 2012, Vutete & Uzhenyu, 2016). This study endeavours to determine the perceptions of the students (customers) on service delivery in an ODL institution where the academics work roles are changing, but at the expense of increasing their workload.

Despite previous studies, no integrated research explains the relationship dynamics between work stress, work engagement and service delivery mainly in an ODL University. It was against this background that this research intended to study the relationships between these constructs in the changing Zimbabwean distance-learning environment. This study should be very useful for the theoretical, empirical and practical levels.

1.5.1   Contribution on a theoretical level

This research might lead to better understanding of the constructs of work stress (represented by overload, job insecurity, organisational support, relationships, growth and advancement) and work engagement (represented by vigour, dedication and absorption) of ODL academics on service delivery (represented by reliability, assurance, tangibles, empathy and responsiveness) provided by higher education distance learning universities.

If significant relationships were established, more awareness on how work stress of academics could be managed and how academics work engagement could be enhanced. This could improve service delivery in distance learning universities. Such relationships if established, other researchers could explore possible interventions that would make ODL universities more competitive, as well as, creating a conducive working tempo for academics.

Furthermore, the findings were likely to contribute to the body of knowledge concerned with the salient issues that affect the academic's work performance and contributing to poor service delivery that needed to be addressed.

1.5.2   Contribution on an empirical level

In this case, the results from the actual study might provide useful insight into the empirical interrelationships found between any two of the three constructs (work stress, work engagement and service delivery) as well as between all three. Furthermore, the study would prove whether significant differences exist between groups of academics based on demographical variables namely age, gender, marital status, faculty, job level, educational level, race, administrative position, years of employment and employment status. Should significant relationships be found, then the results should be helpful to ODL institutions particularly senior management and the human resources departments of how the three constructs and demographical variables play a key role in the psychological functioning, as well as, the well-being of the academic.

1.5.3   Contribution on a practical level

On a practical level, the research could establish whether ODL academics are adapting to the changing roles emanating from the transformation taking place in distance learning environment. This would identify if the ODL academics have attained the requisite skills and exposure to effectively execute their roles in order to improve service delivery. The ODL institutions should be able to assess whether they are doing enough to make the academics' work environment conducive to enhance motivation and job satisfaction. This study should bring new knowledge

(epistemology) to senior managers at the ZOU by improving their understanding of how academics are affected by the increasing new job demands, which in turn increase their workload. The increased workload was being executed with inadequate resources. This study should bring to senior management's attention that this scenario is stressful and causes work disengagement. This in turn, adversely affects the academics' work performance and subsequently, service delivery in the institution.

In summary, an improved understanding of these demanding changes of the academic work roles in ODL should assist human resources practitioners even in other ODL institutions, to redesign the academic job roles accordingly. In the case of the ZOU, such knowledge would influence policy makers in the parent Ministry of Higher and Tertiary Education, Science and Technology Development and even rescind their intended decision to wean state universities from government funding (Uzhenyu, 2017; Zulu, 2015). Instead, they should embark on job redesign for the academics' roles through rationalised job descriptions. That should enhance service delivery by improving the quality of learning and teaching in an ODL institution.

The study should also influence the conditions of service of ODL academics by properly committing more resources for the ODL system to be more effective. *This study therefore endeavours to come up with a new operational framework for an ODL academic that addresses work stress, work engagement and service delivery, taking into account the contemporary transition learning phases of ODL.* This should be feasible if the ZOU senior management and other policy makers like in the parent Ministry of Higher and Tertiary Education, Science and Technology Development take on board recommendations made by this study.

1.6   PARADIGM PERSPECTIVES OF THE RESEARCH

A paradigm is a way of describing the different points of view that a researcher can take in his search for explanations (Morgan, 2007; Rosengren, 1989). A paradigm includes the use of accepted theories, principles, models and the methodologies pertaining to a specific perspective. Paradigms are mainly philosophical and neither testable nor meant to be tested (Mouton, 2001). This study was related to the fields

of psychology and organisational behaviour in the domain of human resource management. This section looks at the paradigms from the perspectives of intellectual climate and intellectual resources.

1.6.1 The intellectual climate

The literature review would be based on the humanistic paradigm perspective and for the empirical study; the positivist research paradigm perspective would be used.

1.6.1.1 Literature review

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

a) Behaviourist paradigm

This perspective views people as controlled by their work environment and behave according to what they would have learnt or experienced from that environment (Alameer & Alhussain, 2016). Behaviourism is concerned with the manner in which environmental factors (stimuli) have an effect on observable behaviour (response).

Every human being has certain needs that should be met in order to survive (Kitchin, 2017; Maslow, 1943). If these needs are met, the individual will be able to maintain a certain level of homeostasis (a stable equilibrium between interdependent items or elements especially those maintained by physiological processes). A desire for this homeostasis then drives and motivates that individual, as well as, his actions .The behaviour will continue as long as one enjoys the same level of homeostasis (Heyes, 2012).

According to the behavioural paradigm, there is learned behaviours, which are because of conditioning. An individual can learn something because of working towards or against a specific action. In this study, the behaviourist perspective relates to the construct of work stress and work engagement since the work environment has a strong control or influence on the individual and even groups.

b)   The humanistic paradigm

This paradigm suggests that each individual is responsible for his own happiness and well-being. There is the innate capacity for self-actualisation based on the desire to achieve the highest potential.

The basic assumptions of the humanistic paradigm considered by this study (Balkin, 2014; Meyer, Moore & Viljoen, 1997) are:

- The individual is an integrated complete. This study focuses on sentiments or perceptions of individuals in an organisation (the ZOU) as collective.
- Each individual is a dignified human being. This study respects each participant's (respondent's) opinions and perceptions and considered in during data analysis.
- Human nature is positive. This study is aware that academics and students are hopeful and anticipate favourable outcomes from this study.

  Thematically, this humanistic paradigm relates to all the constructs of this study, namely; work stress, work engagement, as well as, service delivery.

c)   Positivist paradigm

Positivism could be viewed as a philosophical system that recognises only that which can be scientifically verified or based on logical or mathematical proof (Arghode, 2012). Hammersley (2012) states that the positivist research paradigm attempts to explain, clarify, as well as, to predict what really happens in society by searching for causal relationships between the basic components or parts. It is premised on the use of independent of researchers and that knowledge is discovered and verified by making direct observations or measurements of the phenomena (Krauss, 2005). This paradigm also attempts to draw objective conclusions by reducing or minimising errors through statistical data analysis (Bryman, 2012). The empirical study in this research observed this positivist paradigm in the form of being a quantitative study that involved many statistical methods.

1.6.2 Market of intellectual resources

This refers to the grouping of beliefs that have a direct bearing on the validation of scientific statements (Mouton & Marais, 1996; O'Cass & Sok, 2014). The meta-theoretical statements, theoretical models, and the conceptual descriptions relating to the constructs of work stress, work engagement and service delivery are presented.

1.6.2.1 Meta-theoretical statements

Meta-theory means a theory whose matter is centred on another theory (Mouton & Marais, 1996). The meta-theoretical statements denote the important category of assumptions underlying the theories, models and paradigms used in this research (Magno, 2010; Mouton & Marais, 1996). Meta-theoretical statements are presented on the following disciplines:

(a)   Open distance learning (ODL)

This study was undertaken in the context of open distance learning. ODL is a way of learning characterised by physical distance between the learners and the university (Gaskell, 2017; Rumble, 2012). The learner is responsible for his studies by managing study time since it is flexible and its open to anyone who intend to access the educational offer. ODL has increasingly become scientific due to advancement of information technology because a lot of interaction is done through the use of the internet including assessment of students' work. In this study, the ODL context would be discussed in light of the work stress and work engagement of academics and how they affect service delivery.

(b)   Industrial and Organisational psychology

Industrial and Organisational psychology is the field of studying the science of human behaviour at the workplace and applies psychological principles and theories to the organization and its members including their work-life (Cilliers, 1991; Hodson, 2014; Landy & Conte, 2004, 2016). It includes the study of factors that have a

bearing on work behaviour, such as technology, organisation restructuring and change.

In this study, the conduct of academics would be explored by how they react to work stress (represented by job demands and job resources) and work engagement (represented by vigour, dedication and absorption) which influence their job performance and ultimately service delivery.

(c)   Human resource management

Human resource management is conceptually defined as the strategic approach earmarked to effectively manage the organization workers in order for them to help the business gain a competitive advantage (Bratton & Gold, 2017; Drucker, 2012). Human resource management endeavours to maximize employee performance by putting in place policies and systems that create a conducive working environment. In this study, the fact that ODL academics roles are changing and that the workload is increasing (Barkhuizen et al, 2014; Bezuidenhout, 2015) causing increased work stress and decreased work engagement (Mashile, 2014; Moller, 2012; Yalabik, Rayton & Rapti, 2017), requires a better human resource management approach to streamline the academic roles. Proper human resource management would lead to better or improved ODL service delivery. In this study, the results of the empirical study that focuses on work stress and work engagement and their influence on service delivery, will have a major bearing on the human resource management recommendations to be made.

(d)   Motivation

Motivation is the driving force behind an individual or group actions, desires and needs (Herzberg, 1959, 2017). It is a complex phenomenon but if the work force (academics in this study) is motivated, the following benefits accrue:
- Improved production
- Increased job satisfaction
- Improved needs satisfaction

- Improved learning process
- Improved self-discipline
- Improved dynamism due to energy, enthusiasm, and determination to succeed.

In this study, there is need to establish how *work stress* can be effectively managed, as well as, *work engagement*, so that academics are motivated in order to enhance their service delivery.

(e)   Psychometrics

This relates to the concepts, theories, principles and practices of psychological measurement, for example, the development and standardisation of psychological tests and other related statistical procedures (Coetzee & Schreuder, 2010). Psychometrics help researchers to measure behaviour indifferent or various forms as well as providing different explanations emanating from the results (findings) (Furr, 2017).

In this study, standardised questionnaires were used to measure the individual level of work stress, work engagement and perceptions about service delivery in ODL.

1.6.2.2   Theoretical models

These are formulated to explain, predict, and understand phenomena, as well as, to extend existing knowledge within the limits of given assumptions (Ashton, 2015). In this study, the theoretical beliefs described are testable statements that address 'the what' (prescriptive) and 'the why' (interpretive) pertaining to human behaviour and the social phenomena. These include all statements that include hypotheses, models, theories and conceptual frameworks (Ashton, 2015; Mouton & Marais, 1996).

In this research, the theoretical models would be based on the following:

- For the literature review on work stress, the specific theories reviewed are Robbins and Judge stress (Robbins and Judge, 2012), Person environment fit

(Harrison, 1978) and Job demands resources (Demerouti, Bakker & Gevers, 2015; Schaufelli & Bakker, 2004).

- For the literature review on work engagement, the specific models reviewed are Affective shift (Kahn, 1990), Job characteristics (Hackman & Oldman, 1980) and Utrecht work engagement (Schaufelli & Bakker, 2010)

- For the literature review on service delivery, the specific theories reviewed are Transactional distance (Moore, 1993), Kolb's experiential learning (Kolb, 1984) and Servqual (Zeithaml, Parasuraman & Berry, 1990).

1.6.2.3 Conceptual descriptions

The constructs of this study namely work stress; work engagement and service delivery are described as follows:

- Work stress is a scientific phenomenon, which is discerned as misfit between the worker and the work environment. It has serious effect on one's health and that affects job performance (Neff, 2017).

- Work stress is a complex phenomenon, which is caused by different factors namely: individual, organisational and broader environment (Lovallo, 2015).

- Work stress is high, notably if there is pressure, work overload, job insecurity, unrealistic targets set, interpersonal differences (conflicts) and unsafe working conditions (Schaufeli, 2017). These constitute what is known as job demands, which are the adverse psychological, physical, organisational or social aspects of the job (Demerouti et al., 2015).

- Work stress is low, notably if there is job autonomy, job control, feedback, career opportunities, role clarity, supervisor coaching and guidance as well as social support. These constitute what is known as job resources (Demerouti et al., 2015). They reduce job demands.

- Work engagement is a positive self-fulfilling, job related state of mind, epitomised by vigour, dedication and absorption (Eldor & Harpaz, 2016; Schaufeli & Bakker, 2004).

- *Vigour* is characterised by an individual who is highly energetic with mental resilience and puts in a lot of effort in his work. *Dedication* refers to an individual who is strongly involved in his work showing enthusiasm, pride and sense of

significance. *Absorptio*n indicates total and undivided concentration and being happily engrossed in work by devoting lots of time (Schaufeli & Bakker, 2004; Van Wingerden, Derks & Bakker, 2017).

- Service delivery is the effort or act of providing a public need such as education, health, transport, communications, or utilities like electricity and water (Le Chen, Dean, Frant & Kumar, 2014).

- Service delivery satisfaction is measured by service quality made up of five factors according to Zeithaml, Parasuraman and Berry (1990) which are: *reliability* (ability to adhere and perform promised service reliably and accurately), *assurance* (ability of management and workers to demonstrate confidence and trust), *tangibles* (attractiveness of physical facilities, infrastructure, equipment and materials), *empathy* (provision of hospitality, caring and individualised attention) and r*esponsiveness* (eagerness to assist customers and provision of prompt service).

1.6.2.4   Central hypothesis

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

The interrelationships between the academic's work stress (represented by overload, job insecurity, organisational support, relationships, growth and advancement) and work engagement (represented by vigour, dedication and absorption) have an influence on service delivery (represented by reliability, assurance, tangibles, empathy and responsiveness) in a changing distance changing environment in Zimbabwe. This hypothesis also assumed that an academic with low stress level but work engaged, would perform well and contribute to good service delivery in a changing distance learning work environment.

Furthermore, the study would establish if there are significant differences that exist between groups of academics in terms of their age, gender, marital status, faculty, educational level, race, job title, administrative position, work experience and employment status concerning work stress, work engagement and service delivery. The same should be done for students and their demographic variables considered are: age, gender, marital status, education level, faculty, race and years of learning.

1.6.2.5   Theoretical assumptions

The theoretical assumptions in this research based on the literature review were addressed as follows:

- Work stress is often assumed in daily life to describe negative situations at the workplace. There is need to conduct a basic research on whether work stress is only negative or can be positive, so that it contributes to the better functioning of ODL academics.
- Work engagement contributes to better performance and commitment assuming the major drivers namely; job resources and personal resources are optimal. This is why this study intended to gather literature on the adequacy of job and personal resources in distance learning universities particularly in less developed countries like Zimbabwe.
- Service delivery is usually below customer satisfaction levels in state or government run institutions owing to a number of factors that include mainly: the lack of resources, bureaucratic tendencies and lack of professionalism. This study endeavoured to find out if this was true in a state owned ODL institution (university in this case).

1.6.2.6   Empirical assumptions

Methodological assumptions related to research in the social sciences are regarded as objective by virtue of being critical, unbiased , balanced, rationale, systematic and controllable (Mouton & Marais, 1996). The empirical assumptions for the study were: (Abawi, 2008; Creswell, 2014; Mouton & Marais, 1996):

(i)   There was no existing linear relationship between the three variables;

(ii)   Theories and hypothesis were to be tested based on a cause-effect order;

(iii)   The researcher would be independent and remain distant of the entire study; and

(iv)   Generalisations of this study would contribute to the theory that should then enable the researcher to predict, explain and comprehend the phenomenon under investigation.

1.6.2.7   Methodological assumptions

Methodological assumptions are beliefs about the nature of social science and scientific research with the inclusion of methodological models such as quantitative and qualitative models (Burrell & Morgan, 2017; Mouton & Marais, 1996). The following dimensions of the methodological assumptions affect the nature, structure and process of the research domain.

(a)   Sociological dimension

The sociological dimension conformed to the requirements of the sociological research ethic by drawing from the research community their input as sources of theory development (Burrell & Morgan, 2017). Within the scope of the sociological dimension, research can be experimental or non-experimental, as well as, being analytical and exact because the issues being studied should be subjected to quantitative research and analysis (Mitchell, 2018; Mouton & Marais, 1996). This research was descriptive in nature and includes the quantitative analysis of concepts and variables to be described in in this study as follows, Chapter 5 (covers the empirical research methodology) and Chapter 6 (covers the research results).

(b)   Ontological dimension

The ontological dimension includes all that should be investigated in reality. This pertains to the study of human aspects and their activities, as well as, institutions whose behaviour can be measured (Markey & Gass, 2016; Van Manen, 2016). In this research, the constructs of work stress, work engagement and service delivery would be measured.

(c)   The teleological dimension

 This dimension considers research as being systematic in nature and goal-oriented (Roux, 2014). It is therefore very important to state the problem to be investigated and to relate it to the research goals. This research should be systematic and conforming to the best practice of adopting the research process. Furthermore, the

goals are very clear. These include the investigation of the effect of work stress and work engagement of ODL academics on service delivery. This research aimed to bring new insights to the field of human resource management by contributing knowledge that should make the changing roles of academics in a changing distance-learning environment manageable and effective by improving service delivery.

(d)   The epistemological dimension

This dimension considers research to be guided by the virtues of truth, honesty and integrity relates to the quest for truth (Danermark, Ekstrom & Jacobsen, 2005; Mouton & Marais, 1996). This supports the social sciences primary aim of research, which is to generate valid results (findings) that should approximate reality as closely as possible. This research endeavoured to achieve such truth, honesty and integrity using a good research design and the attainment of reliable and valid results.

(e)   The methodological dimension

The methodological dimension suggests that a sound combination and designed planned set of beliefs, preferences, assumptions and presuppositions should constitute sound research (Mouton & Marais, 1996; Nardi, 2018). The research design used in this research incorporated relevant methods that would be used to test the theoretical and empirical hypotheses.

Both literature review and the empirical study in this research will utilise exploratory, descriptive and explanatory research to cater for the largely quantitative research aspects (Neuman, 2013; Terre Blanche, Durrheim & Painter, 2006). These are covered in the next section.

1.7   RESEARCH DESIGN

The research design is a framework that serves as a bridge between the research questions and the actual execution of the research (Creswell & Creswell, 2017; Terre

Blanche et al., 2006). The research design of this study considered both the exploratory research and the descriptive research.

1.7.1   Exploratory research

Exploratory research is used to gather information usually from a relatively unknown field or context (Kennedy, 2009). This culminates in the establishment of new insights, key concepts and constructs, as well as, priorities. This research was exploratory since it compared the different theoretical perspectives of work stress, work engagement and service delivery (Nardi, 2018).

1.7.2   Descriptive research

Descriptive research is a branch of statistics that describes characteristics of a phenomenon of a population being studied (Sekaran & Bougie, 2010). Its major purpose is to ensure that there is systematic classification of the relationships between variables in the research domain (Kothari & Garg, 2014; Mouton & Marais. 1996). The aim is to describe the issues as precisely as possible.

In the first phase of this research, which is literature review, descriptive research would be applied in order to conceptualise the constructs of work stress, work engagement and service delivery. In the later and final phase of this research, which is the empirical study, descriptive research would be applied in order to compute the means, standard deviations, kurtosis and correlations for the constructs of work stress, work engagement and service delivery.

1.7.3   Explanatory research

 Explanatory research is meant to provide details where a limited amount of information exists in order to provide insights to the researcher (Neuman, 2016). It goes further than the mere indication of the relationship that exists between variables (Mouton & Marais, 1996).   The research seeks to explain the nature of the relationships between the dimensions scores of the constructs of work stress, work

engagement and service delivery, as well as, their sub-scales scores. Ultimately, conclusions would be drawn based on the relationships between these constructs.

1.7.4   The variables

This research attempts to measure the interrelationship between service delivery as the dependent variable and then work stress and work engagement as the independent variables. The independent variable is the presumed cause of the dependent variable (Khothari & Garg, 2014; Leedy & Omrod, 2016). Furthermore, the research also intended to assess whether demographical variables such as: age, gender, marital status, job title, race, educational level, administrative position and work experience, acted as moderating variables of the relationship between work stress and work engagement (independent variables) and service delivery (dependant variable). The measuring instruments collected data that was used to measure the relationship between the dependent and independent variables.

1.7.5   Ethical and legal considerations

Some ethical and legal considerations were strictly observed by the researcher when he conducted this study. These were informed consent, right of privacy and confidentiality, honesty and integrity, risk and safety protection of sources, observance of rules, procedures and standards of authority (Naagarazan, 2006; Porter, 2014; Unisa, 2015). These are explained in detail in chapter 5 on section 5.8.

1.8   RESEARCH METHODOLOGY

This research was conducted within the only ODL university in Zimbabwe which has been undergoing a lot of transformation, due to the coming on board of e-learning that is replacing the traditional mode of learning. The traditional mode of learning comprised the use of modules and classroom tutorial sessions (physical contact with learners). The transformation has many challenges, which include lack of resources, as well as, the lack of preparedness to adopt e-learning fully. The research encompasses two phases, which are briefly discussed below and then in detail in the other chapters.

1.8.1   PHASE 1: Literature review

The theoretical and conceptual frameworks of this study were drawn from the review of literature on the research constructs of work stress, work engagement and service delivery within the context of academic work roles. This fostered the study objectives and the contemporary body of knowledge by integrating the research constructs. The links were able to establish the magnitude of theoretical relationship between work stress, work engagement and service delivery. The steps followed for this phase were:

Step 1: Conceptualising the changing academic work roles from a theoretical perspective.

The changing academic roles from a general point of view and a global perspective were highlighted, as well as, in the context of ODL that was relevant to the research. This formed the background information, in order, to understand where the research is coming from and its rationale. This also motivated the researcher to undertake the research, as they were issues that he wanted to investigate and how these could be addressed to make the work of an academic conducive.

Step 2: Conceptualising work stress from a theoretical perspective

The changing academic roles have brought increased workload, yet resources have been inadequate, especially among Zimbabwean universities. As a result, academics appear to do a lot of work under pressure and this seems to adversely affect their service delivery. The salient features of work stress are presented.

Step 3: Conceptualising work engagement from a theoretical perspective

The changing academic roles have caused work engagement problems. The work engagement dimensions of vigour, dedication and absorption seem to differ among different academics and appear to be not optimal, hence, the perceived low motivation and below par job performance. These issues have been discussed.

Step 4: Conceptualising service delivery from a theoretical perspective

Service delivery is a competitive factor which is worth considering given that there is ever growing ''fight'' (stiff competition) for customers (students) by different service providers (universities). Access to ODL has been enhanced by improved information technology that has seen the use of e-learning and virtual learning. This has brought stiff competition since distance, and physical contact between the tutor and learner, are no longer barriers or constraints. These issues are presented.

Step 5: Integrating the variables and conceptualising the theoretical relationship between them within the ODL context.

Relationships are important in establishing whether a pattern exists between variables and in this research: between work stress and service delivery, work engagement and service delivery, work stress and work engagement, and all the three variables. There is a strong feeling that work stress and work engagement should have a strong bearing on the level of service delivery in an organisation, including ODL universities. These relationships are looked at.

1.8.2   PHASE 2: Empirical study

The research was premised on the positivism philosophy and descriptive cross-sectional quantitative survey design comprising the following steps.

Step 1: Identification and description of the population and samples

The population for this study comprised full time academics at ZOU who were involved in the marking of end of semester examinations whose number was about 140, as well as, 2000 students who had been with the ODL university for at least two years and enrolled with the Harare regional campus. Both academics and students were drawn from all the six faculties (Applied Social Sciences, Arts and Education, Commerce and Law, Agricultural Sciences, Science and Technology, and Information Technology and Multimedia Communication). The identification and the description of these two samples are discussed in detail in chapter 5 on section 5.3.

Step 2: Formulation of hypotheses

This descriptive study investigated associations or relationships between work stress, work engagement and service delivery in an ODL institution. The independent variable in this research was service delivery and the dependant variables were work stress and work engagement. In order to verify such relationships, hypotheses were formulated based on the research objectives and are shown in chapter 5 on section 5.4.

Step 3: Choosing and motivating the research instruments

One research instrument was compiled, incorporating a section with the demographical questions, as well as, three structured surveys incorporating the;

- JD-R questionnaire (Bakker & Demerouti, 2007)
- Ultrecht work engagement scale questionnaire (Schaufeli, Bakker & Salanova, 2006)
- Servqual questionnaire (Zeithaml, Parasunaman & Berry, 1990).

For the academics, they were requested to complete all the three questionnaires, whereas, students only completed the Servqual questionnaire. Both students and academics completed the demographical questions. The measuring instruments are discussed in detail in chapter 5 on section 5.5.

Step 4: Data collection procedure and administration of the questionnaires

The measuring instruments were issued to respondents who completed on their own and anonymously, and that was co-ordinated through the faculties and the largest regional campus (Harare). This step is well articulated in chapter 5 on section 5.6.

Step 5: Statistical processing of data

After collecting data using the instruments mentioned above, the responses for each respondent were captured in an electronic spreadsheet format. Before further processing and analysis, data was subjected to validity and reliability. Validity and

reliability were considered so that the study was able to get the desired and intended results (Neuman, 2016; Njaya & Choga, 2011). The analysis of data was done with the aid of SPSS version 25 and AMOS version 24, and presented in detail in chapter 6 on section 5.7.

Step 6: Reporting and interpreting results

The presentation of results followed statistical procedure, which involved:

- Descriptive statistical analysis (means, standard deviations, skewness and kurtosis).
- Validity and reliability (Cronbach alpha coefficients, exploratory and confirmatory analysis) and construct descriptives (means, standard deviations, skewness and kurtosis).
- Correlational analysis (Pearson product-moment correlation coefficients)
- Inferential statistical analysis (Structural equation modelling, tests for significant mean differences, t-test).

Chapter 6 presents the statistical procedure of reporting and interpreting results of this study in detail.

Step 7: Integration of results

Empirical research results were merged with the literature review findings to make the final interpretations and discussions (Neuman, 2016). This step involved the discussing of the theoretical underpinnings of the study with the empirical results, in order to test the hypotheses.

Step 8: Formulation of conclusions, limitations and recommendations

The results were used to make conclusions based on the research questions, objectives, hypothesis (Rubin & Babbie, 2014) and these were discussed with theory from the relevant literature reviewed. The limitations of the study were explained. Practical and relevant recommendations are suggested, as ways, to address challenges of work stress, work engagement and service delivery of ODL

academics, in a changing distance-learning environment. The details are presented in chapter 7, which is the final chapter of this report.

1.9 DELIMITATIONS OF THE STUDY

The purpose of this study was to find out how the ever-changing roles of ODL academics affected their work stress, work engagement and service delivery. The study was conducted using the ZOU since it is the only university in Zimbabwe mandated to provide ODL. The study was confined to all its ten regional centres scattered throughout the country including the virtual region based at the national centre (Head office) where the sample of academics was drawn from. For students, the sample was made up of students who had studied for at least two years with the ZOU but registered with the Harare regional campus. The study covered all the six faculties from which academics and students were requested to complete structured questionnaires anonymously. Non-academics were left out since they are not directly involved with teaching and learning. The study was delimited to periods between 2000, when the ZOU became a fully-fledged state university, up to July 2018.

1.10 DEFINITION OF KEY TERMS

The following definitions have been contextualised to this study.

Academics: university lecturers comprising assistants, tenured, seniors, professors, research supervisors, programme leaders, departmental chairpersons and faculty deans

E-learning: learning conducted via electronic media, typically on the Internet.

Human resource management: formal systems that optimise the effectiveness and welfare of academics so that they maximise their productivity

Open distance learning: mode of learning characterised by physical distance between the student and the university in which most interactions will take place notably through online or in digital format

Work engagement:a positive state of mind of an academic emanating from work that leads to favourable work-related behaviour and outcomes

Work stress: the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the academic

Service delivery:the act of providing learning services to students mainly by the university's academics

Values: the importance, worthiness or usefulness of this study's outcomes which should improve the work stress, work engagement and service delivery of an academic

1.11   ORGANISATION OF THESIS

The presentation of the thesis is as follows:

Chapter 1: Overview of the scientific research (Introduction);
Chapter 2:   Work stress in the context of ODL academics (Review of related
                     literature);
Chapter 3: Work engagement in the context of ODL academics (Review of related
                     literature);
Chapter 4: Service delivery in the context of ODL (Review of related literature);
Chapter 5: Research design and methodology;
Chapter 6: Results (Data presentation, analysis and interpretation of results); and
Chapter 7: Conclusions, limitations and recommendations.

1.12   CHAPTER SUMMARY

This chapter has covered in detail the overview of open distance learning in terms of its evolution, scope and changing trends including in the Zimbabwean context. The academic work roles have been spelt out. The justification for this study is that there

is no known study that has been done covering the interrelationships between work stress, work engagement and service delivery in an ODL environment especially in Zimbabwe. Through carefully designed methodology, the study should be able to come up with the existing interrelationships with a view to then come up with a framework that should make ODL the most preferred university mode of learning. The next Chapter 2 covers the construct of work stress on the ODL academics.

CHAPTER 2: WORK STRESS IN THE CONTEXT OF OPEN DISTANCE LEARNING ACADEMICS

2.1 INTRODUCTION

Work stress has been a topical issue since the 1960s (Newton, Handy & Fineman, 1995) in the field of human resource management, as it affects employees' health, job performance and job satisfaction, as well as, organisational performance. If work stress is not properly checked or managed, it adversely affects the organisational performance, which would then face operational challenges and become less competitive (Guest, 2017; Ongori & Agolla, 2008). ODL academics have not been exempted and continue to experience this complex phenomenon, often due to their ever-changing work roles. The development of the concept of work stress over the years, its definition and related theoretical models, from which the causes of work stress are derived, have been fully explored in this chapter by reviewing related literature. Finally, the demographic factors that may influence work stress have been discussed with an emphasis on their implications to the ODL academics. Work stress has attracted great interest in the fields of occupational health sciences, human resource management, as well as, industrial and organisational psychology. The implications of work stress in the context of ODL academics for effective human resource management have also been covered in this chapter.

This chapter will address the following research questions:

Research question 1
How is the construct of work stress in ODL academics conceptualised and explained by theoretical models in the literature?

Research question 2
How does work stress of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience and employment status*) as explained by literature?

2.2 HISTORICAL DEVELOPMENT OF WORK STRESS

Work stress is an important aspect of organisational behaviour and its study became prominent in the 1960s (Newton et al., 1995; Vaananen, Antilla, Turtiainen & Varje, 2012). Drawing heavily from Charles Darwin's theory of evolution, Cannon and Selye are credited with identifying stress as an important scientific phenomenon (McCarty, 2016). According to Darwin (2014), all species evolve, develop and survive through the evolution process, which is a continuous physiological adaptation of each specie to its surroundings, in order to be guaranteed long-term survival (Garvey, 2014). Cannon in 1929 considered the ability by any specie to respond quickly by fighting or fleeing from an external threat for survival (Davidyan, 2008). Selye (1987) analysed the impact of stress in the long term (Szabo, Yoshida, Filakovszky & Juhasz, 2017) and developed a three-stage theory that explains how organisms react to harmful stimuli (Kiely, 2016). Initially, the body aggressively responds to the external threat (*alarm stage)*. If the internal biological system successfully fights the threat, then the body (*resistance stage*) restores normal functioning. In the event that the external threat persists, internal biological system resources can be depleted culminating in adverse mental and/or physical consequences, which may lead to death (*exhaustion stage*). Cannon and Selye in 1936 came up with three key issues that enhance the understanding of work stress (Burrows, 2015; Kiely, 2016) which are;

(i)   work stress is discerned as a misfit between the worker and the work environment;
(ii)   work stress victims are usually treated as passive victims because evolutionary adaptation was considered a reactive process; and
(iii)   work stress is a person-centred problem and most stress mechanisms are meant to facilitate reactive coping rather than to proactively adapt to actual work context.

From the discussion, it is evident that work stress is a complex phenomenon, which should be fully understood by distance learning universities, so that remedial action can be taken in order to minimise its adverse effects on academic staff members. Effective human resources management in the ODL university should thus provide advisory and supportive roles so that senior management can create a conducive

working environment that is less stressful in order to arouse academics' job satisfaction and improved performance.

2.3 DEFINITION OF WORK STRESS

Work stress, which in organisations is a critical phenomenon, has the same meaning whether in occupational health sciences, human resource management or industrial and organisational psychology. Stress in organisations is a critical phenomenon. Work stress is a dynamic condition in which an employee is faced with an uncertain but important outcome, which affects his behaviour and well-being (Jubenkanda, 2010, p.152). Work stress can cause harmful physical and emotional responses in the event that work demands do not match the capabilities, resources or needs of the worker (Jubenkanda, 2010; National Institute for Occupational Safety and Health (NIOSH), 2014). Work stress arises from harmful physical and emotional responses due to conflict between job demands on the worker and the degree of control, which the employee has in order to meet these demands (Bakusic, Schaufeli, Claes & Godderis, 2017).

It is generally associated with several vital individual physiological, psychological, and behavioural symptoms (Mahembe & Muromo, 2010). A condition that is stressful exists when there is doubt regarding the outcome that can be favourable or unfavourable (Luthans & Youssef, 2007; Robbins, 2010). The individual would be faced with an opportunity, limitation or demand that is related to desired outcome(s), which is perceived as uncertain and important (Ganster & Perrewe, 2011; Robbins, 2003). Stress is at its highest for individuals with a greater chance of losing and lowest for those likely to win or achieve (NIOSH, 2014). Work stress can be more pronounced and damaging if resources become scarce, as opposed to being adequate (International Labour Office (ILO), 2016).

From the above, this researcher has deduced that stress could affect an individual (academic) mentally, socially and even physically. It results in one failing to meet expected targets and that may affect his or her job performance adversely. In the context of this study, there is a need to establish how ZOU academics were being affected by work stress vis-a-vis service delivery.

2.4 CONCEPTUALISATION OF WORK STRESS (THEORETICAL MODELS)

There are a number of models that dwell on the subject of work stress. For purposes of this study, only three have been discussed, namely; the Robbins and Judge stress model (Robbins & Judge, 2012), Person environment fit model (Harrison, 1978) and the Job demands resources (JD-R) model (Schaufeli & Bakker, 2010). The decision for selecting these three models has been guided by their ability to cover important aspects that impact on work stress such as; the working environment, organisation and individual factors, adequacy of available resources and the symptoms that help to show the effect of work stress.

2.4.1 The Robbins and Judge stress model

The following Figure 2.1 gives an overview of different factors that cause stress and their impact on individuals or groups.
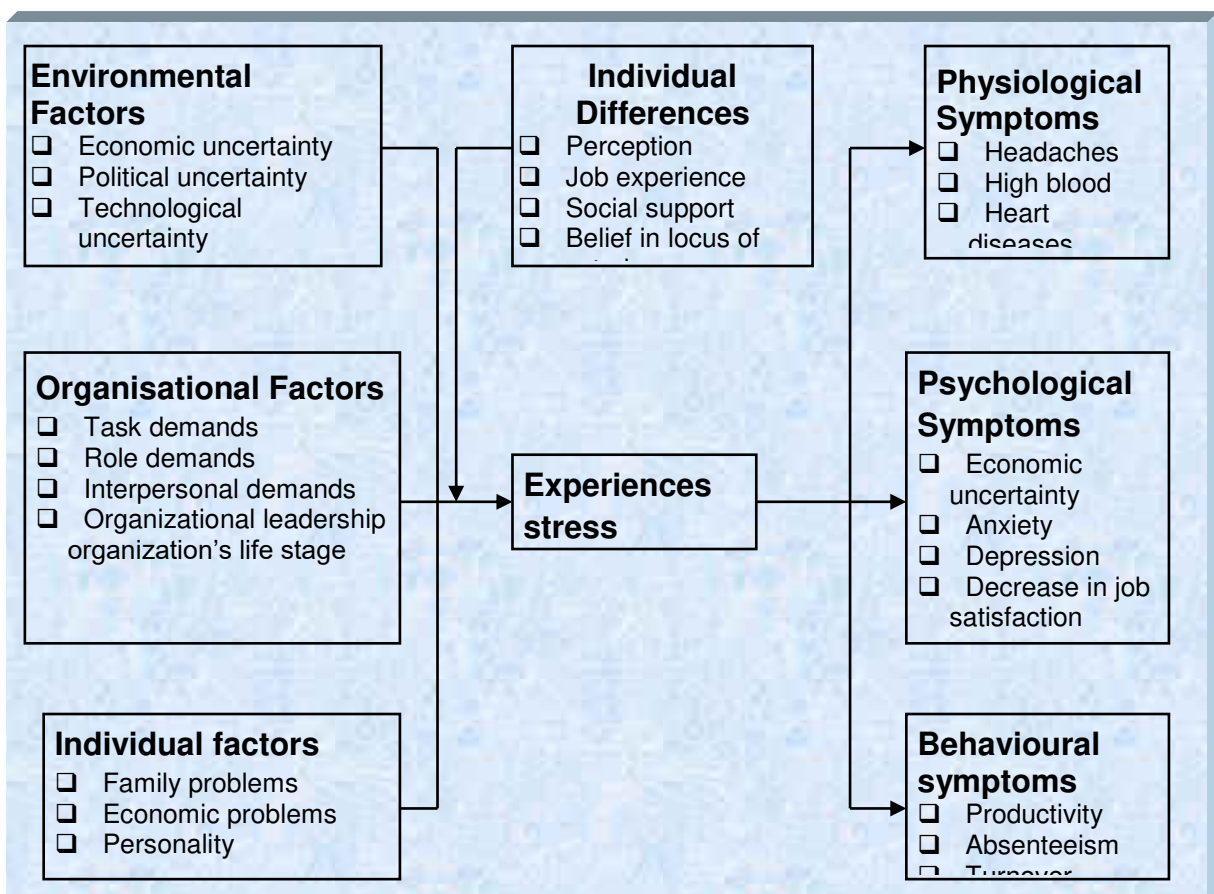
Figure 2.1   *Robbins and Judge Stress model* (Robbins & Judge, 2012)

From Figure 2.1, it can be derived that there are three potential sources of stress namely; environmental, organisational and individual, whose outcomes depend on how individuals perceive them. Consequently, the effects of stress can also be divided into three categories, that is, physiological, psychological and behavioural symptoms (Robbins & Judge, 2012).

2.4.1.1 Environmental Factors

The environment may cause work stress, which affects the individual, group and organisation performance. Table 2.1 shows some of these environmental factors.

Table 2.1

Environment factors that cause work stress(Robbins & Judge, 2012)

Environment	Description
Political	Uncertainty arising from transition of power, new policies, restructuring of government
Economic	Underperformance of economy causing high inflation, unemployment, currency depreciation
Technological	Emerging roles due to new mode of learning, new communication techniques, new assessment techniques

Political uncertainty can be very stressful, especially over transition of power, policy changes and anxiety about the future of the nation. A dynamic environment characterised by new government policies such as the introduction of a new curriculum in education, like in the case of Zimbabwe in 2017, has caused a lot of stress to all major stakeholders, namely; teachers (academics), pupils (students), parents, care givers or guardians (Gasva, Moyo & Dzama, 2017). Restructuring of the government departments and institutions can also be stressful like in Zimbabwe, where even in the ministry of higher education, there have been plans since 2015 to wean state universities from government funding which could trigger many retrenchments (Zulu, 2015). Although state universities are not part of the civil service since they have their own University Acts that govern their operations with a bit of autonomy, they still fall under the mainstream government. If the intended

restructuring is implemented, this will create huge workload for those who remain since others would have been retrenched and they may experience stress as a result (Schubert-Irastora & Fabry, 2014).

The *underperformance of an economy* can be very stressful, especially if there is high unemployment, high inflation and domestic currency depreciation (Ganster & Perrewe, 2011). This is prevalent in less developed countries like those in Africa and Zimbabwe being an ideal example (Tarusikirwa & Mafa, 2017). When considering the ODL environment, rapid *technological developments* such as e-learning for delivery of instruction, communication with students and even online marking of assignments, exams and dissertations can be very stressful (Barkhuizen et al., 2014).

2.4.1.2   Organisational factors

There are numerous variables in an organisation, which cause stress, and the following Table 2.2 shows the major ones.

Table 2.2

Organisational factors which cause work stress (Robbins & Judge, 2012; De Jonge & Dormann, 2017; Saufi, Leong, Chua & Eranza, 2017).

Organisational factor	Description
Physical	Noise, shortage of office space, poor ventilation, poor lighting and unsafe working environment
Structure	Too much formalisation, bureaucratic tendencies and unclear lines of communication
Motivation	Lack of recognition, lack of transparency, inconsistent treatment of workers, non-involvement and participation and leadership style
Job design	Role ambiguity, broader scope of responsibility, excess workloads
Job demands	Come from tasks, roles and interpersonal relationships
Life cycle	More pronounced at the decline stage

Table 2.2 has been explained as follows:

a)   The physical aspects

These include crowding due to shortage of working or office space and poor ventilation. These conditions can also make the working environment stressful (Walsh, Craik & Price, 2000). In addition, unpleasant working conditions, for example, the environment being prone to accidents, extreme temperatures, poor lighting, regular working overtime due to excerssive work and low remuneration, also enhance work stress (Mutswanga, Marufu, Chaminuka, Mafumbate & Chakuchichi, 2016). In some higher education institutions in Ghana, the adoption of e-learning has not been supported with adequate infrastructure which is a big disadvantage and creates stressful working conditions for academics (Arkorful & Abaidoo, 2015).

b)   The organisational structure

The organisational structure can also be a cause of work stress (Mutswanga et al., 2016). Failure to clearly differentiate the organisation in terms of levels (hierarchy), bureaucratic tendencies, lots of formalisation (excessive rules, regulations and procedures), and unclear communication channels, are some of the structural factors that usually become potential sources of work stress (Mutswanga et al., 2016).

c)   Motivation

Low motivation also contributes to work stress (Gold & Roth, 2013; Strauss, Parker & O'Shea, 2017). This includes lack of transparency and inconsistent treatment of employees usually characterised by bias, favouritism and prejudice. Lack of recognition, involvement and participation also create low job morale. ODL academics, who could be experiencing low intrinsic motivation in their work, can experience more anxiety, depression and psychosomatic symptoms of stress such as physical illness (Iliya & Ifeoma, 2015). The managerial style used by managers is also a potential source of work stress. Some managers create a culture that creates tension, fear and anxiety. Some use threats to fire ''underperforming'' employees,

impose very stringent controls or set unrealistic demands or targets (Demerouti, Bakker & Halbesleben, 2015; Kasemsap, 2017).

d)   Job design

Poor job design also causes work stress (Kiely, 2016). The manner in which tasks are organized, what employees do at work and the ways of carrying them out, determines the level of work stress. More workload, role ambiguity, broader scope of responsibility and job enlargement, can be very stressful (Kiely, 2016). Poor job design can cause both physical and mental health challenges. Examples are backache or leg pain, high blood pressure and even heart disease (Daniels, Gedikli, Watson, Semkina & Vaughn, 2017).

e)   Organisation's life stage

The life stage of an organisation can determine the time at which employees experience more stress. Organisations pass through a cycle of four stages, that is; establishment (introduction), growth, maturity and decline (Mupamawonde, 2014). Each stage has a certain level of business performance and where security of tenure is threatened like the decline stage, stress tends to reach its peak (Mutswanga et al., 2016). In higher education, the Academic programme life cycle can determine the degree of stress, depending on the enrolment trend at each stage (Mukerji & Tripathi, 2004). The stages of introduction and decline are stressful. Moderate stress can be experienced during the establishment stage of a programme when there is slow enrolment growth, but stressful during the decline stage when enrolment is on the downward drift and there is erosion of profits (Mukerji & Tripathi, 2004).

Various *types of job demands* can give rise to stress according to Robbins (2010) cited by Mutswanga et al. (2016) and can be classified as:

(i)   *Task demands*. These relate to one's job particularly its design, which comprise the degree of autonomy, task variety and skills variety.
(ii)   *Role demands.* Refer to the amount of pressure placed on someone because of the particular role he/she plays in the department or organisation. Usually,

issues that contribute to stress include role conflict, role overload and role ambiguity.

(iii) *Interpersonal demands.* Co-workers can also contribute to work stress, for example, lack of social support, false accusations and being isolated.

2.4.1.3 Individual factors

Workers with families have other demands that require their attention, which may be stressful (Cassells & Evans, 2017; Robbins & Judge, 2012). Family responsibility is one of the major determining factors of stress level. In addition, failure to meet family demands due to the inadequacy of one's resources, particularly financial resources causes stress. Marriage breakdown, infidelity by the spouse and even children's' bad behaviour, chronic illness or death of a family member are some of the family challenges that cause stress (Iyabo & Olufunke, 2012). In addition, death of a close colleague, separation or divorce, create personal stress that extends to the workplace (Mutswanga et al., 2016).

Economic crisis and financial difficulties have been found by studies to be major stressors that have a negative impact on the workers' mental health (Mucci, Giorgi, Roncaioli, Perez & Arcangeli, 2016). A rise in unemployment, staff reduction and reduction of wages were linked to increased rate of anxiety, dysthymia, mood disorders, depression and suicide (Mucci et al., 2016).

One's personalityplays a major role in accentuating or diminishing the impact of both individual and organisational stressors (Li, Wang, Gao & You, 2017). One's personality can be explained by what is known as the *Type A-Type B* dichotomy (Robbins, 2010; Wang, Wang, Chen, Dong & Dong, 2017). This dichotomy is illustrated in the following Table 2.3.

Table 2.3

***Type A and Type B personalities*(own compilation based on Robbins, 2010).**

Type A personality	Type B personality
Chronic desire for high competitive drive	Relaxed, easy going and no appetite for competition

Impatient and difficulties in coping with leisure time	Patience and has time for relaxing
Moderate to high levels of stress	Low levels of stress
Susceptible to heart related diseases and burnout	Healthy and full of energy to work
Inward looking, selfish and parochial	Cooperative, supportive and open minded and share experiences

These personalities have been supported by Masuku and Muchemwa (2016), as well as, Bowen, Rose and Pilikington (2016), who said that even academics and students in higher education, could be classified under these two paradigms. From a Human resources practitioner viewpoint, this researcher feels that *Type B employees* are the ideal academics who should be in higher education since they are healthy, co-operative and can embrace change that emanates from their changing roles.

In summary, the Robbins and Judge stress model states that *physiological symptoms* relate to emotional and physical disorders such as headaches, back pains and dizziness. Psychological symptoms relate to the mental and emotional state of a person, which affect the mind such as feelings and motivation. Behavioural symptoms are unusual persistent behaviours that are retrogressive such as drug abuse, criminal tendencies and aggression (Robbins & Judge, 2012).

2.4.2 Person environment fit stress model (P–E fit model)

Person environment fit is the extent to which personal and environmental characteristics match (Harrison, 1978; Kristof-Brown, Zimmerman & Johnson, 2005; Lee, Kim, Chen, Zanata & Kristof-Brown, 2017). It is imperative to therefore understand the individual behaviour in a given context in which that person earns a living (Muchinsky & Monahan, 1987). Stress arises from the congruence or fit of the person and his or her environment (Edwards, Caplan & Van Harrison, 1998; Ehrhardt & Ragins, 2018). Stress emanates from a misfit between the person and the environment (Lee, Jones & Day, 2017). The following Figure 2.2 shows a model that describes the effects emanating from psychological stress in terms of the fit between the person and the environment.
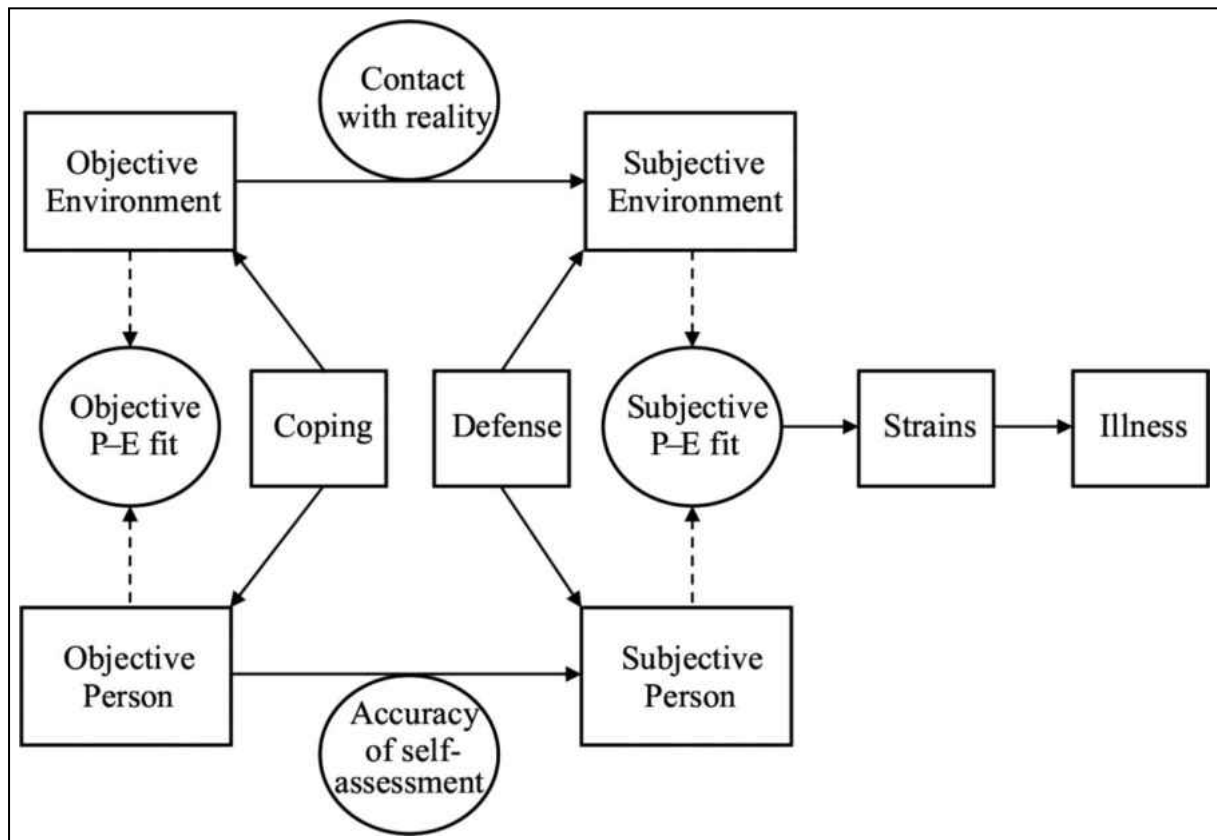
Figure 2.2 A model describing the effects of psychological stress in terms of the fit between the person and the environment(Harrison, 1978; Pee & Min, 2017).

The P–E fit theory has three major distinctions, which are shown in Figure 2.2. These are:

(i)   Distinction between the individual and the environment

This is the most important distinction, which is a prerequisite to conceptualise the P-E fit theory. It looks closely at the reciprocal causation between the two

(ii)   Distinction between the objective and subjective representations of the individual and environment

The objective person looks at his or her attributes in their actual state. The subjective person represents one's personal identity or self-concept. The objective environment largely includes the natural set up of physical and social circumstances which is independent of the of the individual's perceptions. The subjective environment refers

to the viewing of circumstances and events as per individual perception (Lee et al., 2017).

(iii)   Distinction between the individual abilities and the environmental demands

The environmental demands include the job requirements, role expectations, group norms and organisational culture. Individual abilities are usually one's skills, competencies, aptitudes and energy needed to meet the demands (Pee & Min, 2017; Schaufeli & Bakker, 2010; Sifferlin, 2013).

2.4.2.1   Outcomes of a P-E misfit

The subjective P-E misfit can cause behavioural *strains,* which are deviations from normal body functioning. Some of the outcomes, which can be psychological, behavioural and physical are; dysphoria, restlessness, dissatisfaction, insomnia, high blood pressure, weak immune system, smoking, absenteeism, over eating, regular medical attention (Ehrhardt & Ragins, 2018; Harrison, 1978). Defence and coping are outcomes, which require the individual to make an effort to address problems of P-E misfit. Coping can be enhanced if someone gets training to execute the tasks more easily or negotiates with the supervisor for reduced workload. Defensive actions include the denial of strain or disengaging from unattainable results (Schneider, Smith & Goldstein, 2000).

2.4.2.2   Implications of the P-E fit theory

Schneider et al. (2000) suggest that a good person-environment fit is where the individual has a work environment with which he/she is most compatible. In such a scenario, it is highly likely that the P-E fit results in positive outcomes for the individual in terms of adaptation, satisfaction and commitment and reduces stress (Lee et al., 2017). Demerouti and Cropanzano (2010) have also supported these positive outcomes experienced by the individual due to a good person-environment fit. These authors suggest that in the long term, there is a likelihood of homogeneity in idea generation, decision-making and conduct, which is conducive to the reduction of work stress.

Walsh et al. (2000) suggest that comprehending individual-environment transactions includes the interplay between traits, desired outcomes, and behaviour settings. From the individual side there are the desired outcomes (goals) and personality traits. The environment represents settings that influence the conduct of individuals as they strive to attain major life goals (Boon & Biron, 2016). Personality traits may facilitate or thwart the striving towards attaining life goals within a behaviour-setting context. According to Kwasnicka, Dombrowski, White and Sniehotta (2016), traits, goals, and behaviour settings may be analysed in terms of the ongoing person-environment process.

It is common knowledge that people take actions that are compatible with their identities and avoid those that are inconsistent with their desires, goals and values (Hogan & Roberts, 2001). They further suggest that individuals' past choices of outcomes and situations tend to envisage their future participation in various environments. Substantial evidence has it that preferences for environments can correctly foretell professional (occupational) membership, professional tenure and professional change. Such preferences become stable over a long period, because people seem to identify and choose those environments that suit their motives and goals (Hogan & Roberts, 2001; Pee & Min, 2017).

2.4.3 The Job Demands-Resources model (JD-R model)

The JD-R model is very common in the study of work stress (Searle & Lee, 2015). It assumes that employees' health is a result of the balance between positive and negative job characteristics (Mackey, Perrewe & McAllister, 2017). The JD-R model was developed by Schaufeli and Bakker in 2004 (Schaufeli & Bakker, 2004; Searle & Lee, 2015). Its assumption is that any demand and resource pertaining to a job has a bearing on an employee's health, well-being and motivation (Wright, Mohr, Sinclair & Yang, 2015). This occupational stress model suggests that strain is responsive to imbalances between job demands and job resources on an individual. The individual has to deal with those demands (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Searle & Lee, 2015).

2.4.3.1 Job demands

These are psychological, social, physical or organisational aspects of the job. They require physical and/or psychological effort or skills. They are linked to certain physiological and psychological costs (Demerouti et al., 2015). Examples include work pressure, work overload, unrealistic targets, interpersonal differences (conflicts), job insecurity and emotional demands. According to the JD-R model, when job demands are high, there is a need for additional effort to be exerted. This should help to achieve the work goals and to eliminate decreasing performance. However, this comes at a cost and can be overcome by taking a break, doing job rotation (switching tasks), or performing less demanding tasks (Demerouti et al., 2015).

2.4.3.2 Job resources

Job resources include autonomy, job control, feedback, career opportunities, role clarity, supervisor coaching and guidance, and social support (Schaufeli, Bakker & Van Rhenen, 2009). Job resources are supposed to reduce job demands and subsequent exhaustion (Mackey et al., 2017). Bakker and Demerouti (2007) observed that the adverse effect of job demands particularly on exhaustion was strong if workers lacked resources. Two different psychological processes play a critical role in the development of job strain and motivation. These are:

- *Health impairment process*
  Poorly designed jobs or repetitive job demands usually exhaust employees' mental and physical resources. This in turn could culminate in the depletion of energy, thereby leading to health problems (Hassard & Cox, 2013; Schaufeli, Maslach & Marek, 2017).

- *Motivational process*

  Adequate work resources usually exert their motivating potential. This leads to high work engagement, excellent performance and low cynicism (Demerouti et al., 2015). Work resources could either play two roles of intrinsic or extrinsic motivation. Figure 2.3 illustrates the above two psychological processes and how they impact on the worker. The outcome can be positive or negative.
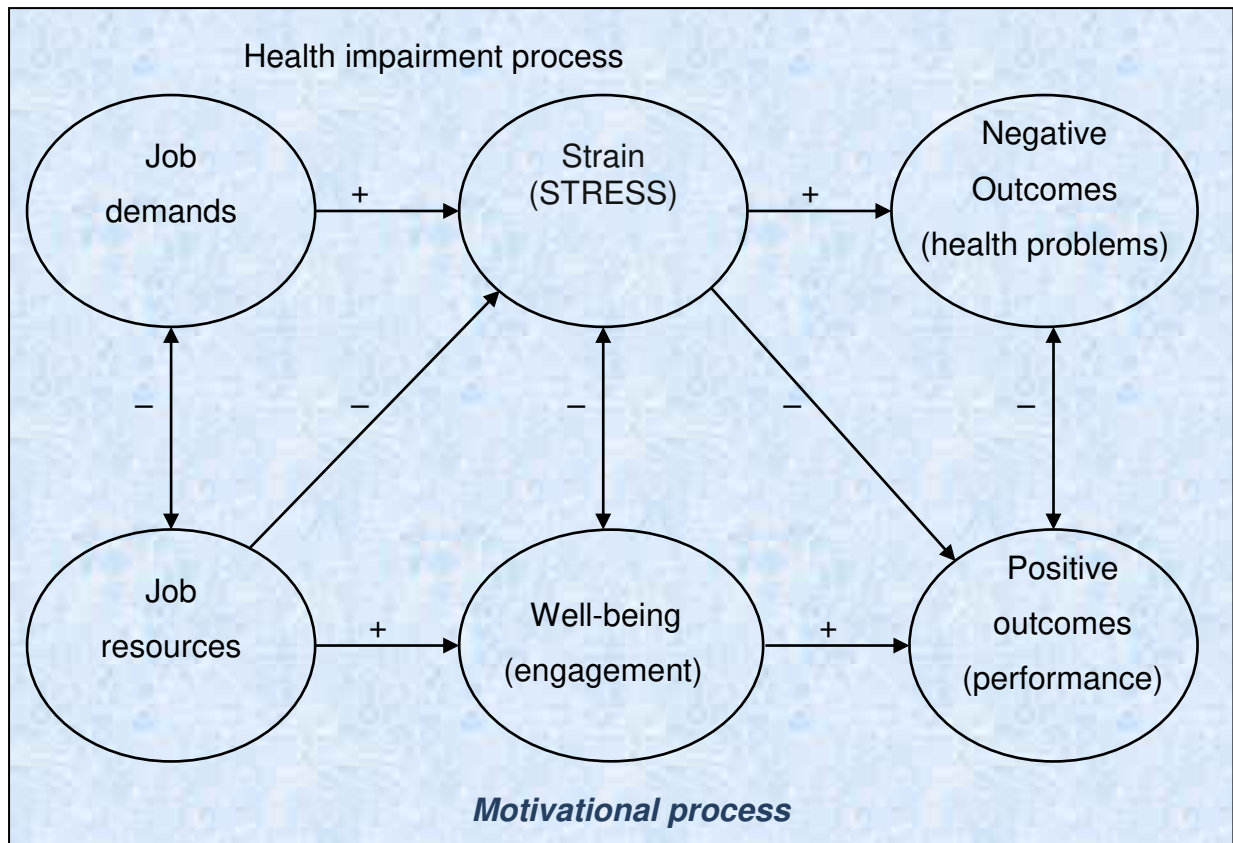
Figure 2.3   The JD-R model (Demerouti et al., 2015)

The JD-R model shows how stress can be adverse, such as causing health problems due to 'excessive' job demands. Resources are pivotal in improving motivation and work engagement. The JD-R model's assumption is based on the conservation of resources (COR) theory. According to this theory, people are determined to source, retain, maintain and protect their resources since they are valuable to their departments and the organisation (Pisanti, Anthony & Quick, 2017).
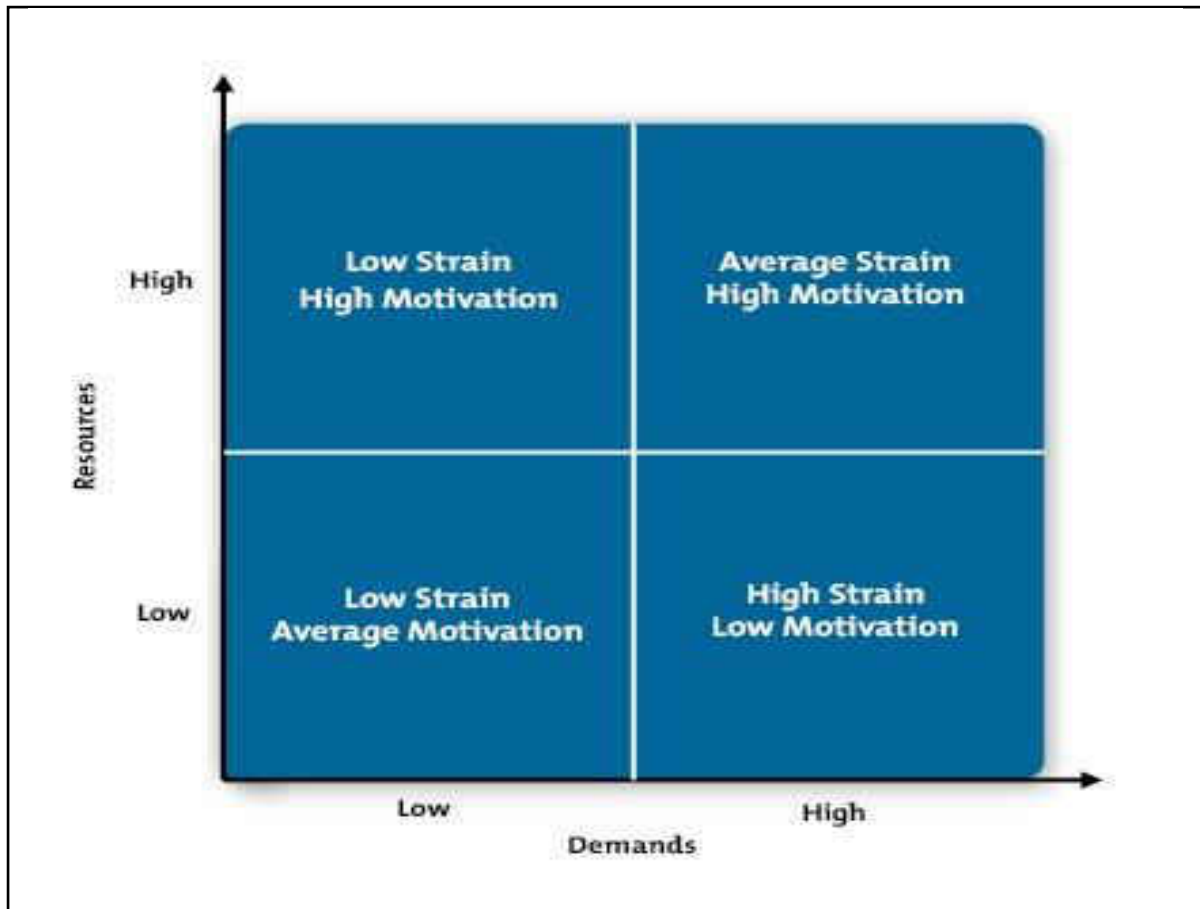
Figure 2.4   JD-R model showing strain levels (Bakker & Demerouti, 2014)

Figure 2.4 shows that if job demands are relatively high at a time when resources are relatively low, employees and even management experience greater levels of stress and low motivation. Such a scenario leads to high employee absenteeism as well as high employee turnover. In this situation, there is need to work towards increasing job positives that make one's job inspiring. This will ultimately reduce stress and increase employees' motivation (Pisanti et al., 2017). JD-R model is also an important theoretical framework that attempts to integrate two reasonably independent research traditions namely; the work stress and the work motivation (Bakker, Van Veldhoven & Xanthopoulou, 2010). The job demands such as excessive workload are the initiators of a negative health impairment process, whereas job resources are the initiators of a positive motivational process. Furthermore, the model outlines how job demands and job resources interact, and then predicts important organizational desired outcomes such as an individual or

group (team) job satisfaction and even organizational commitment. Recent studies on organisational behaviour have supported that the

JD-R model can reliably predict the experience of burnout and of work engagement (Gerards, De Grip & Baudewijns, 2018; Schaufeli et al., 2017).

Hobfoll (2002) commenting on the JD-R model, states that stress occurs when there has been a loss of resources, or when there may be a potential loss of such resources in the near future. In such instances, the social and moral support of workmates (colleagues) should be more visible and instrumental in order to protect such resources (Calderwood & Gabriel, 2017).

Consistent with this reasoning, the analysis of economic imbalances facing Zimbabwe, the ZOU has not been spared. Lack of resources put a lot of demand and strain on academics (Ndudzo, 2012; Nyenya & Bukaliya, 2015). Such job demands are associated with exhaustion. Lack of resources is also linked to disengagement (Liu & Cheung, 2015; Searle & Lee, 2015). In this respect, part time lecturers, tutors and other qualified personnel disengage due to a lack of resources, that is, poor remuneration and conditions of service. This tends to demotivate the academics in general (ZOU, 2013b).

2.5   MOST APPLICABLE WORK STRESS MODEL TO THIS STUDY

The three models explained above namely, the Robbins and Judge stress, the P-E fit and the JD-R models, have shed more light on work stress. However, for this study, the JD-R model rules supreme and has been selected as the one that is most applicable. Given the scenario regarding distance learning in Zimbabwe, it is no secret that the country has been bedevilled by serious shortage of resources because of an underperforming economy since the turn of the new millennium. In light of this, this is why the standardised JD-R survey (latest version questionnaire) by Bakker (2014) is highly regarded for use in empirical studies in situations prescribed above related to assessment of work stress. Hence, it was judged as the most applicable model for use in this study as well.

2.6 CAUSES OF WORK STRESS IN OPEN DISTANCE LEARNING UNIVERSITIES

The following are some of the major contributory factors to work stress of academics in ODL universities across the globe;

(i)   Academics are hard pressed to perform more work with inadequate resources, experience a huge demand on their time, effort and energy, while getting less recognition and fewer rewards for such commitment (Gillespie, Walsh, Winfield, Dua & Stough, 2001; Outlaw, Rice & Wright, 2017).

(ii) Heavy workloads especially administrative work, isolation and inadequate support from authorities are very stressful and often contribute to poor mental health (Jones & Daigle, 2018) and burnout (Poales, Joubert, Bezuidenhout & Nienaber, 2014).

(iii) Unrealistic job demands and expectations by management include the expectation of academics to attain doctorate degrees and professorships in as short space of time as possible. In Zimbabwe for example, a doctorate degree is expected to be completed in 2 or 3 years and attaining professorship status 3 years thereafter, yet the same academic is expected to perform concurrently other roles such as university and community, teaching and developing learning materials (Ndudzo, 2012; Ng'ethe, Iraro & Namusonge, 2012). This is difficult to attain, since most doctorate studies are done on a part time basis and most universities like Unisa give an average 5 years for one to complete, which is equivalent to 10 000 hours of study.

(iv) The ever-increasing student numbers, coupled with having less time with students, are also major sources of work stress for academics (Di Biase, 2003; Harpine, 2013). The academic has to pay a lot of individual attention to students, since they may be in isolated locations and not in a classroom set up as those at a conventional university where a class can be addressed at once (Santos, 2016).

(v)   Some government policy changes, such as weaning state universities from government funding, were affecting the future of higher education, along with the perceived increasing insecurity of academic posts (Vutete & Uzhenyu, 2016; Zulu, 2015). In Zimbabwe, state universities have been under scrutiny

by government, which wants them to be self-sustaining. This intended paradigm shift, is getting a lot of resistance from state universities, which are unable to meet staff salaries, as well as, other overheads. In such a scenario, restructuring or downsizing would be the likely option. This would lead to staff attrition and making some positions redundant.

From the above literature on work stress, it can be deduced that various aspects are present in the distance-learning environment, which are causing stress among academics including those at ZOU. Poales et al. (2014) found that there were high stress levels for academics at an ODL university in South Africa. Therefore, managing stress is key to any organisation including ZOU, because it improves the employees' health, job performance and job satisfaction as well as organisational performance.

Since work stress causes many health challenges, which need medical attention, it attracts some medical expenses. In addition, there is loss of productive time caused by one's absence from work because of ill health (Mahembe & Muromo, 2010; NIOSH, 2014). It is therefore necessary to manage work stress, in order to reduce medical bills as well as to reduce absenteeism and improve production.

2.7   MANAGING STRESS

2.7.1   Several approaches

Managing stress is a very complex process, since there is a need to consider individual, group, organisational and even external factors (Bliese, Edwards & Sonnentag, 2017; Ortner, 2013). Managers and supervisors such as heads of departments and deans of faculties, have a dual role to perform on the issue of work stress. Foremost, they should be able to manage their own stress levels, before addressing those of subordinates. It is also important to examine ways of optimizing stress, since it is difficult to eliminate it. There is need for balance as life consists of different paradoxes, which show some contradictions though they may exist simultaneously for longer periods namely, positive stress (eustress) and negative stress (distress) (Bakker, Albrecht & Leiter, 2011).

According to Walsh et al. (2000), stress is a complex phenomenon, for example; uncertainty may result in stress, yet so can too much certainty. Responsibility may cause stress, but so can a lack of responsibility; performance evaluation may cause stress, but so can a lack of feedback about one's performance; role ambiguity can be stressful, but even a clear job descriptions can cause stress. Each situation should thus be judged individually.

Management should therefore try to maintain a desirable level of stress by promoting an optimal environment. The optimal environment is one that makes the environment friendly, with manageable stressful situations. This can be enhanced by proper job analysis and work design after thorough performance planning, continued feedback, ecological considerations and interpersonal skills, training needs and even other environmental factors (McKeand, 2016).

There are three key process strategies for dealing with work stress (Hobfoll, 2002; Seaward, 2017). These are:

(i)   Making sure that the symptoms are attended to at an early stage.

This should include the identification of those employees suffering from excessive stress and ultimately the provision of health-care, as well as, psychological counselling services.

(ii)   Changing the person.

This second approach should help individuals to build their own stress management skills so that they are less vulnerable to the stress effects. For example, there is need to train employees in time management, as well as, relaxation techniques, exercise, play and social gatherings.

(iii)   Eliminating the root cause of the stress.

There is need to pay attention to the environment in order to reduce stressors such as reducing workloads or having to modify production schedules.

Some managers feel that monitoring employees' stress levels could be considered as an invasion of privacy. However, a study by Lawless (1991) showed that 90% of employees believed employers are responsible to reduce work stress by providing a health plan to address stress illnesses. She emphasized that workers always expected remedial action by their employer. She is supported by Weiss-Randall (2017) who mentioned four employer programmes that were effective in reducing work stress, namely:

(i)   Ancillary and complementary work and family policies.
(ii)   Effective management communication.
(iii)   Proper medical and health schemes to enable treatment of those affected.
(iv)   Flexi-time arrangements that allow flexible working hours.

There are also five suggested managerial actions meant to reduce work stress (Grover, Teo, Pick & Roche, 2017; Williams & Huber, 1986). These include; the need to clarify ones' responsibilities, task assignment, authority, and system used for performance assessment, matching the subordinate's characteristics to the leader's preferred leadership style, promotion of delegation and work autonomy, clear goals with clear criteria for making decisions and consistency in the treatment of all workers (academics).

According to Fernet et al. (2012), establishing one's priorities in life is a pivotal step in the managing of stress. In most cases, the demands of an academic's job may result in the neglecting of other areas, which can adversely affect marriage, social and family relationships (Cassells & Evans, 2017; Fernet et al., 2012). This may influence the academic's health and work performance. It is therefore important to allocate appropriate work time taking into account one's priorities, as this can be the key success factor in any stress reduction program (Fernet et al., 2012).

Macro-environment forces may also create stressful conditions, but they cannot be changed. These include economic crisis like during prolonged recessionary periods, emergence of new government policies or natural disasters. Organisational members do not have control over such prolonged stressors. Therefore, people need

to modify the manner in which they handle stress according to the perceived situation (Brown, Lewin & Shikongo, 2014).

There are many other effective ways of dealing with stress. These include stress reduction workshops, tranquilisers, biofeedback, meditation, self-hypnosis, and a variety of other techniques designed to relax an individual. Programmes that teach tolerance for ambiguity often report positive effects. One of the most promising is a health maintenance programme that stresses the necessity of proper diet, exercise and sleep (Oggioni et al., 2018).

Social support systems are also very instrumental in reducing the effects of stress. Social interaction built along interpersonal relationships that include friends and the family, should create a nurturing environment that is more relaxed less susceptible to stress. Managers can also facilitate the creation of a nurturing, user friendly and supportive environment that can reduce work related stress (NIOSH, 2014).

Eight "universal" factors should create a balance between stress and job satisfaction in an organisation and these are; workload, job status, task variety, accountability, human contact, physical variables, physical challenge and mental challenge (Albrecht, 1979; Fairbrother & Warn, 2003; Robbins & Judge, 2012). Proper stress management is found in the "*comfort zone*" in which the worker should be able to attain optimal performance without creating undesirable effects.

The *social climate* is another major cause of stress in an organisation (Albrecht, 1979; Wacker & Dziobek, 2018). Three factors that should be monitored when evaluating social climate are;

(i)   Alienation

Alienation is usually prevalent when there are divisions or when workers isolate themselves. This can manifest in members usually criticising the organisation or opposing change for the sake of just resisting.

(ii)   Polarisation

Polarisation refers to the degree to which workers and their management are divided into two sharply contrasting groups. One of the effective means of dealing with this problem should be to have inclusivity by constantly involving juniors in organisational activities and decision making at all levels. The goal should be to change the workers from viewing management as "they" to "we" which reflects oneness.

(iii)   Social norms

Social norms include organisational values, which can include trust, integrity, honesty, fairness and respect.

These factors need to be assessed regularly in order to monitor stress levels in the organisation. There is need to reinforce organisational values, which lead to firm belief in the reliability, ability, or truth of somebody's work ethics or conduct (Beckett, Maynard & Jordan, 2017). Contemporary methods of trying to minimise work-related stress are *Job engineering and job redesign*. In the case of job engineering, there is an attempt to consider individual worker needs vis-à-vis the production goals of that organisation (Albrecht, 1979; Salanova, Agut & Piero, 2005). For effective job engineering, the following strategies should be observed (Salanova et al., 2005). The following Table 2.4 shows the strategies linked to job engineering.

Table 2.4

Strategies linked to job engineering(Salanova, Agut & Peiro, 2005)

Level	Strategy
Individual	Clarification of job objectives Clarification of job conditions
Group/Department	Integrating Job processes Consideration of group concerns
Organisation	Implementation/Testing job designs Ongoing evaluation of the job designs

The following is the explanation of Table 2.4, which is meant to design jobs in a manner that should reduce work stress for the following three levels:

- Individual

Clarifying the job objectives and its conditions. There is need to spell out exactly what the job entails and the social aspects, as well as, the physical and psychological characteristics (Argyris, 2017; Demerouti, 2014; Salanova et al., 2005).

- Group or department

There is need to define the job processes including the relevant equipment, and materials to be used. It is also important to consider strongly the concerns of workers to avoid duplications and job dissatisfaction in order to improve performance (Oldham & Fried, 2016; Salanova et al, 2005; Van Wingerden et al., 2017).

- Organisation

Once jobs have been designed, the individuals' in their groups should start to perform the actual jobs. Evaluation should be ongoing after considering further need to redesign the jobs. This is necessary to consider employee attitudes, perceptions and values that could change and any technology that could be required thereafter (Leverhulme & Riggar, 2017; Salanova et al., 2005).

2.7.2   Lazarus Theory of Stress

According to Lazarus (1966), stress is a two-way process; it involves the production of stressors by the environment, and the response of an individual subjected to these stressors as a way of coping with such stress. His theory is known as *Lazarus' Theory of Stress* and at times referred to as the *'Dark world of stress''.* A person considers two major factors that contribute to his response to a stressful situation (Lazarus, 1966). These two factors include**:**
- The threatening tendency of the stress to the individual, and
- The assessment of resources that are required to minimise, tolerate or eradicate the stressor and the subsequent stress it produces.

Such cognitive appraisal of the stressors is classified in to two stages namely: primary and secondary appraisal. At the *primary appraisal stage*, an individual tends to ask questions that dwell on the effect of the stressor and usual answers are that the stressor is *not important, good or stressful.* Subsequent to any of these answers, there is need to classify whether the stressor (situation) is a threat, a challenge or harmless (innocuous).

According to Lazarus (1966) when one sees the stressor as a threat, he views it as something that causes future harm. If viewed as a challenge, one develops a positive stress response because there is the expectation that the stressor can lead to favourable outcomes. On the other hand, seeing the stressor as a harmless stressor may have already been experienced and of no consequence in the near future. Unlike in some theories where the stages usually follow one another, the *secondary appraisal stage* can actually occur concurrently with the primary appraisal or at times even prior. Secondary appraisals include those feelings that are related to dealing with the stressor or the stress it produces. If the feeling there is hope for solution or alternative, this reflects *positive* secondary appraisal. In contrast, if the feelings are a bit pessimistic, this indicates *negative* secondary appraisal. Lazarus (1966) identified four ways that can help one to cope with stress. These are:

- Identifying and defining the real problem
- Generating alternative solutions
- Learning new skills to deal with the stressors
- Evaluating the new skills in order to reinforce ideal standards of behaviour

Therefore, Lazarus Theory of Stress can be very helpful in assisting academics to manage work stress. The institutions of higher learning (universities) could also use the theory to improve the well-being of the academic staff by putting in place mechanisms that enhance their ability to cope with work stress.

2.8   EMERGING CHANGING WORK ROLES OF OPEN DISTANCE LEARNING ACADEMICS

The changes in the learning environment in higher education or tertiary institutions worldwide, have not spurred the nature of roles for the ODL academics. This section

covers the emerging roles of ODL academics by looking at both the international perspective and ZOU as well.

2.8.1 Emerging roles of ODL academics (international perspective)

ODL has experienced significant transformations since the development of distance education theories by Holmberg (1982), Moore (1993) and Peters (1983). Berge (2008) suggests that academic roles have gradually moved towards the use of online teaching that focus on collaborative, user generated content and reflective learning, as presented in Table 2.5.

Table 2.5

Major roles of the ODL academic

Academic role	Description	Source/Author
Process facilitator	Coordinates and ensures compliance with all procedures and requirements throughout the entire studies	Berge, 2009; Goodyear, Salmon, Spector, Steeples & Tinkner, 2001; Kallio, Kallio, Tienari & Hyvonen, 2016.
Advisor/ Counsellor	Provides guidance to students/learners and giving timely advice and assistance	Berge, 2009; Goodyear et al., 2001,Mbatha, 2015.
Instructional designer and materials producer	Developing learning materials, such as modules, course outlines, handouts and online content	Bawane & Spector, 2009; Berge, 2009.
Administrator/ Manager	Manages programmes or courses which one is responsible for on a routine basis (ongoing)	Berge, 2009; Gallagher & Gallagher, 2013; Kenny, 2018.
Assessor	Setting assignments and examinations, marking and moderating them using online technology	Bawane & Spector, 2009; Berge, 2009.
Researcher	Creating new knowledge through empirical study or compiling relevant literature and analysing it	Berge, 2009; Diedericks & Rothmann, 2013; Dolence & Norris, 1995.
Content facilitator	Sharing knowledge with students by guiding them through teaching and tutoring	Berge, 2009; Osibanjo, Salau, Falola & Oyewunmi, 2016.

| Communicator | Provides relevant information pertaining to his area/course or programme including feedback after assessment | Berge, 2009; Berg, Huijbens & Larsen, 2016. |
| Supervisor | Supervising research projects, dissertations and thesis and also marking final reports | Berge, 2009; Wiegel, Sattler, Goritz & Diewald, 2016. |

It is evident from Table 2.5 that the roles of academics are so many. If these roles are not rationalised or streamlined, there is bound to be overwhelming work demands which easily lead to work stress.

2.8.2 Emerging roles of academics at ZOU

The Zimbabwe Open University is the only mandated and largest distance-learning institute in Zimbabwe and is state owned. ZOU has undergone a lot of change and transformation since becoming a fully-fledged university in 1999. The roles seem to be moving in line with those spelt above on 2.7.1 as shown by table 2.6, which has the roles split into specific tasks.

Table 2.6

Academic/Lecturer job descriptions **(ZOU, 2000, 2017)**

As at 2000	As at 2017
1. Writing modules	1. Writing modules as requested by Faculty Department
2. Teaching/Tutoring courses	2. Teaching/Tutoring courses in area of specialty including use of E-Learning
3. Setting Assignments and Exams	3. Setting Assignments and Exams in area of Specialty
4. Supervising students research projects /dissertations	4. Supervising students research projects/dissertations including on-line
5. Marking of Assignments, Exams and Research projects	5. Marking of Assignments, Exams and Research projects / dissertations including Online
6. Participating in Research activities	6. Participating in Research activities including publishing papers and conference papers
7. Participating in University & Community service	7. Participating in University & Community Service
	8. Facilitating recruitment of students and Part time tutors in Programme or department

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	9.	Providing academic advisement
	10.	Marketing program(s) through market out reach programs or other initiatives
	11.	Facilitating the formation of a vibrant Alumni Association in your program(s)
	12.	Active participation in income generating projects.
	13.	Counselling students
	14.	Raising funds through active participation in income generating projects
	15.	Participating in any other duties assigned by the region and/or faculty

From the Table 2.6 above, it is clear that academic roles have been added. In 2017, the job description had more duties compared to 2000. This is evidenced by the additional tasks in 2017 shown as numbers 8 to 15. This could cause work engagement challenges, stress and affect service delivery (Deepa, Palaniswam & Kuppusamy, 2014; Vutete & Uzhenyu, 2016). Some of the added tasks such as conducting marketing outreach programmes and income generating projects, are time consuming and more difficult compounded by logistical challenges owing to a shortage of resources (Chabaya et al., 2011; Ndudzo, 2012). The difference in expectations between 2000 and 2013 could have been because of having to effect staff attrition. This was in line with government thrust to reduce its workforce in order to reduce its wage bill (Reserve Bank of Zimbabwe (RBZ), 2015). Hence, the move to have some administrative tasks added to academics' workload to reduce the number of employed non-academics who used to perform some of those tasks.

Over and above, the other requirement is that academics should be tenured within 3 years and complete a Doctor of Philosophy degree within 6 years after being recruited (ZOU, 2013a). These additional requirements and roles also contribute to the pressure on the academics. This may lead to increased job stress and decreased work engagement (Barkhuizen et al., 2014; Hobfoll, 2002; Wright et al., 2015).

The workload seems to become heavy if targets are inserted for each task, some of which appear unrealistic. For example, to publish at least four papers per year (ZOU,

2017), yet salaries are low and usually pay dates shifted (Zulu, 2015). Furthermore, salaries are relatively low compared to other regional neighbouring countries such as Botswana, Namibia and South Africa, yet in these countries research work is usually funded (Brown et al., 2014; Ndudzo, 2012). In ZOU, research work is self-sponsored and academics have been requesting that there be a research fund or grant, but to no avail (ZOU, 2013b).

Given the above, it is evident that a relevant research gap has been identified, in particular how increased ODL academic roles have culminated in increased workload, which should be stressful and creating work disengagement (Barkhuizen et al., 2014; Wright et al., 2015). This surely should affect service delivery in an ODL institution like ZOU especially on the quality of tuition. It can be deduced that ODL academics still experience numerous barriers as they try to move in tandem with technological developments. If there was a decrease in the academics' heavy workloads or roles, that may strengthen both their physical and psychological well-being.

2.9   DIFFERENT SOCIO-DEMOGRAPHIC VARIABLES THAT INFLUENCE WORK STRESS

In this section, the relationships between socio-demographic factors of age, gender, educational qualification, job title, administrative position, work experience and employment status and work stress are discussed. These have been chosen on the basis that they feature prominently in studies related to academics and would be analysed in the empirical results of Chapter 6.

2.9.1   Age

Paykel (1983) in his study found that the elderly had fewer stressful events compared to the young. Aldwin (1990) who argue that the majority of life events inventories, were inherent among the young generation as they experienced problems revolving g around their marriage, cases of divorce, starting new jobs or attending to upkeep of children and young spouses, also supports this. For academics in higher education, no one seems to have found age difference as

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having impact on occupational stress or vice versa (Barkhuizen & Rothmann, 2008; Iyabo & Olufunke, 2012).

2.9.2 Gender

In Sifferlin's (2013) study covering different age groups, females reported feeling more work stress than their male counterparts did. In terms of frequency, females generally are twice as likely as males to experience depression and anxiety disorders (McKeand, 2016). In terms of managing stress, females are generally more stress tolerable than males because they exhibit afflictive social behaviour by being able to befriend the enemy in the event that there is someone causing the stress or they look for support from their immediate family members or close friends (Maestripieri, 2012).

However, when considering gender differences and stress among academic staff in higher education, there is no significant difference in terms of work stress (Barkhuizen & Rothmann, 2008; Iyabo & Olufunke, 2012). There is not much discrepancy even in current research results, as there seems to be no deviation concerning work stress in universities according to gender (Fan, Blumenthal, Watkins & Sherwood, 2015).

2.9.3 Race

Although race or ethnicity and socioeconomic well-being appear to affect stress responses, the direction of this influence is not very clear (Green, Grace, Lindy, Gleser& Leornard, 1990). Apart from stress, there could be other psychological factors influencing health outcomes based on differences of race. However, Kessler and Neighbors (1986) found that by using a race-by-class interaction, higher levels of stress were reported among blacks than whites. Blacks reported higher levels of stressors and outcome, particularly for post-traumatic stress disorder (PTSD) symptoms (Green et al., 1990). In higher education, there seems to be no empirical evidence to show any difference between different races and work stress.

2.9.4 Job title

A supervisor's job is usually more stressful than that of the subordinate (Sifferlin, 2013). Research has established that workers in high-stress positions with little decision-making freedom were at risk of dying young (McDonald, 2015). The findings indicated that by having a higher degree of autonomy in a job, this usually helps to control work-related stress, thereby enhancing the prospect of a prolonged and healthier life. It was also found that lack of discretion usually results in an unhealthy lifestyle (McDonald, 2015). In universities, Iyabo and Olufunke (2012) have supported the same research findings by stating that work roles (jobs) of junior lecturers did not have much discretion in their work compared to those of senior lecturers and professors. This could imply that junior lecturers experience more stress than senior lecturers due to lack of autonomy in their work (Mudrak et al., 2017). Contrary to the above, in a study on occupational stress conducted in South African higher education institutions by Barkhuizen and Rothmann (2008) on academic staff, they found that Associate Professors experienced higher levels of job demands than junior lecturers.

2.9.5 Educational qualification

On this aspect, workers with a lower educational qualifications experience a greater amount of stressful work (Lunau, Siegrist, Dragano, & Wahrendorf , 2015). There was a consistent association regarding low education qualifications and higher work stress levels among academics (Lunau et al., 2015). Academics with higher education levels have better opportunities for skills utilisation, are therefore capable of meeting new occupational challenges, and hence, have relatively low stress levels compared to those with inferior qualifications (Kenny, 2018).

2.9.6 Work experience

In universities, there was high stress levels for non-tenured academics as they were concerned with their job security (Grollman, 2015). These academics usually experience physical symptoms such as headaches, insomnia and depressed immune function (Rockquemore, 2015). However, in a study conducted in South

West Nigeria, there was no significant difference on work stress levels between lecturers of different years of working in higher education (Iyabo & Olufunke, 2012).

2.9.7 Administrative position

The work stress experienced by different administrative positions has been found to vary among different managerial levels or degree of supervision (Johnson et al., 2005). Lower positions were found to be experiencing below average levels of stress contrary to more involving or senior positions (Kahn, 1993), including the teaching profession (Ellis & McNicholl, 2015;Travers & Cooper, 1993). The different stress levels emanated from one's role, role ambiguity and role conflict (Dewe, 1991; Pienaar & Bester, 2006). In a university set up, more stress is likely to be experienced at faculty and departmental levels (deans and chairpersons) and relatively lower for unit or programme specific levels (programme leaders and programme coordinators) (Winter, Taylor & Sarros, 2000). Thus, lack of resources, poor supervisor relations and low job autonomy, increased academics' degree of exhaustion and cynicism, particularly among those academics who hold lower positions and depend on their superiors to authorise the procurement of resources who could prioritise themselves first(Gillespie et al, 2001).

The above section has addressed the following:

Research question 2
How does work stress of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience and employment status*) as explained by literature?

2.10   IMPLICATIONS OF WORK STRESS IN THE CONTEXT OF OPEN AND DISTANCE LEARNING (ODL) ACADEMICS FOR HUMAN RESOURCE MANAGEMENT

The changing demands of ODL academic work roles have been considered in the wake of work stress. This section looks at how roles of academics are developing

over time. Understanding of the work role of the ODL academic is a central concept to this study.

2.10.1   Defining the work role of an ODL academic

A role is a key component of a function, which include some critical competencies (McLagan, 1989). The academic role embeds a set of expectations that define the relevant behaviours and expectations of one jobholder in relation to other academics holding other positions (Johnson & Johnson, 1994). In the ODL context, the role of the academic has shifted from being the centre of instruction to more of being involved in virtual online conversations, which requires more time and implies more demands (Ahmad, Ibrahim & Yusof, 2018; Conceicao-Runlee & Reilly, 1999).

2.10.2   Differences in changing roles of ODL academics

Theorists of distance education such as Holmberg (1982) and Moore (1993) have found out that ODL has become more complex and sophisticated, and that has since changed the role of an academic drastically. The rapid global rise of the use of technology, has forced academics to realign assignments, research projects and other forms of assessment to promote critical thinking skills and improved performance (Baldwin, Ching & Hsu, 2018; Salmon, 2004).

The role of an academic has shifted from that of a direct instructor, being a subject expert or specialist, and is moving towards a broader focus due to the designing of pedagogically effective learning environments (Anderson, 2008). The boundaries that used to demarcate the development and subsequent delivery of ODL learning material are becoming blurred, since such functions are being deconstructed and reinvented to suit modern trends (Bennet, Agostinho, Lockyer & Harper, 2009; Papadopoulos, 2017).

2.10.3   Designing of the early ODL academic model

After realising, the changing roles of higher education academics particularly in ODL due to ever-increasing demands of online teaching, Berge (1995), developed one of

the early models that covered the roles of an academic in a virtual environment. He classified the academic roles under four categories as illustrated by the following Figure 2.5.

Category one: Pedagogical role	**Category two:** Social role
Category three: Managerial role	**Category four**: Technical role
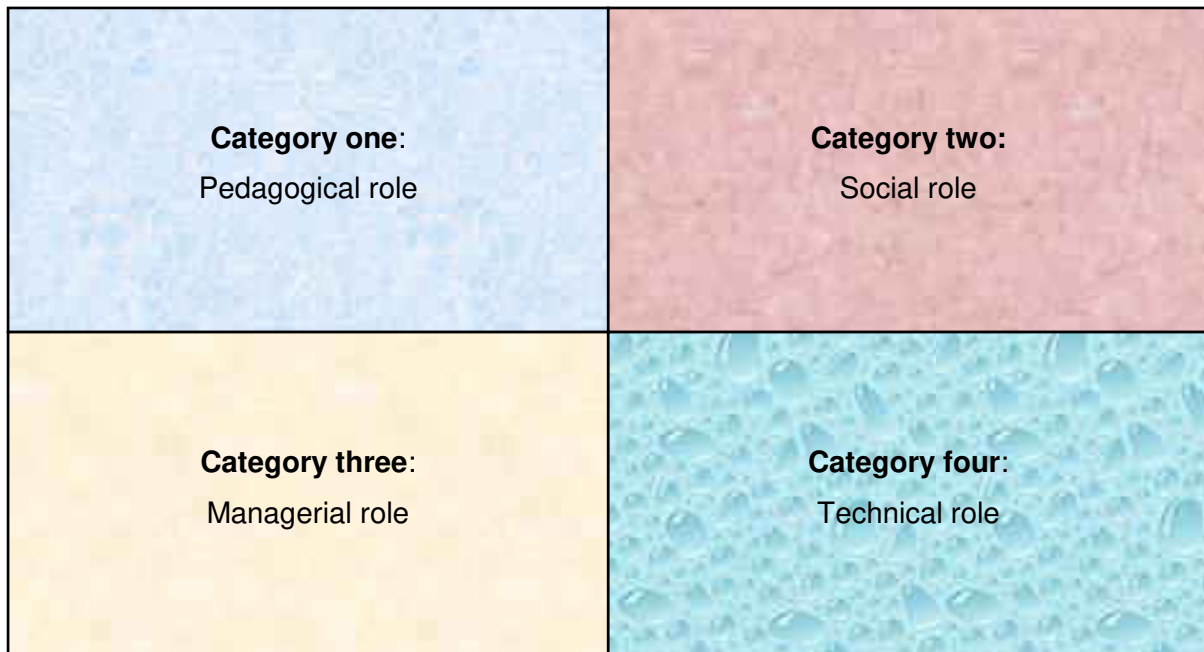
Figure 2.5   The instructor's roles model(Berge, 1995)

A synopsis of each category in Figure 2.5 is given as follows:

(i)   The pedagogical role (category one)

This emphasises the use of discussions to facilitate learning.

(ii)   The social role (category two)

This emphasises the need for sound and cordial relationship between the student and the academic through dialogue and social skills.

(iii)   The managerial role (category three)

This emphasises co-ordinated learning through proper planning, organising, leading and designing the learning framework and logistics.

(iv)   The technical role (category four)

This emphasises the need to provide a user-friendly technological environment to users.

These four roles were suggested during the stressful transition period to an online environment (Berge, 1995). However, the roles still are prevalent in some developing countries like Zimbabwe, owing to slow uptake of the online learning drive (Conceicao, 2006; Paz, Moore & Creel, 2017).

In the field of *human resource management*, work stress is recognised as a critical occupational hazard that usually impairs one's physical health, mental well-being, and actual work performance (NIOSH, 2014). It is assumed that work stress is the moderator between the effect of external job demands and related work outcomes like job satisfaction, engagement, absenteeism, or illness (Maslach, Leiter & Schaufeli, 2008; Zhu, 2013).

It is also important to note that work stress usually emanates from role conflict and role ambiguity (Cervoni & DeLucia-Waack, 2011;Inegbedion, 2017). These factors are linked to burnout as well as low job satisfaction. The multiple demands facing academics due to overlapping roles especially with support staff and conflicts emanating from the dual reporting structure usually in ODL seem to put pressure on decisions to be made on what tasks to perform and how to execute them without adequate resources (Vutete & Uzhenyu, 2016). The tension created by the two factors culminating in job dissatisfaction seems to have been reduced by the introduction of work engagement as a good predictor of job satisfaction (Cesario & Chambel, 2017; Demerouti & Bakker, 2011).

2.10.4 Eustress versus distress

In daily life, the term "work stress" is often used to describe negative situations at the workplace (Darabi, Macaskill & Reidy, 2017). Stress can also be positive and it is known as eustress, whereas distress is negative stress (Fleige, 2017; Selye, 1987). The following Table 2.7 below illustrates the major differences of these two types of work stress.

Table 2.7

Differences between negative and positive stress (eustress and distress)
(Fleige, 2017; Selye, 1987)

Aspect	Eustress	Distress
Behaviour	Motivates, focuses energy	Causes anxiety or concern
Duration or period	Is short-term	Can be short or long-term
Ability	Is perceived as within one's coping abilities	Is perceived as outside of one's coping abilities
Feelings	Feels exciting	Feels unpleasant
Performance	Improves performance	Decreases performance
Health status	Maintains good health	Can lead to mental and physical problems

Eustress is deemed healthful and gives the feeling of fulfilment (Hulsing, 2017). It is usually experienced when one performs a challenging work assignment that is perceived to be neither too difficult nor too easy (Lurea & Safta, 2018). It is therefore necessary for universities to create conducive working environments that promote eustress among academics.

2.11 SUMMARY

This chapter looked at an important construct of this study that is work stress. The historical development of stress was given and showed how new knowledge has cropped up over the years although it remains a complex phenomenon. Stress theories (models) namely, Robbins and, Judge, Person-Environment fit and the JD-R were explained in detail and they all alluded to the fact that stress affected particularly one's health as well as work performance and many other negative effects. Causes of work stress have been explained and studies have revealed that work stress is also prevalent among ODL academics and precipitated by ever changing work roles.   Means of combating work stress have also been looked at.

Reflecting on the literature research aims, this chapter managed to cover the following theoretical research aims pertaining to the construct of work stress:

Research aim 1: To conceptualise and explain the theoretical models of the construct of work stress in ODL academics as explained by literature.

*Research aim 2:*To conceptualise how work stress of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience and employment status*).

The next Chapter 3 covers relevant literature on work engagement.

CHAPTER 3: WORK ENGAGEMENT IN THE CONTEXT OF OPEN DISTANCE LEARNING ACADEMICS

3.1 INTRODUCTION

Work engagement has increasingly become an area of interest in the study of employee behaviour at the workplace. Its influence on an employee's work tempo, commitment, energy, effort and attitude has received a lot of attention from consultancies, academics, human resources practitioners' and organisations. In the contemporary world of work, for companies to compete effectively, they should not only focus on recruiting the best brains or highly skilled work force, but should create a conducive working environment that inspires employees to apply their full potential and capabilities to their work. This chapter addresses the conceptualisation of work engagement and the major models of work engagement, which are affective shift, Job characteristics and the Utrecht work engagement. The causes of work engagement, particularly among ODL academics, would be investigated. The demographic factors that impact on work engagement in distance learning universities, as well as the implications of work engagement in the context of ODL academics, and the discipline of human resource management, will be explored.

This chapter will address the following research questions:

Research question 1
How is the construct of work engagement in ODL academics conceptualised and explained by theoretical models in the literature?

Research question 2
How does work engagement of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience and employment status*) as explained by literature?

3.2   HISTORICAL DEVELOPMENT OF WORK ENGAGEMENT

Kahn (1990) is credited for making inroads in the study of work engagement as a key component of human behaviour at the workplace (Bakker & Albrecht, 2018). He improved Goffman's (1961) role theory, which stated that individuals on different occasions have attachments and detachments towards their role performances. Drawing some inspiration from Goffman's (1961) work, Kahn (1990) then identified a construct on the behaviour of role playing in a work environment which he called work engagement (Van Wingerden et al., 2017). Kahn (1990) defined work engagement as the state of mind of an individual's work role contexts culminating in physical, as well as cognitive and emotional role execution. Alderfer (1972) and Maslow (1943), view each individual as being in need of self-expression and ownership of his or her roles at work. Their views have heavily influenced Kahn's concept of work engagement (Bakker & Demerouti, 2017).

Kahn (1990) studied how people at the workplace ended up being engaged or disengaged by elaborating on the three psychological conditions. These are meaningfulness, safety and availability (Mone & London, 2018). *Meaningfulness* is associated with the feeling that an individual receives something commensurate with his effort based on tasks, assignments, roles and interactions. On *safety,* he refers to it as an individual who is able to work without fearing the possibility of negative consequences to his status at work. Individual and group relationships, as well as intergroup dynamics influence that. On *availability,* Kahn (1990) implies that each individual has a certain extent of physical, emotional and psychological resources that are all needed for each job. Other researchers at the time explored these dimensions. In one study, May, Gilson and Harter (2004) validated Kahn's findings, and their results showed that meaningfulness, safety and availability were all strongly significantly related to work engagement. In addition, the authors established that job enrichment together with role fit, were able to predict meaningfulness of work. Cordial supervisor relations together with rewards were able to predict safety, whereas the availability of resources predicted availability.

Kahn's (1990, 1993) studies also identified work engagement as a key multi-faceted construct having three dimensions. These are vigor, dedication and absorption

(Breevaart, Bakker, Demerouti & Derks, 2016; Gonzalez-Roma, Schaufeli, Bakker & Lloret, 2006). These dimensions are further covered in detail in this chapter. According to Bakker and Albrecht (2018), the understanding of work engagement is largely attributable to the two early theoretical frameworks developed by Kahn (1990) and Maslach, Schaufeli and Leiter (2001).

3.3   DEFINITION OF WORK ENGAGEMENT

Work engagement is a positive, self-fulfilling, job-related state of mind, epitomised by vigour, dedication and absorption (Gagne, 2014; Schaufeli & Bakker, 2010). Rothbard (2001) refers to work engagement as a psychological presence that is composed of two major components namely, attention and absorption. Attention relates to the amount of time that an employee spends on his role(s). Absorption is the degree of being immersed in a particular role, as well as the level of concentration given to that role. Both definitions show the importance of employees' psychological connection with their work. The major difference is that the first definition accommodates the three major sub-dimensions of work engagement which are vigour, dedication and absorption (Schaufeli & Bakker, 2010), whereas the second one, considers absorption only, which should be complimented by attention (Rothbard, 2001).

It is important to also highlight that the terms employee engagement and work engagement are different, despite some authorities saying they can be used interchangeably (Bakker & Schaufeli, 2015; Mone & London, 2018). Work engagement refers to the relationship of the employee with his work only, whereas employee engagement tend to also include the relationship with the organisation.

3.3.1   Work engagement major sub-dimensions
These were raised by Schaufeli and Bakker (2010) and are briefly explained as follows:

3.3.1.1   Vigour
Vigour is characterized by an individual who exhibits high levels of energy, mental resilience and the desire to invest lots of effort in his work as well as persevering even under difficult circumstances.

3.3.1.2   Dedication

Dedication is denoted by strong involvement in one's work culminating in feelings of experiencing enthusiasm, relevance, inspiration, pride and a sense of significance.

3.3.1.3   Absorption

Absorption is epitomised by having difficulties to detach oneself from work because of total concentration and happily engrossed in such work and time is seen to be '*flying'.*

The above three sub-dimensions will be explained in detail by the Utrecht work engagement model on 3.4.3. From the above it is evident that work engagement is connected to all kinds of positive outcomes for any organisation (Bakker & Albrecht, 2018). Some of the positive outcomes of work engagement are:

(i)   Work engagement is related to better performance by the individual, group and entire organisation.
(ii)   High levels of work engagement are related to a high financial turnover (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2012).
(iii)   Work engagement promotes personal initiative.
(iv)   Work engagement enhances organisational commitment.
(v)   Work engagement causes low turnover intention among employees since they are satisfied with their work leaving minimum chances of likely to leave their jobs.
(vi)   Work engagement enhances customer satisfaction and loyalty.
(vii) Work engagement is also linked to individual health outcomes. If workers are full of energy, they are less likely to develop negative effects that adversely affect their health.

According to Chen (2017), as well as, Bakker, Demerouti and Xanthopoulou (2012), work engagement   also enhances the following positive behavioural aspects among employees:

(i)   treating each employee as an essential member of the team (organisation) who focuses on clear goals.

(ii)   feeling being trusted and empowered by receiving frequent and also constructive feedback that help in developing new skills.

(iii)   feeling being thanked, respected and being recognised for achievement.

(iv)   employees having a sense of pride and loyalty arising from working for the organisation.

(v)   instilling positive attitudes and behaviours among employees leading to improved business performance.

(vi)   capitalising on the employees' acquired knowledge and ideas in order to improve the organisation's products and services by promoting and supporting innovativeness.

(vii)   an employee being an ambassador and advocate of the organisation to other key stakeholders like users, clients, suppliers and customers.

(viii)   an employee developing a culture of going beyond ''the call of duty'', for example, going the extra mile to complete an assignment or task even after normal working hours.

(ix)   inculcating a sense of deeper commitment from employees culminating in reduced staff turnover, accident rates decline, fewer leave days' uptake reduction of conflicts and grievances whilst productivity increases.

Work engagement captures how workers perceive and experience their work in terms of being stimulating and energising (Bakker, Rodriguez-Munoz & Sanz Vergel, 2016; Salanova & Schaufeli, 2008). This should determine the degree to which one can commit time, effort and input (the vigour component). There is also the desire for meaningful pursuit of a goal (the dedication component). Lastly, there is the desire to be involved and fully focused (Gonzalez-Roma et al., 2006). Employees should be psychologically connected to their work. They should have a clear understanding of their roles and expectations so that they remain focused. They should be determined and be able to invest themselves wholeheartedly in their roles. They should be proactive and committed to excellent quality performance. This calls for employees who naturally are engaged with their roles and work (Bakker & Leiter, 2010; Wright et al., 2015).

For the above to occur, engaged organisations should have clear, strong, inspirational and authentic values (Chen, 2017; Woo, 2014). There should be clear evidence of the existence of trust and equity based on mutual respect that accommodates the two pronged promises and commitments of both the employers and employees, which should be understood and fulfilled. Work engagement cannot be accomplished by using a mechanistic approach, which attempts to extract discretionary effort by diluting and manipulating employees' commitment and emotions. Such attempts are quickly noticed by employees who usually then become cynical and disillusioned (Travaglianti, Babic & Hansez, 2016).

3.3.2   Two key variables of work engagement

There are two key variables, namely job and personal resources that drive work engagement (Breevaart et al., 2016; Demerouti et al., 2015). Table 3.1 gives a synopsis of these.

Table 3.1

Variables of work engagement (own compilation)

Variable	Implication	Examples
Job resources	Reduces effect of job demands on strain	-Support from work mates and supervisor (Victor & Hoole, 2017) -Job control (Breevaart et al., 2016) -Access to training facilities (Bakker & Demerouti, 2017)
Personal resources	Individual inner drive to make successful impact	-Confidence (Breevaart et al., 2016) -Motivation (Demerouti et al., 2015) -Resilience or perseverance (Bakker & Demerouti, 2017)

Table 3.1 is explained as follows;

3.3.2.1 Job resources

Work engagement is positively associated with job resources such as support from colleagues, supervisors, coaching, and job control. In addition, performance

feedback, task variety, access to learning and development, and training facilities also enhance work engagement (Pride & Tatenda, 2017; Victor & Hoole, 2017). These resources help in reducing the effect of job demands on strain. However, they are also critical to the achievement of work goals, if they can stimulate learning and personal development. One consistent finding was that the motivational potential of job resources is particularly critical where there are high job demands (Bakker & Demerouti, 2017; Demerouti et al., 2015). In ODL, long work hours, work overload and ergonomic problems are some of the job demands, which tend to disengage academics (Hensley, Shaulskiy, Zircher & Sanders, 2015). The negative effects of such demands may be buffered by job resources, which are instrumental to the smooth learning and motivation of academics in an ODL university environment so that they are work engaged.

3.3.2.2   Personal resources

Individual or personal resources, such as optimism, confidence and recovering from a difficult situation (resilience) are key to controlling the work environment and making a positive impact for success (Gerards et al., 2018). Engaged organisations have employees with distinguishable personal characteristics from those in less engaged organisations. The characteristics include extraversion (sociability, energy, assertiveness and talkativeness), conscientiousness (awareness, alertness) and emotional stability (steadiness) (Bakker & Demerouti, 2017; Demerouti et al., 2015; Schaufeli et al., 2009).

Work engagement is related to better performance (Castanheira, Chambel, Lopes & Oliveira-Cruz, 2016). Courtney (2013) found a positive relationship between the organisation's resources, work engagement and the actual performance among workers. There are several possible reasons that explain why engaged organisations have employees who perform better than those which are not engaged (Courtney, 2013; Reijseger, Peeters, Taris & Schaufeli, 2017; Searle & Lee, 2015).   For engaged workers:
- they usually experience more positive emotions.
- they usually have better health.
- they are able to create their own personal and job resources.

- they transfer their engagement to others (cross-over).

3.4   CONCEPTUALISATION OF WORK ENGAGEMENT

In order to have a deeper understanding and appreciation of work engagement the following three models have been looked at namely: Affective shift, Job characteristics and the Utrecht work engagement. These were chosen as they give better insights of work engagement given that they consider different aspects, which relate to the work of academics.

3.4.1   The Affective shift model of work engagement

Developed by Kahn (1990) and further developed by Bledow, Schmitt, Frese and Kuhnel (2011), the affective shift model of work engagement is centred on self-regulation and premised on the assumption that both negative and positive affect contribute a lot to work engagement (Carver & Scheier, 1990; George & Zhou, 2007; Kuhl, 2000). The model proposes that the fundamental mechanism behind the emergence of high work engagement is a change from negative to positive affect. Work engagement emanates from people who would have moved from a situation in which negative affect shifts to that state of high positive affect.

The term *affect* encompasses the presence of short term or temporary affective processes, discrete emotions, and longer lasting mood states (Watson, 2001; Watson, Clark & Tellegen, 1988). The following Figure 3.1 illustrates the Affective shift model of work engagement.
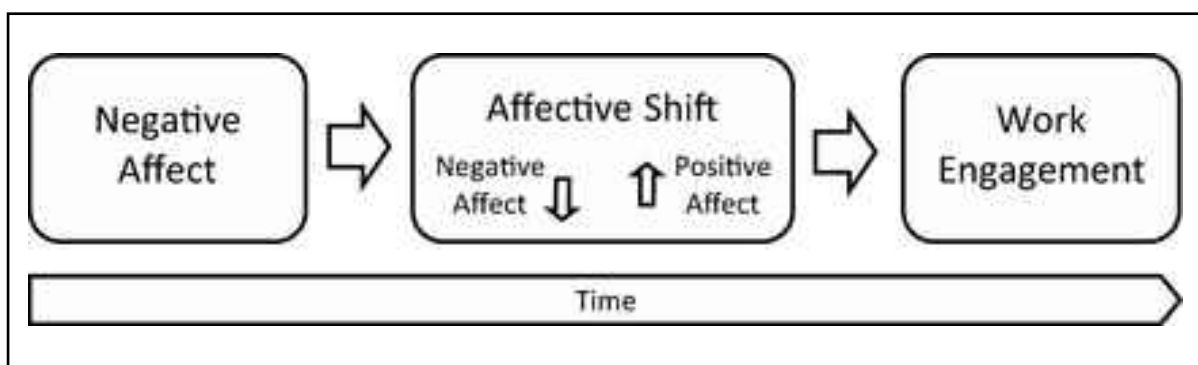
Figure 3.1   The Affective shift model of work engagement (Bledow et al., 2011)

3.4.1.1   Positive affect

A condition of high work engagement entails the presence of positive work-related feelings, for instance happiness and enthusiasm when one is performing work tasks (Kahn, 1990; Schaufeli, Salanova, González-Romá & Bakker, 2002; Zhang, Zhang, Qiu &Tang, 2017). When one experiences positive affect, there is a tendency to set high targets for a task, because of the anticipation that by engaging in a task, positive outcomes would be yielded (Hakanen, Bakker & Schaufeli, 2006). Positive affect contributes to the beginning of goal-directed action, which is a prerequisite for work engagement to occur (Kazen, Kaschel & Kuhl, 2008). During the actual execution of a goal-oriented activity, positive affect supports the comprehension that enhances work engagement and makes one to become entrenched in that ongoing activity (Bailey, Madden, Alfes & Fletcher, 2017). Although work engagement is attached to the presence of positive affect, it is understood that positive affect alone is not adequate to activate the emergence of high work engagement, but only together with negative affect as well (Kuhl, 2000).

3.4.1.2   Negative affect

Negative affect is not compatible with high work engagement, but creates self-regulatory functions that set the foundation for high work engagement at a later point (Kuhl, 2000). Negative affect expedites the analysis of information processing. Most people analyse information by monitoring closely the details and they are usually sensitive to any discrepancies that may arise (Bailey et al., 2017; Schwarz & Bless, 1991). Based on information processing, managers and workers will develop a keen interest in obtaining more details in order to understand a particular situation. Consequently, they would then prepare to take goal-directed action so that they become engaged in the subsequent activity (Bledow et al., 2011; Kuhl, 2000). Negative affect is an indicator of things not moving smoothly that require remedial action to be taken. Negative affect can at times have motivating potential under certain conditions, which would then lead to future improvement in effort, commitment and work engagement. Empirical evidence found that people could only devote more time and put better effort to a proximal goal as long as they

experienced negative affect before realising the actual goal (Louro, Pieters & Zeelenberg, 2007).

3.4.1.3 Affective shift and work engagement

The assumption of the affective shift model is that work engagement can only result from the experience of negative affect and then shifting to positive affect. Work engagement is usually low if people tend to remain in a negative affective state for some time without experiencing positive affect. Contrary to that, if people move to a positive affective state, the motivating potential of negative affect can unfold and increase work engagement (Lyubomirsky, King, & Diener, 2005). The temporal sequence of negative affect, which is then followed by positive affect, is known as an *affective shift* (Bledow et al., 2011; Rayton & Yalabik, 2014). The higher the level of negative affect and subsequent experience of higher level of positive affect, the more pronounced the affective shift. An affective shift can occur at different time intervals. There can be a sudden shift from negative to positive affect in a very short period ranging from milliseconds to hours, days, or longer periods (Barrett, Mesquita, Ochsner & Gross, 2007; Gray, 2004).

An affective shift is reflected by one's *mood*. The term mood refers to one's level of positive and negative affect over a time interval of usually several hours (Bledow et al., 2011; Frijda, 1993; Frijda & Mesquita, 1998). When an individual experiences negative mood in the morning of a particular working day, and then positive mood later in the day, work engagement should be high because an affective shift would have occurred. This implies that the consequence of negative mood in the morning for work engagement in the afternoon depends on the level of positive mood that is experienced between the morning and afternoon work sessions (Zhang et al., 2017). Positive mood that follows negative mood should therefore moderate the working tempo relationship between the negative mood in the morning and work engagement later in the afternoon. Negative mood should therefore be negatively related to work engagement in the afternoon if it is followed by low positive mood (Brewer & Santiago, 2018).

3.4.1.4   Affective events and work engagement

Due to the many different activities and situations encountered at work, people's moods change and work engagement increases and decreases subsequently (Kuppens, Van Mechelen, Nezlek, Dossche & Timmermans, 2007; Watson, 2001). Events are situational precursors of affect and transmit their impact on work engagement through the affective reaction of the individual (Frijda & Mesquita, 1998). Positive events yield positive mood and increase work engagement, whereas negative events are interconnected with negative mood and a decrease of work engagement (Huntsinga & Ray, 2015). If someone receives praise from the supervisor for a task being worked on, there is subsequent increase in positive mood, which then should be supportive of work engagement. In contrast, an event culminating in one becoming aware of a failure is therefore incongruent with one's goals and is therefore likely to disrupt work engagement (Kuppens et al., 2007). After a negative affective event occurs, an individual may reflect on the problematic situation and the potential courses of action to take which may require investment of additional effort (Bailey et al., 2017).

3.4.1.5   Dispositional affectivity

The affective processes underlying work engagement are not uniform across persons but conditioned by the disposition of positive affectivity (Weiss & Cropanzano, 1996). Positive affectivity denotes a personality trait that predicts general affective tendencies across the pattern of one's life (Thoresen, Kaplan, Barsky, Warren & De Chermont, 2003). People high in positive affectivity tend to have a high level of positive mood. They are usually lively, happy and sociable. Those who are low in positive affectivity tend to be frustrated and apathetic (Weston, 2016). Positive affectivity is positively related to work engagement (Langelaan, Bakker, Van Doornen & Schaufeli, 2006). The following *Figure* 3.2 shows the effect of mood level on positive affective.
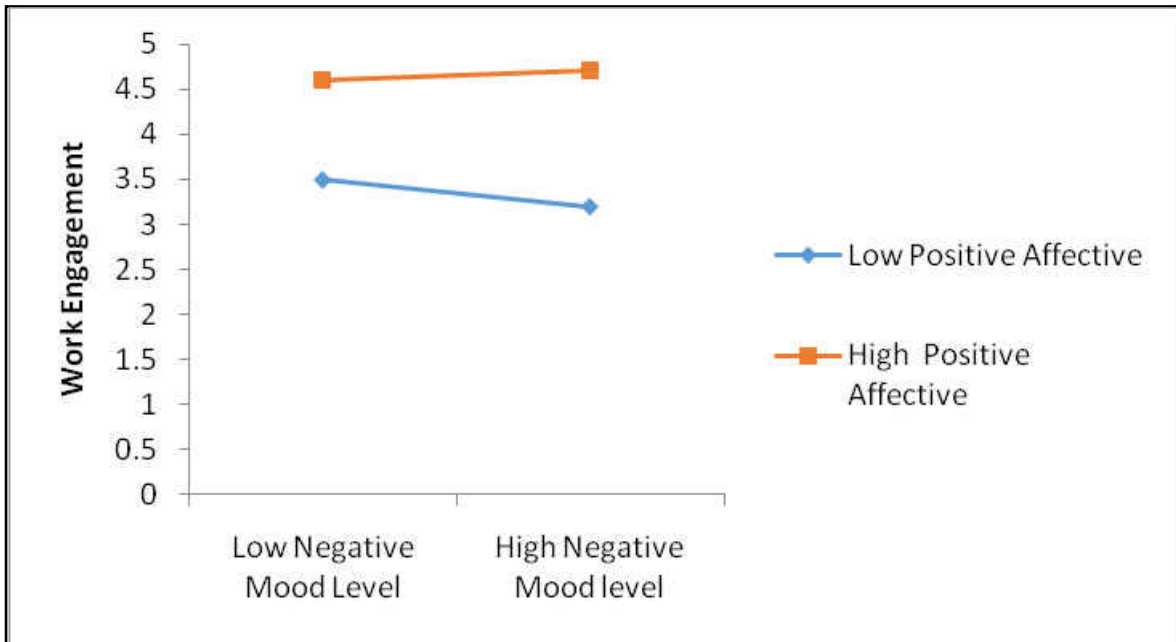
Figure 3.2   Effect of mood level on positive affective(Bledow et al., 2011)

People with high positive affectivity, have a high baseline of positive mood and can easily return quickly to positive mood and high work engagement after occurrence of negative events and experiencing negative mood as shown by Figure 3.2. In contrast, people low in positive affectivity remain disengaged for a long period because of low baseline level of positive mood (Bledow et al., 2011). The following Figure 3.3 shows the effect of positive events levels on positive affective
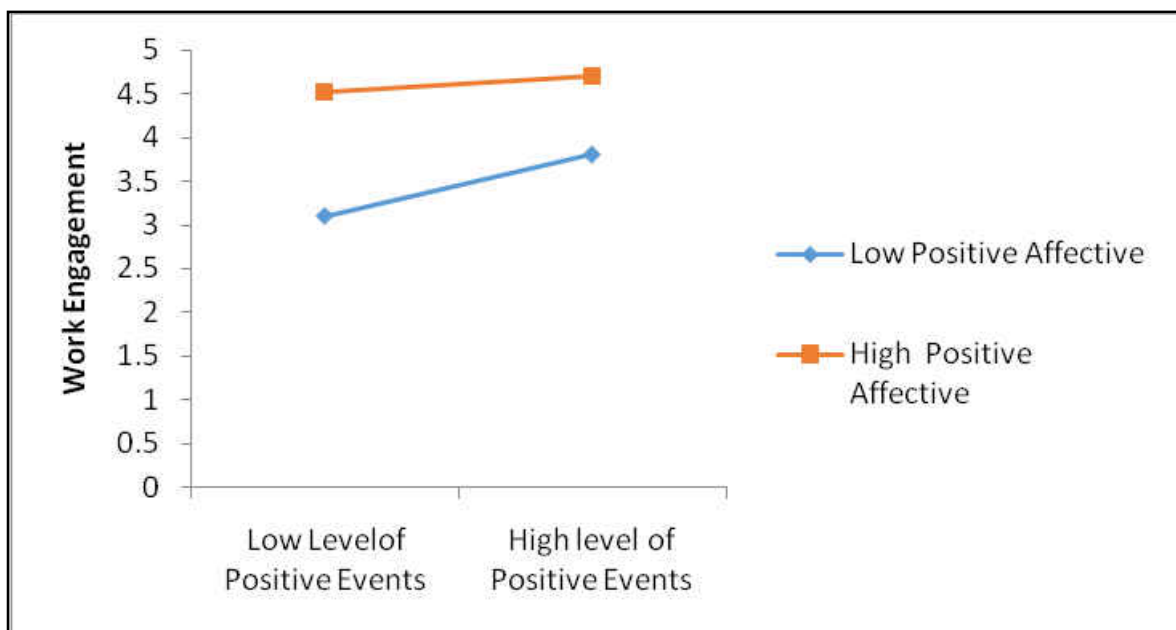
Figure 3.3   Effect of positive events levels on positive affective(Bledow et al., 2011)

Positive affectivity enables employees to show work engagement independent of whether positive events occur at work or not. Figure 3.3 shows that individuals who are high in positive affectivity are relatively less dependent on positive events since positive affectivity can compensate for the lack of positive events at the work place. Contrary to this, there is no internal compensation for any lack of positive events for those individuals who are low in dispositional positive affectivity (Demerouti & Makikangas, 2017).

3.4.1.6 Cross-level moderation of affectivity

Actively engaging at work can reduce negative mood that may arise because somebody would have fallen behind in pursuing the goal (Carver & Scheier, 1990, 2009; Rayton & Yalabik, 2014). Since affective shift can occur over different time frames, there is need to understand whether it would have similar consequences for work engagement and other outcomes over different time frames. It is unclear, whether an affective shift caused externally has the same consequences as an internally induced affective shift (Bakker, 2014; Neumann & Strack, 2000; Weston, 2016). Concerning events, there is need by organisations to conduct a more detailed analysis of various kinds of events and how they impact on work engagement.

Individual employees, supervisors and organisations can shape events (Weiss & Cropanzano, 1996). Organisations should give attention to the typical events that their employees face when performing their daily work and understand how such events are interpreted and how they can be managed. For example, a worker may not react with a decrease in work engagement in the event that he makes an error in an organization whose culture treats errors as opportunities for learning (Van Dyck, Frese, Baer & Sonnentag, 2005). It should be the role of supervisors to play a decisive role that enhances the creation of positive events and to provide support should negative events occur (Zhang et al., 2017).

Managers should comprehend and accept that negative mood and the occurrence of negative events, for example conflicts, crises and errors, are an integral part and unavoidable aspects of human conduct at work (Ewing, 2018; Weston, 2016). The absence of negative experiences can also make people see as if it is not necessary

to act and will then show lower levels of work engagement. Therefore, attempting to suppress and avoid negative events as well as negative mood can be really difficult and ineffective at times (Gross & John, 2003; Mahmood & Sahar, 2017). For organisations, they should invest in systematic assessment and development of affect regulation skills, which is a promising strategy for human resource management. Improved affect regulation promotes employee well-being and job performance.

It is also important to know that creativity is influenced by the dynamic interplay of positive and negative affect (Brewer & Santiago, 2018). High creativity is a result of a person experiencing an episode of negative affect first, that is followed by a decrease in that negative affect to increase positive affect. There is also personal initiative, as well as proactive behaviour that should enable one not to only react to events that take place at work, but also should actively influence the work environment (Bindl & Parker, 2010). This implies that employees because of their initiatives could create the events that in turn will positively affect work engagement.

The Affective shift model is therefore useful in explaining the dynamic nature of work engagement. The core mechanism underlying the emergence of high work engagement is therefore a shift from the negative to the positive affect. Negative affect has motivational effect potential even to academics as it signals that all is not well and that appropriate action should be taken. This dynamic interplay of negative and positive affect at the workplace produces work engagement.

3.4.2 The Job characteristics model

According to Holman and Axtell (2016), Hackman and Oldham (1980) designed the model, which is very useful in the design of the job. It is premised on the notion that the work or job itself is pivotal to employee motivation. Any job that is boring and monotonous stifles a person's motivation to perform or to do the job well. Contrary, motivation is enhanced by a challenging job including the three aspects of variety, autonomy and decision making authority. Two ways of creating variety and challenge are job enrichment and job rotation (Holman & Axtell; Hackman & Oldham, 1980). The following Figure 3.4 illustrates the Job characteristics model.

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CORE JOB CHARACTERISTICS | CRITICAL PSYCHOLOGICAL STATES | OUTCOMES

Skill variety
Skill identity
Skill significance
→ Experienced meaningfullness of the work

Autonomy
→ Experienced responsibility of the outcomes of the work

Feedback from job
→ Knowledge of the actual results of the work activities

High internal work motivation

High "growth" satisfaction

High general job satisfaction

High work effectiveness

Moderators
1. Knowledge & skill
2. Growth need strength
3. "Context" satisfaction

JOB CHARACTERISTICS MODEL
From Hackman and Oldham, 1980

Figure 3.4   The Job characteristics model (Hackman & Oldman, 1980)

As illustrated on Figure 3.4, each job has five key job characteristics. These are skill variety, identification of task, significance of task, autonomy, and feedback. These characteristics have an impact on the three critical psychological states, which are meaningfulness, responsibility for outcomes, as well as the knowledge of the results. The psychological states in turn influences the work outcomes of satisfaction, absenteeism, and motivation.

The five major job characteristics can be combined to come up with what is known as the *Motivating potential score* (MPS). This is an index, which shows the likelihood of a job affecting an individual's attitudes and behaviours. According to Castanheira et al (2016), Hackman and Oldham's (1980) model proposes that a high degree of motivation during the execution of one's work, results in an individual experiencing the following three psychological states:

- *Meaningfulness of work*

Labour or work should have meaning to the job incumbent who should be able to derive intrinsic motivation that is self-satisfying.

- *Responsibility*

Responsibility suits well when one has been accorded the opportunity to succeed by having sufficient freedom to act or decide on his own. This includes the ability to initiate changes as well as having to incorporate the learning gained whilst performing the job.

- *Knowledge of outcomes*

The jobholder should get feedback on how successful his work have been, in order to learn from any mistakes made. The other benefit is that the worker can be emotionally connected to the customers, which is very important, as that should contribute to better customer care.

Hackman and Oldham's (1980) supported by Petrou, Demerouti, Peeters, Schaufeli and Hetland (2012), emphasise that each of these three psychological states is deduced from the five key job characteristics showed in Table 3.2.

3.4.2.1 Meaningfulness of work

The work must be experienced as meaningful, since an employee needs to make a worthwhile contribution that should significantly add value to the overall effectiveness of the organisation (Ramos, Jenny & Bauer, 2016). The following Table 3.2 presents the five job characteristics.

Table 3.2

Enhancing the meaningfulness of work(Own compilation)

Job characteristic	Outcome
Skill variety	Maximisation of talent or potential (job satisfaction) (O'Brien, 1983; Ramos et al., 2016).
Task identity	Reduction of mistakes or errors (Adebayo & Ezeanya, 2010; Ramos et al., 2016)
Task significance	Motivation because of the task's importance to others (Grant & Ashford, 2008; Hofstede, 1984; Ramos et al., 2016).
Responsibility	Performance key result areas and job control (Manove, 1997; Ramos et al., 2016)
Knowledge of outcomes	Monitoring of one's performance (Bowen, 2018; Ramos et al., 2016)

Table 3.2 is explained below:

- *Skill variety*

By using appropriate variety of skills and talents, one should be able to find the worthiness of work through work satisfaction (O'Brien, 1983; Ramos et al., 2016).

- *Task identity*

If one is in a position to identify the work as wholesome and complete, he gets more pride in the outcome of his work including understanding of the complete work requirements (Ramos et al., 2016).

- *Task significance*

Task significance refers to one's ability to attach or evaluate the importance of a task to be performed that is likely to exert a positive impact on the other workers. This is bound to make the person motivated (Grant & Ashford, 2008; Hofstede, 1984; Ramos et al., 2016).

- *Responsibility*

Responsibility emanates from autonomy. This is enhanced if the job enables one to enjoy some degree of freedom, independence, as well as use of personal discretion

in scheduling work and determining the relevant procedures to be used in carrying out that work (Manove, 1997; Ramos et al., 2016).

- *Knowledge of outcomes*

This can only be known if meaningful feedback is provided. If an employee is aware of his effectiveness based on his conversion of effort into performance, he can be able to analyse and even adjust such performance. Feedback usually comes from the supervisor but could also come from others or the job itself (Bowen, 2018; Ramos et al., 2016).

From the information above, it can be deduced that the Job characteristics model is useful in the design of a job and even redesigning it (Holman & Axtell, 2016) by:

(i)   Varying or altering work to enhance skill variety;

(ii)   Assigning work to individuals' or groups in order to promote the wholeness and quality of the final product produced, thereby giving them the opportunity to reflect the job significance;

(iii)   Delegation of tasks to the possible lowest level, in order to create autonomy and granting of responsibility; and

(iv)   Connecting individuals to their work outcomes is desirable if customers are involved, since these can provide more objective feedback for learning.

3.4.3 The Utrecht Work Engagement model

Another important model of work engagement is the Utrecht work engagement model which explains the three sub-dimensions of work engagement. These were briefly given earlier on 3.3.1. The following Table 3.3 shows these sub-dimensions.

Table 3.3

*Sub-dimensions of the UWES**(own compilation)

Dimension	Characteristics
Vigour	High levels of commitment, energy and resilience
Dedication	Work satisfaction, motivation and determination
Absorption	Highly engrossed in work, focused and passion for work

These sub-dimensions are explained as follows;

i.   **Vigour**

Vigour refers to a high level of effort, commitment, energy and mental resilience during actual working, the desire to invest own effort in one's work, and resilience even in the wake of difficulties (Mudrak et al., 2017; Schaufeli & Bakker, 2010). Employees with a feeling of vigour at work have high job motivation and are likely to remain resolute and persevere even when encountering difficulties (Calderwood & Gabriel, 2017). Employee vigour is a significant predictor of organisational citizenship behaviour. Organisational citizenship behaviour refers to employees who go beyond what they should perform as per their job descriptions by helping others at work to improve the proper functioning of the organisation. Mediocrity is a culmination of employees who fail to exhibit good citizenship behaviour. Simmons, Gooty, Nelson and Little (2009) came up with a personality trait, which they called *attachment style* as a significant predictor of vigour. They said that individuals are characterised as having any of the three forms of attachment style namely; secure, counter dependent or over dependent. Those individuals with *secure attachmen*t, usually create healthy and reciprocal relationships with others. They can work well independently, but they also know when to call on others for help should they need it. Simmons et al. (2009) said that the other category of *counter dependent* attachment style avoids close relationships and usually tends to overlook others even if they need help. For the *over dependent* category, they cling to others and want more support than they need and they may be seen as problem makers by others. As predicted, those with a secure attachment style are likely to experience

vigour at their work place, while those individuals with a counter dependent or over dependent attachment style are likely to experience less vigour.

ii.   **Dedication**

Dedication refers to being fully involved in one's work, deriving meaning and satisfaction from one's work and experiencing the work as challenging (Schaufeli & Bakker, 2010). There is also the experience of sense of determination, enthusiasm, inspiration, motivation and pride (Bakker & Albrecht, 2018; Langelaan et al., 2006). Apart from dedication being related to a cognitive state, it also has the affective dimension.The affective dimension includes emotions, feelings and humour. The more dedicated the employees are at the workplace, the more strongly they are able to effectively contribute towards their organisation, thereby leading to high work engagement (Arora & Adhikari, 2013). Dedication constitutes the emotional component of work engagement. It is characterised largely by putting one's heart into his job (Schaufeli & Bakker, 2010). Furthermore, it signifies a strong sense of identification with one's work (Garvey, 2018). Moreover, dedication indicates one's psychological involvement in his work, combined with a sense of purpose and significance (Bevitt, 2015; Van Wingerden et al., 2017). This dimension of work engagement, in turn, has some conceptual similarity with the traditional concept of job involvement, also known as job commitment (Cooper-Hakim & Viswesvaran, 2005). Job involvement is considered as a function that depicts how far a particular job can satisfy an employee's current needs (Arora & Adhikari, 2013). Dedication and job involvement are both regarded as stable phenomena, while the real difference between them seems to have not been clearly argued (Arora & Adhikari, 2013; Cesário & Chambel, 2017). Nevertheless, dedication is a broader phenomenon that includes feelings of enthusiasm, challenge, inspiration and pride, while job involvement solely focuses on the psychological significance of the job in one's life (Arora & Adhikari, 2013).

iii.   **Absorption**

Absorption refers to being fully focused and engrossed in one's work. The employee is not worried about time passing, as he is engrossed in his work (Chen, 2017;

Langelaan et al., 2006; Schubert-Irastora & Fabry, 2014). Those employees, who score high on absorption, normally feel that they are happily engrossed in their work. They also feel immersed in their work and tend to find it difficult to detach themselves from their work because they easily get carried away (Victor & Hoole, 2017). Absorption is characterised by people who are completely immersed in their work, such that time appears to pass so quickly that they tend to forget everything that surrounds them (Bakker & Albrecht, 2018; Chughtai & Buckley, 2008; Schaufeli & Bakker, 2010). This component of work engagement refers to the full concentration, satisfaction and engrossment that individuals receive from performing their job-related tasks, thus deriving pleasure from work. Such individuals usually find it to be very difficult to disengage themselves from their work (Knight, Patterson & Dawson, 2017).Organisations look for employees who devote all their abilities together with their experience when they execute their roles. They need employees who are engaged with their work, since engaged employees are more creative and productive (Bakker & Demerouti, 2007; Deepa et al., 2014).

3.4.3.1 *The relationship between the three sub-dimensions*

The major dimensions of work engagement are considered to be vigour and dedication (Bakker & Albrecht, 2018; Schaufeli & Bakker, 2010) and absorption is usually a consequence of work engagement (Bakker et al., 2016; Langelaan et al., 2006). Work engagement is a motivational process driven by the availability of resources. Job resources which include, autonomy, financial rewards, career opportunities, performance feedback and supervisory coaching, may engage workers, who in turn work very hard (vigour), become involved (dedicated), and subsequently happily engrossed (absorbed) in performing their work (Bakker, Schaufeli, Leiter & Taris, 2008; Grover et al., 2017; Schaufeli & Bakker, 2010).

3.5 DRIVERS OF WORK ENGAGEMENT

In this section, the causation of the work engagement phenomenon will be discussed including its drivers. Work engagement can occur either at individual or organisational level or both, as well as being influenced by job and personal

resources. The following Table 3.4 below shows the characteristics of the drivers that are needed for work engagement to be experienced.

Table 3.4

Drivers and their characteristics that enhance work engagement

Driver	Characteristics
Individual	Optimism, self-efficacy, self-esteem and energetic (Bakker & Demerouti, 2017)
Organisation	social support, good supervision, performance feedback, autonomous working environment (Bakker & Demerouti, 2017; Grover et al., 2017)
Job resources	organizational climate, job control (Wiegel et al., 2016)
Personal resources	resilience, influence on work environment (Kallio et al., 2016)

Table 3.4 is interpreted as follows:

3.5.1 Individual level

Bakker and Demerouti (2017) state that work engagement has its roots in the individual's underlying personality traits. Furthermore, engaged workers may have high in-born levels of energy (Rothman, 2003; Schaufeli & Bakker, 2010). This correlates with the findings of Anthony-McMann, Ellinger, Astakhova & Halbesleben (2017). Macey and Schneider (2008) also support the notion that engaged workers have high energy levels. Xanthopoulou et al. (2012), in concurrence with Mauno, Kinnunen and Ruokalainen (2007), have singled out some personal resources like self-efficacy and self-esteem as strongly related to work engagement. Self-efficacy, complimented with optimism are crucial for an individual's psychological well-being, as well as work–related wellbeing (Hobfoll, 2002; Luthans & Youssef, 2007; Reijseger et al., 2017).

Work engagement is positively related to the extent to which an individual recovers from the demands of the previous working day (Sonnentag & Frese, 2003). Engaged employees do not only work hard because of their strong passion for work and

irresistible inner drive (Victor & Hoole, 2017), but because they regard work as fun (Georgievski, Bakker & Schaufeli, 2010).

3.5.2 Organisational Level

Job resources are important as they correlate with work engagement (Grover et al., 2017; Halbesleben, Harvey & Bolino, 2009; Mauno et al., 2007; Saks & Gruman, 2014), particularly under conditions of high job demands (Bakker, Hakanen, Demerouti & Xanthopoulou, 2007). Many job resources, deemed crucial in organisations, such as social support, supervision, coaching, autonomy, feedback on work performance and opportunities arising at the workplace for professional development, are strongly positively related to work engagement (Hakanen, Bakker, & Schaufeli, 2006; Saks & Gruman, 2014; Szabo, Yoshida, Filakovsky & Juhasz, 2017).

3.5.3 Job resources

These are the physical, social or organisational job aspects that usually reduce the job demands (Bakker & Demerouti, 2017; Schaufeli & Bakker, 2004). Job resources also should be functional in order to achieve work goals and to stimulate an individual's personal, learning, development and growth (Wiegel et al., 2016).

3.5.4 Personal resources

These are positive self or individual evaluations linked to resilience and sense of ability to control and successfully influence the work environment (Bakker & Leiter, 2010; Kallio et al., 2016). Bakker and Demerouti (2017) concluded that employees that have the most personal resources usually score the highest on work engagement.

3.6   BENEFITS OF WORK ENGAGEMENT

Work engaged employees perform better than non-engaged workers (Bakker & Demerouti, 2008; Bakker & Schaufelli, 2015; Jones & Daigle, 2018). Work

engagement contributes to employees experiencing good health, as well as favourable or positive work outcomes (Li et al., 2017; Rothbard, 2001). Work engagement improves workers' performance and this usually provides an organisation with a competitive advantage (Cartwright & Holmes, 2006; Demerouti & Cropanzano, 2010).

A study by Eldor and Harpaz (2016) showed that work engagement was instrumental in explaining the relationship between the organisation's learning climate, employees' creativity and their ability to adapt to the work environment. Work engagement was more useful in explaining that relationship than related concepts, such as job satisfaction and job involvement. Work engagement was found to perform a moderating role in assisting employees to adapt or cope with the work environment.

There has been a marked increase in scientific studies on engagement (Albrecht, Bakker, Schaufeli, Leiter & Taris, 2008; Breevart et al., 2016). Work engagement has been linked to outcomes such as job performance (Bakker & Bal, 2010; Halbesleben & Wheeler, 2008; Van Wingerden et al., 2017), customer satisfaction (Salanova, Agut & Peiro, 2005), financial rewards and returns (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009). These studies also provide better insights about why work engagement is important (Demerouti & Cropanzano, 2010), including for academics employed at universities (Jordan & Weller, 2018; Kenny, 2018).

From the literature studied, it can be deduced that because of work engagement, employees become highly energetic, proactive and self-motivated individuals, who can exert influence over activities that affect their lives. Because of their positive mind-set and activity level, these workers provide their own positive feedback due to their appreciation of being recognised, after accomplishing their tasks (Bakker & Leiter, 2010; Reijseger et al., 2017). Although at times, the employees may feel exhausted after a day's hard work, they tend to interpret their tiredness as a desirable state, because it is linked with positive achievements (Abu-Shamaa, Al-Rabayah & Khasawneh, 2015). Work engagement results in employees enjoying other activities outside their actual work, but still relevant to keep the work tempo and they view work as naturally providing enjoyment and inspiration (Demerouti et al.,

2015; Dermentzi, Papagiannidis, Toro & Yannopoulou, 2016; Georgievski et al., 2010).

3.7 NEGATIVE EFFECTS OF WORK ENGAGEMENT

It is also important to understand that work engagement has its own challenges. According to Gagne (2014) supported by Breevaart et al. (2016), these are:

(i) Work engagement is not the same as productivity

Work engagement may be linked to ''smoke which is not fire''. The primary concern of any business is increasing productivity or output. It is possible that an employee could be fully engaged and emotionally committed to the organisation, but that alone may not necessarily improve output (Salanova, Schaufeli, Xanthopoulou & Bakker, 2010).

(ii) An unclear definition of work engagement

A failure to clearly define a construct makes it difficult to accurately measure it. There are a lot of contradictory definitions of ''work engagement.'' Some managers link high work engagement with stronger feelings, as well as, increased effort. However, other factors like poor leadership, use of wrong skills, improper training and development, tend to neutralise any benefit (s) associated with work engagement (Tims, Bakker & Xanthopoulou, 2011).

(iii) Work engagement is usually a by-product and not a cause

One explanation of the relationship between work engagement and productivity, is that productive employees who are well managed, well rewarded, empowered and recognised, provide good service since these factors create a conducive work environment that enhances work engagement (Anthony-McMann et al., 2017; Xanthopoulou, Bakker & Llies, 2012). Work engagement is usually a by-product of

other people-management factors and does not drive productivity on its own, since its dependent upon other factors such as a conducive environment.

(iv) External factors may influence work engagement

During times of high unemployment, there is a tendency for an employee to be emotionally attached to the firm simply because he is content and happy. For example, if an academic has been offered employment by the university during such trying and difficult times of high unemployment, he would be happy to be employed (Bevitt, 2015).

(v) One can still perform extremely well even without an emotional tie

Motivation factors like level of professionalism in the organisation, pride or self-esteem, pay itself and job security are some of the factors that can still cause an employee to perform and even stay longer in an organisation (Halbesleben, 2011; Herzberg, 2017).

(vi) Too strong emotional attachment may actually cloud performance

Too much "engagement" could cloud decision-making resulting in an employee discounting external threats and becoming opposed to change even if such a change is progressive (Garvey, 2018).

(vii) Measuring emotions rather than behaviour

Many assessors, for example during interviews, tend to focus more on one's emotions rather than actions and behaviours. In reality, actions and behaviours can be observed and measured, but emotions are difficult to measure (Ashkanasy, Zerbe & Hartel, 2016).

(viii) Unreliable responses at times

Work engagement surveys are sometimes dependant on the prevailing condition or situation e.g. the timing aspect may influence the result. For example, those asked after surviving a retrenchment or restructuring exercise or after payment of a bonus, they might want to misrepresent themselves by answering in the affirmative to please management (Zysberg, Orenshtein, Gimmon & Robinson, 2017).

Although the majority of studies have overwhelmingly confirmed that high levels of work engagement usually manifest in numerous positive organisational outcomes, a few researchers have concluded that work engagement also has unfavourable effects or consequences for engaged employees. This includes possibility of mental illness (Alfes, Shantz, Truss & Soane, 2013; Bakker et al., 2011; Reuben & Schaefer, 2017). Being heavily engrossed in work can lead to a tendency of having a lifestyle characterised by long working hours and even challenges of workaholism (Ehrhardt & Ragins, 2018). Work engagement may also lead to workers who fail to balance their work and family life, and that could potentially cause family disintegration (Bakker, Schaufeli, Demerouti & Euwema, 2007; Garvey, 2018)

3.8   DIFFERENT SOCIO-DEMOGRAPHIC VARIABLES THAT INFLUENCE WORK ENGAGEMENT

There are socio-demographic factors that influence work engagement and the major ones, which have an effect on academics, are discussed below. These have been chosen on the basis that they feature prominently in studies related to academics

3.8.1   Age

According to Woo (2014), there are notable differences regarding the influence of age of different groups on their work engagement. The variables or determinants of work engagement job characteristics namely, task and skill variety, produce different relations when considering their effect on staff turnover based on age. This is summarised by the following Figure 3.5.
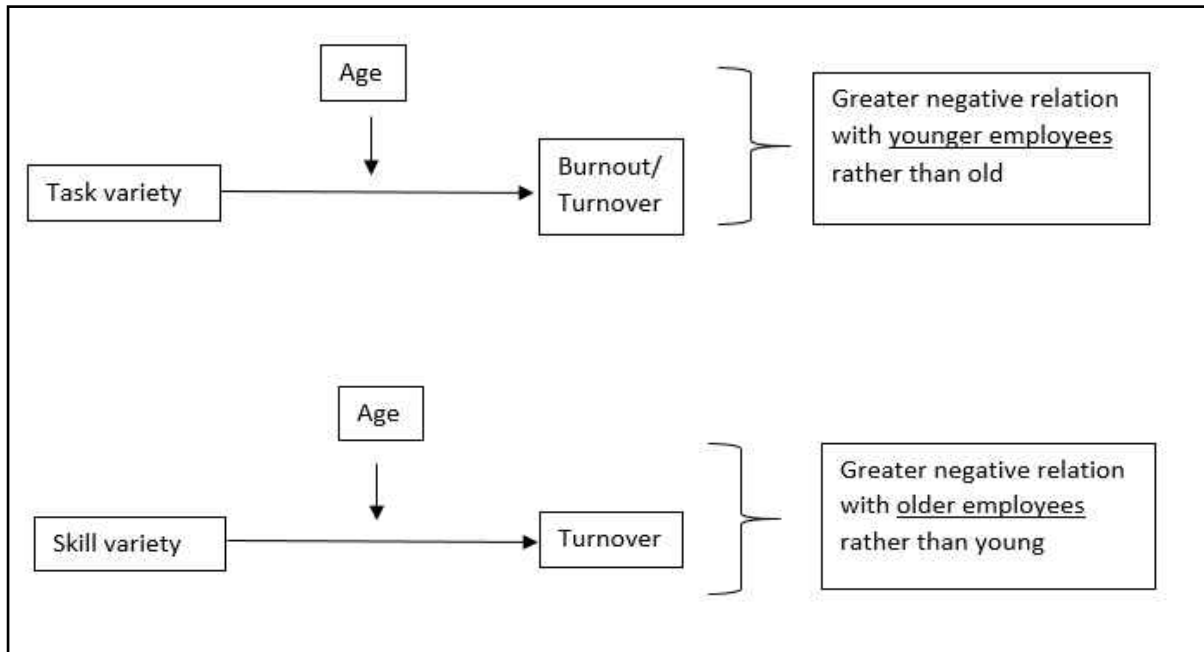
Figure 3.5   Effect of age on task variety and skill variety (Thome, 2013)

From Figure 3.5, younger employees have a stronger preference for task variety, than older employees who prefer skill variety. The younger employees see task variety as a means to develop their job skills, in order to advance their career. Contrary to that, older workers who would have acquired these skills are generally more interested in applying their skills (Thome, 2013). The two scenarios lead to better or improved work engagement and a decrease in both turnover and burnout (Bakker & Xanthopoulou, 2013).

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A study by James, Boyle, Buchman and Bennett (2011) shows how certain factors can affect work engagement, depending on their age. The four influential variables looked at were; immediate supervisor support and recognition, job clarity, schedule satisfaction, career progression and promotion. All four variables promote engagement in employees, but they have different outcomes depending on age. Supervisor support and recognition have a significant impact, especially on older employees, nearing retirement. Job clarity affects all age groups, save for those about to retire. The following Figure 3.6 shows the effect of different ages on work engagement.
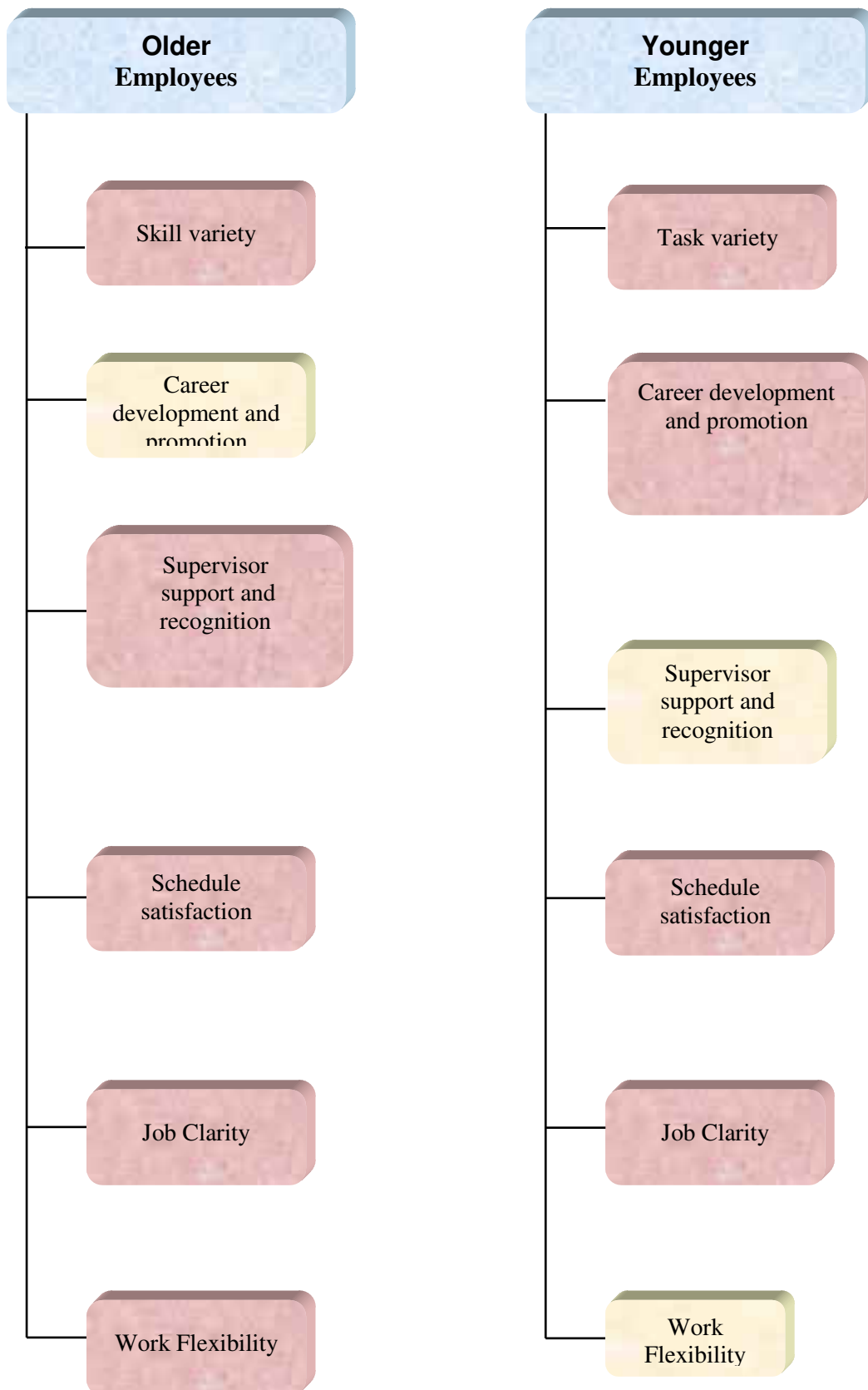
Figure 3.6   Effect of work engagement factors for different ages (James et al., 2011)

Anthun and Innstrand (2016) found that older workers had higher scores on organisational commitment and the meaning of work in the higher education sector. The results suggested that consideration of different interventions be used when aiming to improve work engagement.

3.8.2 Gender

Work engagement is strongly influenced by gender. Generally, males tend to demonstrate higher levels of work engagement than females (Acurantes, 2016; Banihani, Lewis& Syed, 2013). In one study of a large organisation, which looked at work engagement as well as staff retention, it was found that men have more concern for achievement and personal growth than women (Acurantes, 2016) do. The study found that both men and women seem equally motivated by strategy, especially on their belief in the company's mission and vision. In a related study by the Human Capital Institute and Achievers, the results indicated that males were the most engaged employees (Thome, 2013). In a study by Bezuidenhout and Bezuidenhout (2014), female academics had just above average scores on work engagement, which were lower than male academics, and they recommended that universities should introduce a management strategy that facilitates nurturing, as well as allowing them to take full responsibility for their own wellness. Furthermore, there was a need to detect early signs of decreasing work engagement depending on the work environment, which might not be gender sensitive, instead of dismissing it simply as either lack of energy or mere fatigue (Schaufeli & Salanova, 2011).

3.8.3 Race

There is no significant difference on work engagement based on race/ethnicity status (Jones, Ni & Wilson, 2009; Jordan & Weller, 2018). They also found that white employees' work engagement was relatively low in comparison with other race group members such as blacks, coloureds and Indians in their nationwide survey which included several professions in the United States of America. In terms of psychological availability, which refers to individuals intentions to invest themselves cognitively and psychologically at work (Kahn, 1990) as a way of enhancing work

engagement, this was higher among the black, Indian, and coloured workers (Laba & Geldenhuys, 2016).

3.8.4 Job title

Work engagement is strongly related to one's professional working title or occupational roles within their organisations (Schaufeli & Salanova, 2011) and even in a university (Byrne, 2000). A highly ranked position such as a professor in a university organogram (structure), along with work environment resources and job autonomy, envisages an intention to be work engrossed and the desire to stay within that position (Landy & Conte, 2016; Rees & Smith, 2017; Robbins, 2010). Supervisors have significantly higher work engagement and lower turnover intentions than low or line-level employees (Lu, Lu, Gursoy & Neale, 2016).The integrative theory by Saks and Gruman (2014), which looks at how different psychological conditions of employees including their job title affect work engagement, outlines career growth as positively related with work engagement.

3.8.5 Educational qualification

The more socially recognised and important of a profession is, as well as a higher grading in a job evaluation system, the more likely the job incumbent experiences work engagement (De Lange, De Witte & Notelaers, 2008; Subbaye & Vithal, 2017). In addition, a job position linked to a higher level of academic and professional qualifications is related positively to work engagement and even in a distance learning institution (Saba, 2016; Zawacki-Richter, 2017).

3.8.6 Work experience

Long serving members are usually loyal and satisfied and are more productive and likely to remain with the organisation longer. On the other hand, new employees get frustrated if their expectations are not met and they become dissatisfied and less productive, with high chances of them likely to quit (Bartlomiejczuk & Jin, 2015). Motivation and job design theories suggest that more time in a particular role (job

specialisation), enhances one's work engagement and motivation, culminating in satisfactory performance (Xanthopoulou, Bakker, Kantas & Demerouti, 2012).

3.8.7 Administrative position

Studies have shown that positive attitudes toward work such as organisational commitment, job involvement and job satisfaction, are related to work engagement (Schaufeli & Bakker, 2004). In line with Maslow's hierarchy of needs, the job status (esteem needs or self-ego) and the organisational structure, play critical roles in determining the level of work engagement (Robertson, 2016). Engagement is not an attitude, but the degree to which one becomes attentive and absorbed in the execution of their roles that depend on the position that one holds (Green, Finkel, Fitzsimons & Gino, 2017). In higher education, one's administrative position in a faculty does not influence how one becomes engaged, but it is other factors such as; curriculum barriers (due to unclear objectives, poor curriculum design), cultural barriers (student and university leadership attitudes) and environmental and financial barriers, that influence work engagement (McDonald, 2015). There are no significant differences among academics of different administrative positions in a faculty in terms of their work engagement (Van den Berg, Bakker & Ten Cate, 2013).

The above section has addressed the following:

Research question 2
How does work engagement of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience and employment status*) as explained by literature?

3.9   IMPLICATIONS OF WORK ENGAGEMENT IN THE CONTEXT OF OPEN AND DISTANCE LEARNING (ODL) ACADEMICS AND HUMAN RESOURCES MANAGEMENT

Job demands and inadequate job resources largely contribute to job dissatisfaction, whereas optimal job resources enhance work engagement of academics in higher

education institutions (Barkhuizen et al., 2014; Pride & Tatenda, 2017; Zulu, 2015). Barkhuizen et al. (2014) raised another dimension of dispositional optimism, which had a direct effect on academics' perceptions of job resources, but an indirect effect on work engagement. Resources used for coping with work stress are derived from both job and personal characteristics of work engagement (Barkhuizen et al., 2014). Furthermore, adverse consequences of work, which include excessive stress and ill-health should not be solely examined from the work characteristics perspective, but even personal characteristics as well (Castanheira et al., 2016). This supports the dual-process model developed by Schaufeli and Bakker (2004), which states that for academics to have higher work engagement there is need for the availability of appropriate job resources.

Career-related skills, abilities and competencies, have a significant positive effect on work engagement (Plomp et al., 2016). Managers and Human resources (HR) practitioners should optimise employee well-being by focusing on HR policies that improve work engagement, as well as, investing in training and development of career competencies. It is important for HR practitioners and managers in ODL universities to have an understanding of academic competencies (Roberts & Bezuidenhout, 2017), and their significant effects on work engagement.

3.9.1 Work engagement and ODL academics' competencies

Despite the majority of academics' competencies being similar to a large extent, they also differ depending on whether the learning mode is ODL or conventional. McLellan (1996) define a competency as an individual skill or ability that has a bearing on behavioural efficiency. Competencies are predictors of behaviour, as well as performance (Lee et al., 2017; Spencer & Spencer, 1993). In terms of characteristics, competencies could be traits, self-belief, attitudes, cognitive skills, content knowledge or values, but should be reliably measured or counted (RezaeiZadeh, Hogan, O'Reilly, Cunningham & Murphy, 2017).

In light of this study, ODL academics need specific competencies to enable them to adapt to the changing higher education environment, as they need the knowledge, skill, capacity and correct attitude to perform to expectations (Asunda, Calvin

&Johanson, 2018; Baranova & Surikova, 2010). These competencies are shown in the following Table 3.5

Table 3.5

Competencies of ODL academics

ODL academic competencies	Description	Author (s)
Designing	Developing new curriculums, courses and programmes	Arinto, 2013; Aydin, 2005; Lentell, 2003.
Knowledge expertise	Course/subject specialist, use of online teaching technology and producing learning materials	Chen, 2017; Lentell, 2003; Varvel, 2007.
Mentoring	Moulding and preparing students for the world of work, imparting life skills	Asunda et al., 2018; Lentell, 2003.
Facilitating	Providing guidance and helping students towards goal accomplishment	Jordan & Weller, 2018; Lentell, 2003.
Problem solving	Should provide solutions	Lentell, 2003; Smith-Tolken & Bitzer, 2017.
Resource coordinating	Should manage resources e.g. time, budgets, monitoring equipment	Aydin, 2005; Santos, 2016.
Teaching and assessing	Providing instruction, lectures, tutorials and setting and marking assignments, exams and dissertations	Arinto, 2013; Subbaye & Vithal, 2017.

A number of authorities, view competencies of ODL academics in the context of them being designers, knowledge experts, mentors, facilitators, problem solvers and resource co-ordinators. Santos (2016) feels that they should have competencies in technology, online education and curriculum design, communication and time management. Arinto (2013) suggests that they need competencies in designing learning activities, developing content, teaching techniques and assessment of students' work and performance. ODL academics need professional development in light of the ever-changing complex higher education environment despite a plethora of challenges or barriers they face (Chen, 2017; Varvel, 2007).

3.9.2 Work engagement challenges experienced by ODL academics

Like in any other profession, challenges and barriers that interfere with the smooth execution of one's roles or duties are inevitable and ODL academics are not an exception. A barrier is a condition that makes it difficult for an activity or a task to make the desired progress in order to accomplish an objective (WordNet, 1997). In the context of an ODL academic, barriers are the aggregate impact of institutional impediments that deter the effective participation and involvement of academics in teaching and learning activities (Olcott & Wright, 1995).

There is a need for a proactive approach by institutions to support academics to overcome challenges emanating from massive investments in contemporary technology and online teaching (Jordan & Weller, 2018; Salanova & Schaufeli, 2008). A number of barriers related to such innovations require that academics engage in new behaviour and that universities should strive to eliminate negative attitudes and perceptions towards the new technology and inventions (Gumusay & Bohne, 2018).

In addition to the technological challenges, cultural and technical barriers seem to be prevalent in the working environment of an ODL academic (Berge & Mrozowski, 1999; McDonald, 2015). The cultural barriers hinge on the resistance by academics to adopt innovations, as well as their negative buy-in of technology. The technical barriers comprise a lack of adequate infrastructure, lack of exposure, connectivity and more so, the technical support (Mudrak et al., 2017).

The barriers are classified into three groups (Pajo & Wallace, 2001). These barriers can be:

(i)   Personal

The personal barriers comprise inadequate training and appreciation, lack of skills, lack of knowledge, inadequate time to design and implement the online courses (Maguire, 2005; Pajo & Wallace, 2001).

(ii)   Attitudinal

The attitudinal barriers include the lack of trust on technology, fear of use of technology, unwillingness to embrace technology and doubts over student access and capacity to measure up to desired expectations (Blanco-Portela, Benayas, Pertierra & Lozano, 2017).

(iii)   Organisational

The organisational barriers include heavy workload of academics, insufficient technical support, inadequate resources that are related to infrastructure, hardware and software (Stoffregen, Pawlowski & Pirkkalainen, 2015). The heavy workload of ODL academics is repeatedly raised as one of the principal barriers affecting their optimal functioning and perfomance (Kenny, 2018; Naidu, 2014; Panda & Mishra, 2007; Pride & Tatenda, 2017). Because of busy work schedules of academics, there is lack of time for them to adequately develop learning material. In addition, lack of time, is another worrying factor why many ODL academics have failed to use new technology since there is hardly time to invest in learning the needed requisite skills (Baethge, Vahle-Hinz, Schulte-Braucks & Van Dick, 2017). Bates and Kaye (2014) have also argued that ODL academics are facing an ever-increasing diverse working environment, yet they lack training that is commensurate with such changes, thereby lacking appropriate skills for the digital era.

3.9.3 Benefits of work engagement to distance learning institutions and academics

The literature seems to suggest that there is a lot that can be done by universities, through their human resources departments, to enhance work engagement among ODL academics. According to Janse van Rensburg, Rothmann & Diedericks (2018), work engagement is emerging as one way used by organisations including ODL institutions to measure the effectiveness of their investment in human capital (Boudreau & Cascio, 2017). Employers' measure and use work engagement data to improve their work ethos retain employees, thereby increasing business financial

success (Attridge, 2009; Lochner, 2004). A job that satisfies an academic would motivate him to be more committed and have passion with his work. This has helped most individuals including academics, to deal effectively with the demands arising from stressful work (Britt, Adler & Bartone, 2001; Sonnentag, Mojza, Demerouti & Bakker, 2012).

Other notable areas where work engagement is important to human resources practitioners, including those employed in ODL institutions are:

(i)   Work engagement is related to individuals' attitudes, perceptions and intentions, and that affects one's conduct at the workplace (Sonnentag et al., 2012).

(ii)   Work engagement determines the individual's quality of work and his own experiences of performing that work, as well as the organisation's desired outcomes, especially growth and productivity (Kahn, 1990; Morgan, 2017).

(iii)   The experience of engagement is a self-fulfilling positive work-related experience and state of mind (Bakker & Albrecht, 2018; Schaufeli & Bakker, 2010).

(iv)   Work engagement is also related to better health and positive work influence such as job satisfaction (Garg, Dar & Mishra, 2018; Johnson, Robertson & Cooper, 2018).

(v)   Employees who continue to engage themselves are satisfied with their jobs, because they enjoy favourable reciprocal exchanges from the organisation, such as recognition, advancement or promotion (McInerney, Korpershoek, Wang & Morin, 2018).

(vi)   Engaged employees who usually trust and have better relationships with their supervisors, exhibit positive attitudes and show favourable intentions toward the organisation (Bakker & Demerouti, 2017; Ten Brummelhuis, Oerlemans & Bakker, 2016).

The above literature demonstrates how work engagement is an important concept in organisational psychology and human resource management. Having engaged employees in organisations such as ODL universities, will inspire a strong workforce that has focus and energy. Each one of them would be keen to ensure his personal

development. The workers would also accept and adapt to change, thereby contributing to organisational objectives through improved business outcomes, in terms of productivity and profit.

3.10 SUMMARY

The aim of Chapter 3 was to provide more insight on work engagement by covering many of its fundamental issues. Work engagement denotes the positive behaviour due to one's positive state of mind at the work place that leads to favourable work related outcomes. The chapter has described employees who exhibit high levels of work engagement as energetic and being dedicated to their work to the extent of being immersed to their work. Work engagement is centred on the three major sub-dimensions of vigour, dedication and absorption that have been discussed in detail. The three models namely, the Affective shift, Job characteristics and Utrecht work engagement, were discussed using existing literature as well as related studies on the construct of work engagement.

Reflecting on the research aims, this chapter managed to cover the following theoretical research aims pertaining to the construct of work engagement:

Research aim 1: To conceptualise and explain theoretical models of the construct of work engagement in ODL academics as explained by literature.

Research aim 2: To conceptualise how work engagement of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience and employment status*).

This chapter has improved the understanding of the importance of work engagement particularly its relationship to the changing roles of ODL academics. The next Chapter 4 covers service delivery, which is the ultimate key construct in this study as it, is the result of the outcome based on the previous constructs of work stress and work engagement of academics in ODL.

CHAPTER 4: SERVICE DELIVERY IN THE CONTEXT OF OPEN AND DISTANCE LEARNING

4.1   INTRODUCTION

Service delivery is fundamental to the survival of any organisation, especially in modern times where competition is intense due to globalisation and technology development. This chapter looks at the importance of service delivery in ODL universities, and why it is regarded as a key component of any university's success and enhancement of its competitive advantage. The changing work roles of academics in ODL universities have been scrutinised by covering work stress and work engagement in the previous two chapters. Therefore, the impact of these two constructs on service delivery is pivotal to the human resource management of academics and how best they can be fully utilised, in order to provide the most effective and efficient service that benefit both the students and the ODL institutions. This chapter aims to investigate theories and models on service delivery by providing better insights on this construct, as well as the relationships between these three constructs of work stress, work engagement and service delivery.

This chapter will address the following research questions:

Research question 1
How is the construct of service delivery in ODL academics conceptualised and explained by theoretical models in the literature?

Sub-question 1.1: What is the theoretical relationship between work stress and service delivery in ODL academics?

Sub-question 1.2: What is the theoretical relationship between work engagement and service delivery in ODL academics?

Sub-question 1.3: What is the theoretical relationship between work stress and work engagement in ODL academics?

Research question 2

How does service delivery of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*) as explained by literature?

Research question 3

Do academics and students have significant differences in their perceptions of service delivery in ODL?

Research question 4

What evidence can be supported by existing literature that shows that there is close association between work stress, work engagement and service delivery?

4.2   HISTORICAL DEVELOPMENT OF SERVICE DELIVERY

Service delivery and expectations of service delivery dates back to the industrial revolution that started in Great Britain in the 18th century and then spread to other parts of the world (Juran & Bingham, 1974). A number of theories pertaining to service delivery were developed after the second world war that ended in 1945 (Chase, 1981; Crosby & Free, 1979). However, significant interest in service delivery gathered momentum in the early 1980s (Senge & Oliva, 1993) when the service quality/service capacity model was developed (Boulding, Kalra, Staelin & Zeithaml, 1993; Moissis, 1989). This model looked at the waiting time for customers to be served, taking into account the capacity or competencies of the service provider. Oliva, Oliver and MacMillan (1992) refined the model and made the following three major conclusions pertaining to service delivery:

(i)   It is very difficult to measure quality owing to subjectivity because of its intangibility.

(ii)   Service quality level is a function of the number of personnel, including their skills and experience, as well as, the supporting infrastructure.

(iii)   Underinvestment in service capacity leads to poor quality of service, low morale among staff, high staff turnover and mediocre business performance.

Since the turn of the new millennium, service delivery has taken centre stage and has established itself as the key component that is attributable to any successful organisation. In light of the massive competition due to globalisation, service delivery is increasingly important, also in higher education (Lemoine, Hackett & Richardson, 2016; Noaman, Ragab, Madbouly, Khedra & Fayoumi, 2017; Perera & Abeysekera, 2015). Stiff competition has also reached alarming levels in higher education institutions throughout the world particularly in distance education, and service delivery has become instrumental to lure students for better enrolment figures, even at the Zimbabwe Open University (Chadamoyo, 2016; Moyo & Hadebe, 2018; Richard, 2016).

4.3 DEFINITION OF SERVICE DELIVERY

Mupamawonde and Tarwireyi (2013, p.176) citing (Lovelock & Wirtz, 2011) define a service as an act, deed, input or effort, production and performance that should not be seen, kept (stored) or touched in the same manner as physical goods, but only perceived, sensed and experienced. A service is therefore the action of helping to benefit the welfare of another individual or party in need (Ali & Garg, 2017; Rodrigues, Hussein, Aktharsha & Nair, 2013). *Service delivery* is a common phrase used to describe the distribution of basic resources citizens depend on, like water, electricity, sanitation infrastructure, land, housing and education (Le Chen, Dean, Frant & Kumar, 2014).

4.3.1 Characteristics of a service
Services have unique characteristics and these are shown in the following Table 4.1.

Table 4.1

Showing characteristics of service

Characteristic	Major features	Description
Perishability	Cannot be stored	A service cannot be stored, saved, returned, or resold once it has been used. Once it is rendered to a customer, it is completely consumed and therefore cannot be delivered to any other customer. (Mupamawonde, 2014; Tharangani & Patabedige, 2017).
Intangibility	Cannot be touched or seen	A service is not a tangible product, cannot be seen, tasted, or touched. A service is made and delivered on spot. (Mupamawonde, 2014; Nyenya & Bukaliya 2015; Tharangani & Patabedige, 2017).
Variability	Human element makes it difficult to maintain consistency	The quality of a service varies depending on who provides it, where, when and how it is provided. There is difficulty in achieving standardization as well as quality control. (Mupamawonde, 2014; Subrahmanyam, 2017; Tharangani & Patabedige, 2017).
Inseparability	Difficult to separate provider and service when marketing	A service is unique because it is usually provided and consumed at the same time as well as same location. There is simultaneous production and consumption (Ali & Garg, 2017; Mupamawonde, 2014; Tharangani & Patabedige, 2017).
Non ownership	No ownership of service	The consumer does not attain ownership of the service. The provider owns the service rendered (Mupamawonde, 2014; Tan & Kek, 2010; Tharangani & Patabedige, 2017).

4.4 CONCEPTUALISATION OF SERVICE DELIVERY IN THE CONTEXT OF OPEN DISTANCE LEARNING UNIVERSITIES

Service delivery, particularly in ODL universities, could be best understood by Moore's Transactional distance theory (Moore, 1993), Kolb's Experiential learning theory (Kolb, 1984) and the Servqual model (Parasuraman, Zeithaml & Berry, 1994). These three have been selected on the strengths of their ability to explain the key aspects that characterise learning, specifically, in the context of distance education and how service delivery issues can be explored. These are explained below.

4.4.1　Moore's Transactional Distance theory

The theory was developed for distance education (teaching) and became prominent in the late 1990s. Moore (1993, 2009) described ODL as an instructional method in which teaching behaviours are executed apart from the learning behaviours. In this case, print, electronic, mechanical or other devices, must facilitate communication. This theory is useful in assisting ODL institutions' to plan for better service delivery by making relevant decisions, that will lead to effective amount of structure, dialogue and autonomy, as well as, preparing learners to adapt to the learning conditions under its different independent methods of instruction. This would help to determine the predominant delivery mode at a particular phase of distance learning (Nikolaki, Koutsouba, Lykesas, Venetsanou & Savidou, 2017; Zawacki-Richter, 2017).
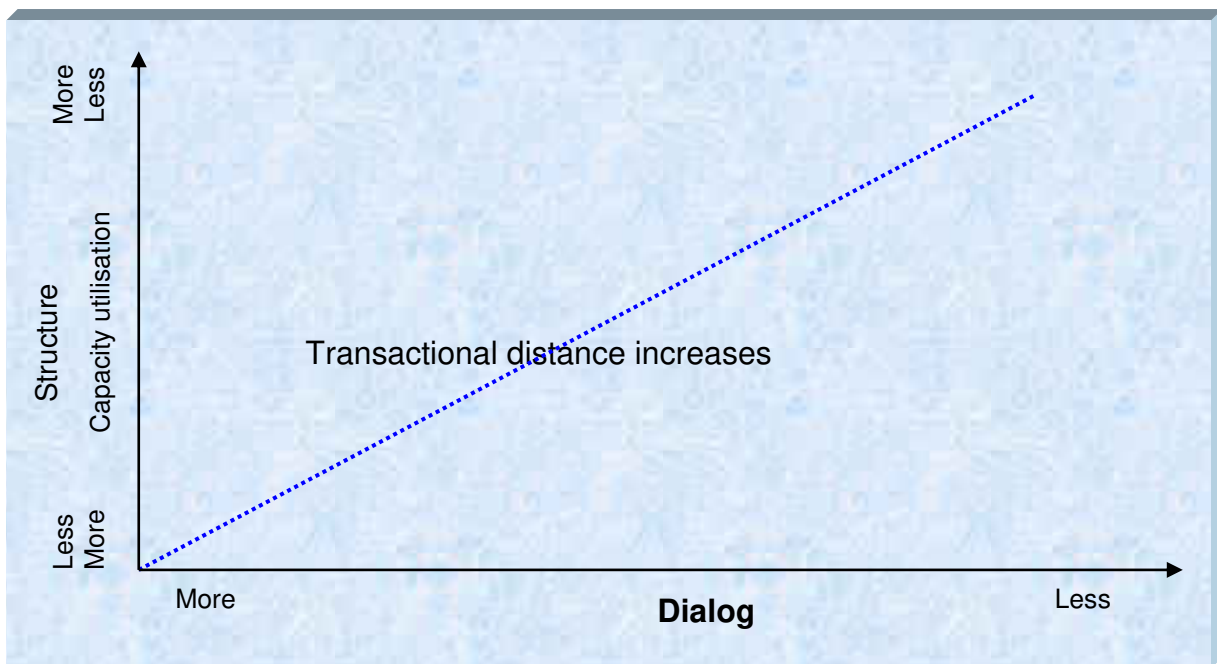
Figure 4.1　The Transactional distance theory (Moore, 1993, 2009)

According to Moore (1993, 2009), there are a number of independent methods of instruction used in ODL (Huang, Chandra, DePaolo & Simmons, 2016). These methods initially covered television, radio, correspondence, programmed instruction, computer assisted instruction, telephone, dial access audio tapes and independent learning on campus. He classified these into; more individualised and less individualised programmes. He further classified programmes as involving high

dialogue (constructive interaction) and low dialogue (textbook study) (Huang et al., 2016; Moore, 2009).

Moore (2009) stated that the degree of autonomy required of the learner increases as the transactional distance increases (Saba, 2016). Such autonomy means that the student largely dictates the pace of learning which is more self-directed. That allows the learner to contact the academic (tutor) at his or her own time and pace (Zawacki-Richter, 2017). This is why ODL is seen as more flexible, as students can be occupied with other activities at certain times (Nyenya & Bukaliya, 2015). For example, at ZOU the majority of students are gainfully employed (Chabaya et al., 2011). If the requests for support from students continuously increase, that may cause stress to academics and reduce work engagement (Bezuidenhout, 2014). Although the student can frequently ask for support from the academic, it implies that the workload could be increased dramatically since the academic needs to address the same problem to the entire class individually. This is unlike in a conventional set-up, where the problem can be tackled usually at once before the entire class (Firat, 2016; Ryan, Carlton & Ali, 1999). Autonomy is a three dimensional concept. For any programme, the type of control the learner is allowed should be in formulating goals, implementing the learning programme and assessing progress (Harpine, 2013; Kaatrakoski, Littlejohn & Hood, 2017).

Moore (2009) explained that pedagogical or transactional distance is a function of two sets of variables, that is Dialog (D) and Structure (S) resulting in four types of programmes namely:
1.   No dialogue and no structure (–D –S);
2.   No dialogue but structure (–D +S);
3.   Dialogue and structure (+D +S); and
4.   Dialogue but no structure (+D –S)

The D and S are viewed as continuous variables.

When autonomy is low, the need for structure becomes high and vice versa. Therefore, programmes with low dialog require a high degree of learner autonomy. The capacity of the learner for autonomous learning is influenced by the learner's

conduct, learning styles, learning experience, the scope or context to be taught (Moore, 2009; Tharangani & Patabedige, 2017).

Based on the above, ODL institutions such as ZOU, could utilize Moore's Transactional distance theory to design courses for different degrees of learner autonomy by varying dialogue and structure. Such variations should also take into account the nature of the academics workload, so that it is manageable for effective service delivery (Barkhuizen et al., 2014). The workload should not be so high that it becomes too stressful and adversely affect work engagement (Kenny, 2018).

If the ODL model of service delivery for ZOU is considered, it seems to have been structured along Mooré's *Transactional Distance theory* since the institute's communication with its students has been facilitated by the use of print, mechanical and electronic devices. This makes it a very important and applicable theoretical framework for this study. ZOU's mode of delivery has been modelled as shown in Table 4.2 with the goal of improving service delivery.

Table 4.2

Phases of ZOU's mode of delivery (ZOU, 2008)

Phase	Learning mode
1	Modules or readers and more contact hours
2	Modules and reduced contact hours
3	Gradual removal of modules and introduction of e-learning
4	Full implementation of e-learning

These phases in Table 4.2 are elaborated below together with the periods;

- **Phase I (2001-2005)**

For this phase, modules in written format were mainly used as the learning mode. A module is a book with essential learning material that covers the content of the syllabus of a particular course (Ariefiani, Kustono & Pathmantara, 2016; Knox, 2005). It has units and self-help activities and references for further reading at the end of each unit. Where modules were unavailable, readers were used. A reader is

learning material that covers the major topics of a particular course and the material is usually downloaded from already on-line literature. The reader was only used as a temporary measure where a module was not yet available. Contact hours between the students and the tutor in a classroom set up per semester ranged between 12-16 hours per course.

- **Phase II (2006-2010)**

Modules remained the main mode of delivery. However, classroom tutor-student contact hours were reduced to only 6 hours per course per semester. The reduction of classroom contact hours was meant to allow more student autonomy in line with the Transactional Distance theory (Moore, 1993, 2009).

- **Phase III (2011-2013)**

This phase was supposed to gradually phase out the use of printed modules and then introduce the e-learning mode of delivery. Both students and tutors were supposed to mainly resort to the use of e-books and journals. Submission and marking assignments was to be via online methods including tutorials and feedback via You Tube (an internet facility).This phase according to ZOU original plan, was supposed to have been fully implemented by 2013.

- **Phase IV (planned for 2014-2016)**

This last phase was earmarked for total adoption of e-learning, using advanced Information and Communication Technology, such as the *MyVista* software programme, in order to be in tandem with global best practices. MyVista is an online platform (web portal), provided by ZOU on its website to allow communication between academics and students through interactions and discussions. This phase according to ZOU planning should have been fully implemented by 2016.

At the beginning of 2015, when the researcher commenced with the development of the research proposal of this study, ZOU was still on Phase II of its ODL delivery mode. Since 2013 (the past five years), ZOU has been struggling to move towards Phase III, due to what appears to be a serious shortage of financial resources, possibly, due to an under-performing national economy (Ndudzo, 2012; Pride &

Tatenda, 2017; Zulu, 2015). This lack of resources situation could be worsened if the government goes ahead with its plan to wean off all state universities including ZOU, from being dependent on state funding (Tarusikirwa & Mafa, 2017; Zulu, 2015). This is in line with the Zimbabwean government's expectation of public universities becoming fully-fledged independent entities by cutting government expenditure (Kunofiwa & Odhiambo, 2013; Uzhenyu, 2017; Woldegiorgis & Knight, 2017; Zulu, 2015). This remains a very sensitive and topical issue in Zimbabwe even at the time of writing this thesis report. The intention of government to reduce its expenditure on state universities is very likely to adversely affect ODL service delivery to students. Such reduced financial support would affect academic-student learning behaviour in ODL, which has largely developed over the years as explained by the *Transactional Distance theory* by Moore (1993, 2013).

At ZOU, like any other ODL institution, the level of autonomy of the student is dependent upon his or her other family, social or work commitments and the ability to access library services and Internet facilities. By varying the degree of dialog and structure in the programme, ODL institutions like ZOU, could utilise Moore's Transactional distance theory to design courses for different degrees of learner autonomy. Such variations should also take into account the nature of the academics' workload so that it is manageable (Tomei, 2005). The workload should not be so high that it becomes too stressful and adversely affect work engagement and service delivery to students (Chen, 2017; Di Biase & Rademacher, 2005; Wonacott, 2001).

4.4.2   Kolb's Experiential Learning Theory

Kolb's (1984) theory, states that learning is a process that involves the attainment of abstract concepts that are flexible for application in a diverse range of situations (Seaman, Brown & Quay, 2017). Kolb (1984) states that the process of learning involves the creation of knowledge largely by the transformation of experience. Therefore, the level of experience for both the ODL academic and learner has a strong bearing on service delivery. The theory provides an opportunity for a better tailor made service to the learners (Grady, 2017) and is shown by the following Figure 4.2.
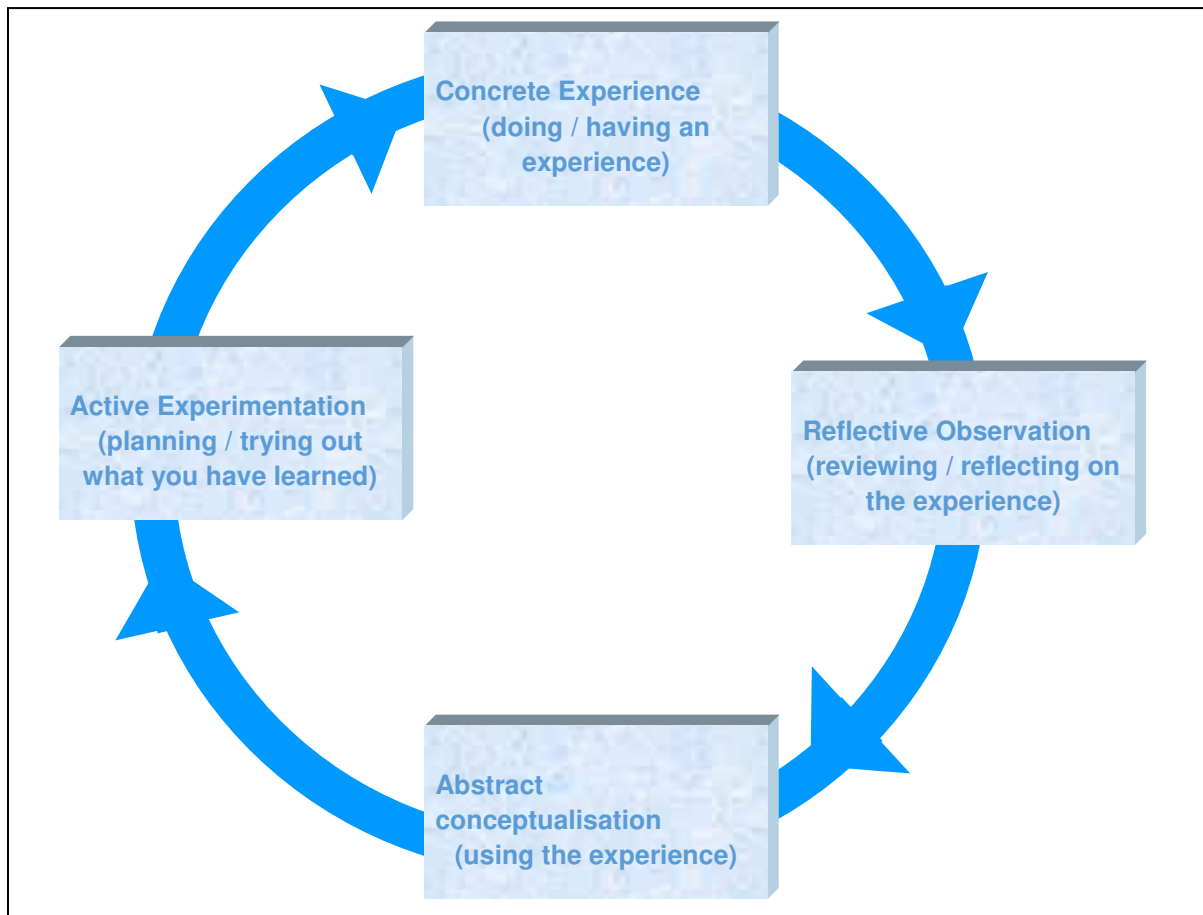
Figure 4.2   The experiential learning theory (Kolb, 1984)

Kolb's experiential learning theory has a four stage learning cycle, which requires the learner to be taught in order to be familiar with each cycle (Kolb, 1984; Wurdinger & Allison, 2017). If learners are well versed with each stage, this will help improve the culture in an ODL university between academics and learners, thereby, improving service delivery since they would have a common understanding of the institution's values, procedures and processes (Huda et al., 2017; Van Der Westhuizen, 2014). This requires academics who are qualified and experienced in distance learning and students who should know the differences between distance and conventional learning so that they can weigh these options.

4.4.2.1 The four stage cycle

The four stage learning cycle is explained as follows:

Stage 1: Concrete experience

This refers to a situation in which new experience is encountered or in which the existing experience is reinterpreted.

Stage 2: Reflective observation

At this stage, one has to reflect on the new experience on a personal basis, but should take note of any inconsistencies that can arise between experience and understanding.

Stage 3: Abstract conceptualisation

Whereas reflection helps to generate new ideas, at this stage, the learner makes effort to conceptualise a principle, theory or model of what would have been observed.

Stage 4: Active experimentation

This active experimentation stage provides the learner with the opportunity to apply the ideas to his surroundings or world around him, in order to see the actual results. An example would be an experiment in a laboratory or actual fieldwork. Kolb (1984) views learning is therefore an integrated process and that each stage should be mutually supportive of the next stage that it feeds into. One can enter the Experiential learning cycle at any stage and then follow through the cycle's logical sequence. The following Figure 4.3 is a simplified version of the Experiential Learning cycle.
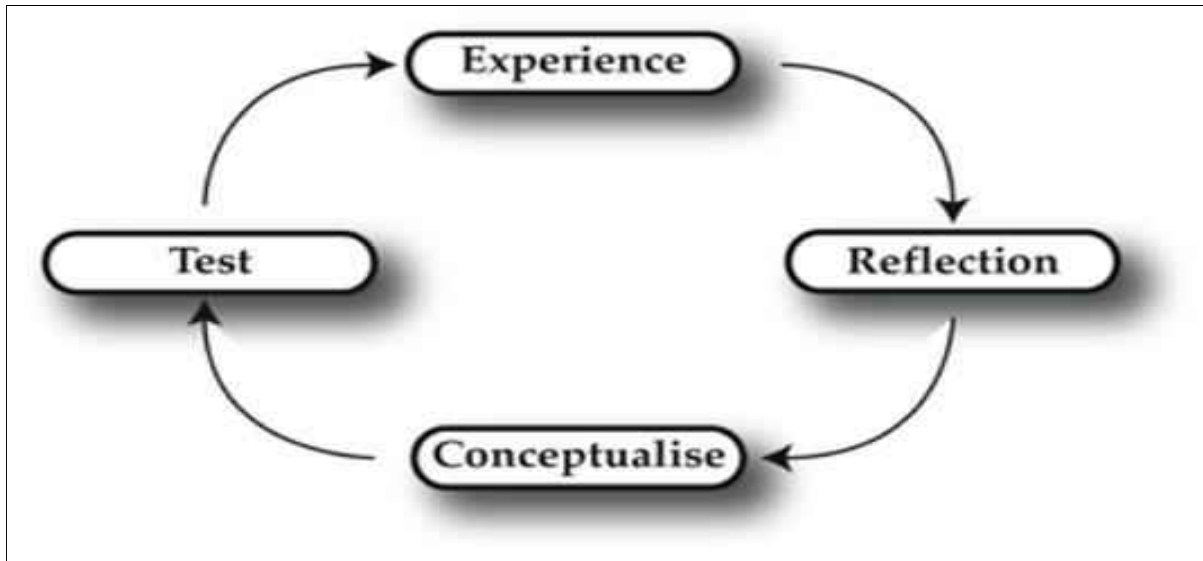
Figure 4.3   A simplified experiential learning cycle (Seaman, Brown & Quay, 2017)

4.4.2.2   Learning Styles

Kolb's Experiential learning theory of 1984 has culminated in four distinct learning styles (Wurdinger & Allison, 2017). From these styles, different people opt for a particular single different learning style. A number of factors such as; the social environment, academic and educational experiences as well as individual characteristics influence the individual's preferred style (Chiou, Lee, Tien & Wang, 2017). Kolb's (1984) learning style can be explained based on two key dimensions namely; how an individual understands the information and how to then process it. This has manifested in four learning styles outlined as follows:

1 Diverging style

Those individuals, who are accustomed to this type of learning style, usually look at things from a very different perspective. They would rather prefer watching than doing. They also have the passion to work in groups, have relatively strong imaginationcapacity, and are emotionally strong in the area of arts with broad interests in accommodating different people and cultures. Because they are accommodative, they are open-minded and accept criticism as a way of progressive feedback. The learning characteristics combine concrete experience and that of reflective observation (Chiou et al., 2017; Kolb, 1984).

2 Assimilating style

Under this learning style, those interested would prefer to work with good and clear information. They use that information to logically format and explore analytic models. They prioritise formulating concepts and abstracts. The dominant characteristics include the abstract conceptualisation and the reflective observation (Kolb, 1984; Newton & Miah, 2017).

3 Converging style

For this learning style, learners endeavour to solve problems by putting their learning into practical aspects. The learners prefer technical tasks as well as experimenting with new ideas. The learning characteristics are made up of abstract conceptualisation and that of active experimentation (Kolb, 1984; Rahiminia, Rahiminia & Sharifirad, 2017).

4 Accommodating style

Individuals who prefer this kind of learning styleare usually attracted to new challenges and deal with them practically, as well as, solving problems intuitively. The dominant learning characteristics are the use of concrete experience as well as active experimentation (Frantz, De Jager & Roman, 2017; Kolb, 1984).

4.4.2.3   Educational implications of Kolb's experiential learning theory

According to Grady (2017), these are:

(i)   The instructor or teacher is able to develop relevant and appropriate learning materials for the learners.

(ii)   Teachers are able to design activities that give opportunities to the learners so that they learn in the best manner that suits them.

(iii)   The activities conducted, enable the learners to acquaint themselves with the entire experiential learning cycle process.

4.4.3   The Servqual model

Servqual is a common quality management framework that measures quality and service delivery in the service sector (Nyeck, Morales, Ladhari & Pons, 2002; Soares, Novaski & Anholon, 2017). The Servqual model suits very well ODL institutions like ZOU in their planning process of attempting to address key service components that are pivotal to service delivery. ZOU provides education services to open distance learners, and therefore falls into the service delivery sector. The Servqual service quality model is often used to establish any actual or perceived discrepancies (gaps) between what the customer expects and perceives of the service being offered. It outlines the main components pertaining to high quality service (Buttle, 1996; Yeo & Li, 2014).

The concepts of service quality and customer satisfaction are critical and organisations such as ZOU must understand them in order to remain competitive in business (Kolar, Erčulj & Weis, 2018; Mupamawonde, 2014). The customer in the context of this study is the ZOU student, who expects to get good education service from the ODL institution. It is very important for organisations to know how to measure these constructs from the consumers' perspective, in order to better understand their needs and, hence, satisfy them. Service quality is considered very important, because it leads to higher customer satisfaction, profitability, reduced cost, customer loyalty and retention (Jaroensrisomboon, 2009; Kasiri, Guan, Sambasivan & Sidin, 2017). Zeithaml, Parasuraman and Berry (1990) originally identified ten elements of service quality, but these were collated into five factors namely: reliability, assurance, tangibles, empathy and responsiveness. That created the acronym RATER. Organisations using Servqual, attempt to measure and effectively manage service quality by using a questionnaire. This questionnaire attempts to assess or measure the customer expectations on service quality by incorporating these five factors (Lee, 2017). In addition, the questionnaire also intends to establish the customers' perceptions about the quality of service they receive. When customer expectations exceed the actual received service, service delivery is considered low. Apart from being used as a measurement model, Servqual is also applied as a management model (Nadiri, Kandampully & Hussain, 2009; Soares et al., 2017). This concept may also apply to higher and tertiary

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education, to measure the service offered by higher education institutions including ODL universities like ZOU.

Studies using the Servqual model have been conducted before to measure service quality in ODL institutions. Some of these ODL institutions' are; University of South Africa (Gorringe & Hochman, 2006), Indira Gandhi National Open University (Nsamba & Makoe, 2017), Open University of Sri Lanka (Perera & Abeysekera, 2015); Open University Malaysia (Hairudin, 2005). The student would replace the customer or learner as it applies to this study. This is possible since tertiary institutions provide learning services. This study intended to determine what service expectations ODL learners have. The Servqual model identified five gaps that may cause customers to experience poor service quality (Uppal, 2017; Zeithaml et al., 1990). Such gaps could be also true for ODL learners. The following Figure 4.4 illustrates the Servqual model gaps
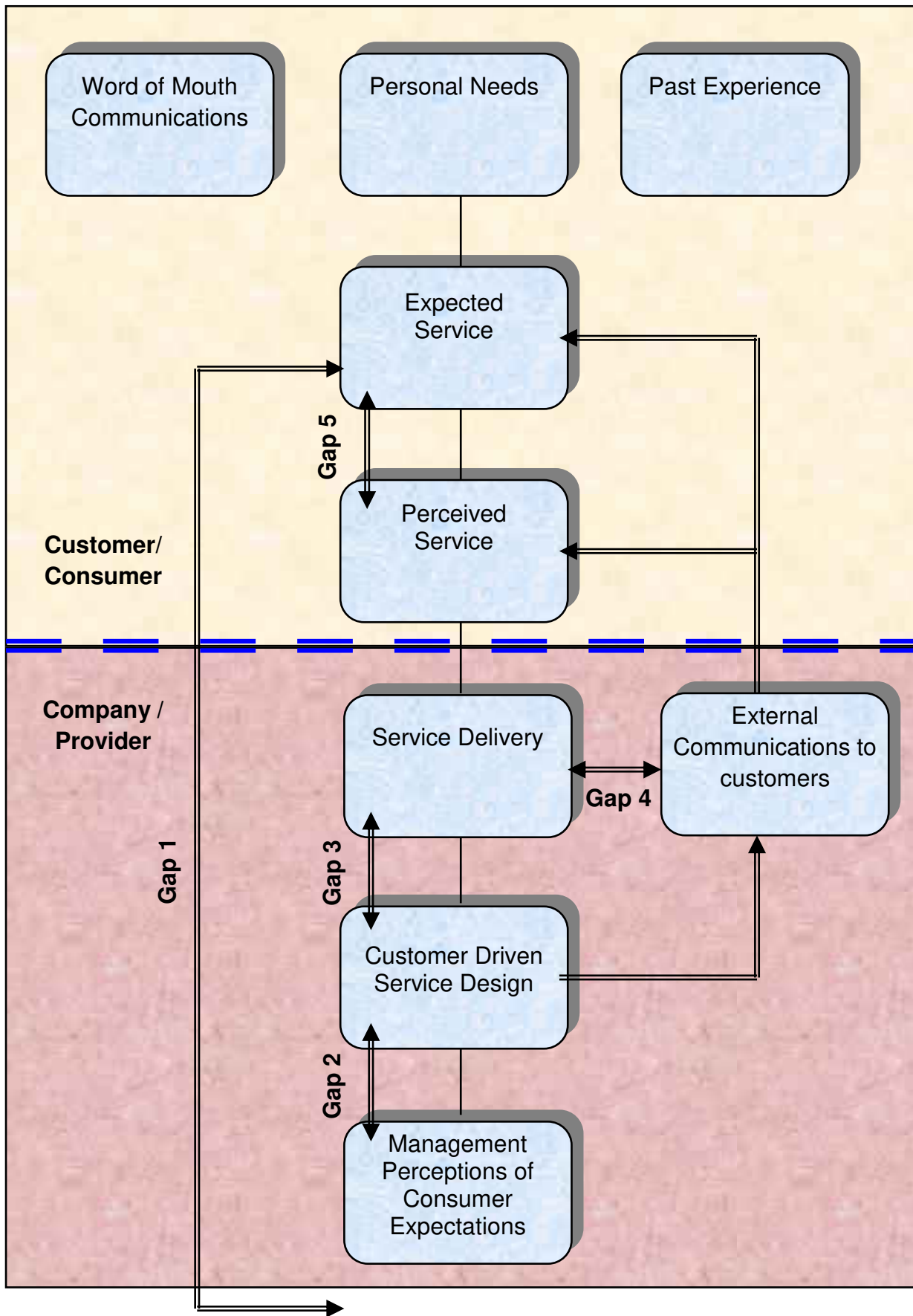
Figure 4.4   The Servqual model(Zeithaml et al., 1990)

- Gap 1: Between consumer expectation and management perception

This gap is seen when management incorrectly perceives what the customers want (Mupamawonde, 2014). For instance, academics may think that students want high marks, yet they could be more concerned with the quality of tuition and the need to comprehend the courses (Stephens, Doherty, Bennet & Margey, 2014).

- Gap 2: Between management perception and service quality specification

Although the management might be able to correctly perceive what the customer wants, they may fail to set an appropriate performance target (standard) (Soares et al., 2017; Van Der Westhuizen, 2014). An example would be where the faculty or senate determine assignment due dates without considering the amount of work involved as the set dates could be unrealistic for students.

- Gap 3: Between service quality specification and service delivery

This gap usually arises through poorly trained staff that is incapable of meeting the set service standard (Kotler & Armstrong, 2016). At ZOU, it appears the staff competencies and qualifications were negatively affected due to brain drain as many senior academics have left the university (Ndudzo, 2012; Tettey, 2006). Furthermore, not much training has been done to prepare for e-learning for both academics and learners.

- Gap 4: Between service delivery and external communication

In most instances, consumer expectations seem to be highly influenced by business statements such as financial reports and promises made by company officials or their representatives including their advertisements (Kotler & Keller, 2012; Nyenya & Bukaliya, 2015). The gap usually arises when these anticipated expectations are not fulfilled by the time of delivery of that service (Vutete & Uzhenyu, 2016). For example, ZOU promising students that there is a flexible fees payment system. Learners may want to stagger payment over the entire semester (6 months), yet the allowed period by ZOU could be only 3 months (ZOU, 2015a).

- Gap 5: Between expected service and experienced service

This gap usually arises when a consumer or client misinterprets the service quality (Latif, Latif, Farooq Sahibzada & Ullah, 2017; Mupamawonde, 2014). For example, in a tutorial, the learner may expect the tutor (academic) to provide a lot of detail. The learner may expect a lot of notes and information handouts, whereas the tutor may only dwell on major concepts and not really lecture as per the learners' expectations.

The simplified RATER model enables customer service components to be explored and assessed quantitatively (Nyeck et al., 2002). The Servqual measuring tool remains one of the most complete attempts to understand and measure service delivery. The Servqual measuring tool can be applied effectively to examine various service industries such as education, healthcare, banking and financial services (Nyeck et al., 2002). However, for testing service delivery at ZOU, a distance education university, the Servqual model is also very appropriate since similar studies have been conducted to measure service quality in open and distance learning institutions (Abbul-Rashid & Latif, 2004; Nyenya & Bukaliya, 2015; Perera & Abeysekera, 2015). The Servqual model should therefore be able to measure accurately the level of service delivery that ZOU offers, in light of the ever-changing roles of academics.

4.5 CHALLENGES FACING OPEN DISTANCE LEARNING SERVICE DELIVERY

The issue of service delivery challenges has also been looked in this section in order to cover particularly Africa and even the ZOU. This would help to compare international trends with the results of this specific study at ZOU. The following discussion is organised based on the major challenges facing distance learners.

4.5.1 Major e-learning challenges affecting open distance leaners

The strong need and increased demand for continuous learning, especially by adults have led to the emerging of ODL across the African continent (Nyerere, Gravenir &

Mse, 2012). However, the provision of ODL as a contemporary mode of education faces various challenges, chief among them, those pertaining to infrastructural development. Kumar (2015) identifiedfive common challenges, presented in the following Table 4.3, facing students in distance education through e-learning. He raised these challenges after conducting a study on why a lot of students who after being attracted to online education, failed to complete their courses.

Table 4.3

Challenges of e-learning among distance education learners(Kumar, 2015)

Challenge	Description
Adaptability struggle	Difficult to adapt to virtual computer based learning from traditional classroom face to face contact
Technical issues	Poor internet connectivity mainly in some developed countries
Computer literacy	Failure by many to use even simple computer packages due to lack of exposure in primary and even secondary education
Time management	Difficult to manage online learning due to several other commitments
Self-motivation	Some belief that use of computers is complicated and they may give up due to lack of self-motivation

These challenges in Table 4.3 above have a direct effect on service delivery and are discussed below:

- Adaptability Struggle

Switching from the traditional face-to-face learning to virtual computer-based training makes the learning experience very different for students, especially older adults. Initially like in any change process, there is bound to be resistance to change, as there is reluctance to adapt to an online learning environment and that usually takes time for the students to get accustomed to (Ali, Uppal & Gulliver, 2017; Kumar, 2015). While the traditional classroom set up is characterised by passive listening and largely taking notes by learners, online learning and discussions demand a lot of effort. Most students, who would have developed a "traditional" mind-set, usually find it difficult to adapt to e-learning especially in Africa (Pande, 2017). In Africa, the

resistance is mainly linked to the fear of massive job loss due to technology (Millington, 2017) exacerbated by shortage of resources to put the necessary infrastructure and logistics (Adam & Mubila, 2017), which can then affect service delivery (Kangu, Kenneth, George & Robert, 2017). They need to have a new vision, open mind and heart, in order to embrace change by accepting the changing or new learning circumstances, so that they erase the memories of the predominant and traditional conventional mode of learning (Al-Kilani & Twaissi, 2017). As a better way of preparing students for online classes, they need to be made aware of the benefits of eLearning, which should for example, include explaining how to implement online learning to them (Berge, 2009; Dias, Aires & Moreira, 2018; Piskurich, 2006). Initially, service delivery would be adversely affected, but should then improve once the academics and students become more familiar with these changes (Dias et al., 2018; Outlaw et al., 2017).

- Technical issues

In developing countries, bandwidth or Internet connections required for online courses are lacking and they make learning problematic. Since in ODL, most students if not all, live off campus, they usually find it difficult to cope up with the technical demands of the online courses. In some cases, a substantial number may not even own computers due to their relatively unaffordable prices (Bergeron & Fornero, 2018; Jocoy & Di Biase, 2006). In the Zimbabwean scenario, a considerable number of ODL students come from relatively remote areas like rural areas and some cannot afford to buy computers, taking cognisance of the economic hardships prevailing in the country (Pride & Tatenda, 2017; Zulu, 2015). Shortage of such key resources adversely affects service delivery (Kanyongo, 2005; Saleem, Abid & Saghir, 2017).

- Computer literacy

Despite students being generally technologically well informed, a number of them lack computer literacy. In developing countries, quite a number cannot operate basic computer programs such as Microsoft Word, Excel and PowerPoint (Njenga, 2018;

Nyenya & Bukaliya, 2015). Basic training courses in computer literacy before embarking on e-learning enhance students' knowledge on computer applications and would help them to participate effectively in online learning (Tladi, 2017). Given the shortage of computers and the large numbers that require training, the training could be stretched over a longer period and this may derail progress and compromise service delivery.

- Time Management

Online courses demand a lot of time, as well as intensive work, and that makes time management a difficult task for e-learners. Since ODL has the convenience of place and time flexibility, a number of students fail to manage their time, owing to their various daily routines and commitments (Ahmad et al., 2018; Mashile, 2014). Initially, they may fail to cope with the demands of online learning, but are likely to improve as they adapt to the new learning mode.

- Self-Motivation

Self-motivation is one of the e-learning essential requirements. However, many online learners lack self-motivation. After enrolling in distance learning, they lag behind and some contemplate giving up (Firat, Kilinc & Yuzer, 2018). A positive attitude is essential to overcome the e-learning challenges (Gregory & Lodge, 2015). Lack of self-motivation would affect the commitment and attitude of students and that has an adverse effect on service delivery.

4.5.2 Major service delivery challenges in distance education for key stakeholders

ODL involves multiple stakeholders but three namely; students, academics and administration are the most critical (Abidin, 2015; El Mansour & Mupinga, 2007). They raised six common major challenges pertaining to these three key stakeholders as shown in the following Table 4.4.

Table 4.4

Major challenges affecting three key distance education stakeholders

Challenge	Description
Inadequate infrastructure and space allocations	Inadequate funding to procure computer hardware and software and for maintenance (Abidin, 2015; El Mansour & Mupinga, 2007).
Faculty development failure due to technological changes	Difficulties to adapt to online learning and inadequate training of academics (Abidin, 2015; El Mansour & Mupinga, 2007).
Faculty increased workload	Increase of workload due to online learning in additional to other traditional academic roles (Abidin, 2015; Acton, Chipman, Lunden & Schmitz, 2015; El Mansour & Mupinga, 2007).
Student persistence of traditional learning styles	Students still prefer traditional learning methods of classroom contact and change in delivery mode threatens enrolment (Abidin, 2015; El Mansour & Mupinga, 2007).
Academic dishonesty	Rampant plagiarism and low integrity of system (Abidin, 2015; El Mansour & Mupinga, 2007; Stephens, 2015).
Lack of protection of intellectual property and copyrights	Failure to protect access to developed learning materials by outsiders (Abidin, 2015; El Mansour & Mupinga, 2007).

These challenges in Table 4.4 are discussed as follows:

1. Inadequate infrastructure and space allocations

One of the major challenges of supporting distance education is the ability to develop and maintain the requisite infrastructure especially in developing countries (Rajah, 2017). This includes the developing or purchasing of the relevant computer bandwidth, efficient instruction hardware and software, skilled IT work force such as instructional designers and providing training to all relevant stakeholders (Gregory & Lodge, 2015). In some cases, funding is a major hiccup or obstacle, for example, in Zimbabwe, government support to state universities has been reduced drastically and for about three years since 2015, there has been strong debate to wean them from government financial support (Tarusikirwa & Mafa, 2017; Zulu, 2015). The instruction transition phase from face-to-face delivery mode to electronic delivery

mode is quite expensive, since it requires major investments in securing hardware and software (Abbul-Rashid & Latif, 2004; Pillai, 2018).

5   Faculty development failure due to technological changes

The majority of academics have hardly been exposed to online teaching, apart from receiving a bit of in-house training (Ahmad et al., 2018; Wonacott, 2001). A number of faculties' resistance to introduce online teaching in ODL has been largely due to perceived lack of institutional support and technical training (Clark, 1993; Yong, Nagles, Corredor & Chaparro, 2017). There are few cases where support from the institution has been satisfactory (Glass, 2017).

The use of printed modules, with face-to-face contact teaching (tutoring) hours with students, is becoming increasingly redundant (Bornman & Potgieter, 2017; Ng'ethe et al., 2012). This has been due to the increasing use of information technology (IT) and the effect of globalisation. Technology and globalisation have made access to learning material feasible in all corners of the world (Ahmad et al., 2018; Briggs, 2005). Students access relevant learning material from respective universities' websites. Communication with tutors is also done online. In such developed countries like Australia and the United States of America, ODL universities appear to have gone virtual with minimal or even no physical tutor-student contact (Courtney, 2013; Hovenga & Bricknell, 2006). Academics mark assignments and supervise dissertations and thesis online (Baldwin, Ching & Hsu, 2018; Berge, 2008). They also give feedback using You-tube, teleconferencing and podcasts. This demonstrates how the roles of academics are changing rapidly (Englund et al., 2017; Ruth & Sammons, 2007). However, these changing role expectations and increases in workload have been linked to emotional discomfort associated with anxiety, stress, burnout and depression in academic staff (Baranova & Surikova, 2010; Bezuidenhout, 2014).

6   Faculty increased workload

Distance education creates an overwhelming workload for academics as shown by the results of a study conducted, that compared time requirements for online and

traditional conventional delivery modes (Bezuidenhout, 2015; Holt, 2005). Several authors have agreed that web-based courses need a lot of time and effort in comparison with classroom courses that are of comparable size and content (Tomei, 2005; Visser, 2000). Regarding the use of online teaching, the workload increases relatively more, when the number of students' increases, relative to the conventional set up (Glass, 2017; Di Biase & Rademacher, 2005). In terms of course preparation, more time is needed for distance education classes unlike conventional face-to-face classes (Di Biase & Rademacher, 2005). More workload in distance education also emanates from academic advisement if learners are to benefit more and maximise their educational experience. Advising distance students who are scattered throughout the country and even across borders via e-mail and other Internet platforms, is particularly challenging (Di Biase, 2003; Firat et al., 2018; Gregory & Lodge 2015).

The academic work has become increasingly emotionally challenging and fragmented (Bilgin, Rowe & Clark, 2017). In addition, some academics still resist the use of technology as an instructional tool (Millington, 2017) despite drastic transformation in the mode of delivery. Given the complex developments on the roles of the ODL academic, Egan and Akdere (2005) say that the roles and competencies are therefore interrelated.

Pickersgill (1998) conducted a study on the workloads of ODL academics and non-academics, and found that there were several areas of overlap between the two areas of work. He found that ODL academics have a lot of administration work to deal with, over and above their core functions. This was in addition to their major work roles of teaching and learning, research and publications, participating in university activities as academic citizenship and community service. Pickersgill's (1998) findings have since been supported by Pienaar and Bester (2006), Berge (2008), Bilgin et al. (2017), Papadopoulos (2017), as well as, Roberts and Bezuidenhout (2017). These researchers also found that ODL universities experienced many changes to the academic work roles. The changes in the modes of delivery in ODL make academics' workload more demanding. Their job roles now include redesigning of the curricula to accommodate online delivery, increasing staff student ratios, more student support activities, supervision of part time staff and 24-

hour availability (Bezuidenhout, 2015). Some of the roles are purely routine and administrative in nature (Enders & Musselin, 2008; Mashile, 2014; Vutete & Uzhenyu, 2016).

7   Student persistence of traditional learning styles

For many ODL students, their educational experiences do not prepare them to be autonomous, as well as, managing the responsibility expected from asynchronous instruction even in Zimbabwe (Mupfiga, Mupfiga & Zhou, 2017). Low persistence rate causes some serious implications, since a decrease in enrolment, means a drop in revenue from fees. This would adversely affect the faculty's ability to provide and maintain the desired quality of tuition. Another dimension of importance is the ability to come up with appropriate learning styles for e-learning students, even in Sub-Saharan Africa (O'Connell et al., 2017). Ability of the instructor to know the learning styles appropriate for the students makes it easier to design a better course content. If different learning styles are incorporated into the courses, effective learning should take place (Tladi, 2017). It is also ideal to note that some adults may be more inclined towards teacher-centred instruction. Others may prefer personal-oriented or personal-directed instruction. Others may opt for further reading to gather additional or new information. These learning styles should be considered during the early planning activities; otherwise, they complicate the job of the distance educator (Inegbedion, 2017).

8   Academic dishonesty

Academic dishonesty poses a serious challenge in distance education. Internet provides an abundance of information and there is growing tendency by students to 'copy and paste' other people's education material without acknowledging the authorities or sources, and then present for assessment as if it is their original work (El Mansour & Mupinga, 2007; Robinson & Glanzer, 2017). This constitutes plagiarism (Bach & Stojanovski, 2017). There is need for departments to communicate their expectations about the proper citation of sources or authorities for referenced materials published online, in order to preserve academic integrity standards. Each syllabus should incorporate a section that explicitly explains

academic dishonesty and its detrimental consequences such as; imposing a heavy penalty or nullification of a result (Jocoy & Di Biase, 2006; Paz, Moore & Creel, 2017). Many higher education institutions have resorted to the use of an anti-plagiarism software, *Turnitin*, to detect plagiarism (Batan, 2010; Razon, Tan, Promentilla, Aviso & Yu, 2017). A complicated challenge to academic honesty is the inability to identity the exam candidate or test taker if this is being done online. This is why a number of institutions are against the writing of exams online (Merriman, 2006; Outlaw et al., 2017).

9   Lack of protection of intellectual property and copyrights

The issue of ownership or copyright for the use of the learning material or instruction developed in universities is of paramount concern for each university administration and even faculties as well (Lipinski, 2006; Rooksby & Hayter, 2017). Today, the faculty academic is asked to sign a waiver for any learning material written under the auspices of the faculty, department or university, as these become the custodians of such material that they retain the right to use anytime in the future (Bamigbola & Adetimirin, 2017). However, there is a significant challenge for the use of copyright for Internet based courses material. Despite huge amounts of data being accessible on the Internet, some cannot be used freely (Wonacott, 2001).

4.5.3   Major service delivery challenges at the Zimbabwe Open University

Chabaya et al. (2011) conducted a study at ZOU's Masvingo regional campus on students' perceptions of service delivery. The results showed that students were not satisfied with the institution's registration and other administration processes, which were largely manual. They were also not satisfied with the manner in which tutorials were being conducted, as well as, the library services provided. In addition, there was discontent over assignment management and overcrowded offices, which housed many academic staff members. Sharing of offices made it difficult for academics to offer counselling services to students, as there was no privacy, which is required in such circumstances (Harpine, 2013). Communication, shortage of computers and unavailability of some modules at registration also brought dissatisfaction. Issues of assignments being marked late and some modules not

being available at the time of registration at ZOU could be attributable to the heavy workload of academics who fail to meet the targets (ZOU, 2013b).

According to the department at ZOU responsible for students' welfare, the Centre for students' management, on students' services and support, (ZOU, 2015b), outlines some of the major student expectations on service delivery;

(i) Affordable tuition fees and flexible payment system;
(ii) Efficient registration process including availability of a total registration package (should include all course modules, assignments, calendar of events to show assignment due dates and exam timetable);
(iii) Effective conducting and supervision of tutorials;
(iv) Effective supervision of practicums and students' industrial attachment programme (on-job training);
(v) Timely feedback of marked assignments;
(vi) Efficient examination system;
(vii) Effective administration and supervision of students research projects and dissertations;
(viii) Effective dialogue and communication between tutors (academics) and students;
(ix) Proactive academic advisement and counselling;
(x) Efficient students' records management system;
(xi) Conducive tutor (academic) and student academic relationship;
(xii) Quality tuition; and
(xiii) Competitive curricular design relevant to market needs (industry and commerce).

The above challenges pertaining to ODL operations and service delivery require universities' administrators including the faculties, to re-examine them, as they can dent their quest for quality tuition especially for those programmes that are offered via asynchronous means (Moore & Kearsley, 2011; Rose, 2017). The numerous challenges facing ODL academics regarding service delivery have shown that the roles of academics in ODL continue to change faster, relative to those employed by conventional universities (Englund et al., 2017; Kamuka, 2006; Mashile, 2014). At

conventional universities, students normally stay on campus and have their lectures throughout the weekdays via face-to-face interactions. Conventional, full time students largely focus on their studies, unlike in ODL where the majority of students have family responsibilities, social and work commitments (Chabaya et al., 2011; Wang & Chen, 2009).

4.6   DIFFERENT SOCIO-DEMOGRAPHIC VARIABLES THAT INFLUENCE SERVICE DELIVERY

The following socio-demographic factors have influence on service delivery in ODL universities. Those considered are age, gender, race, job title, educational qualification, work experience and administrative position for academics. For students, only age, gender and learning years have been discussed. These have been chosen on the basis that they feature prominently in studies related to ODL.

4.6.1   Age

There has been a lot of debate on whether job performance (in the form of service delivery) is better or lower for the elderly academics, in comparison with relatively younger academics (McEvoy & Cascio, 1989). Most empirical research reviews on this subject matter, have concluded that, despite individual studies differing, there was no major relationship between age and job performance (Almahdi, 2017; McEvoy & Cascio, 1989; Salthouse & Maurer, 1996). Therefore, there is no substantial data on whether service delivery changes with age. This could be due to the reality that service delivery is usually multi-dimensional. This means that the work requires many different skills for overall success. However, according to Schmidt et al. (2009), job experience leads to better job knowledge and hence better service delivery. In this context, age is therefore positively related to work experience. The fact that older academics would have been available for longer periods, means that they would have acquired better job-relevant knowledge than those younger workers with relatively less experience (Maurer, Weiss & Barbeite, 2003). A positive relationship exists between older females' academics and their work engagement as they become fully engaged, absorbed and happily engrossed in their work (Bezuidenhout & Cilliers, 2011). As more engaged academics would

probably deliver better service than less engaged academics, one should expect a positive relationship between age and service delivery.

4.6.2 Gender

Chudgar and Sankar (2008) found that there is little conclusive evidence that shows the relationship between teacher-gender and service delivery. In their analysis, they found that male and female teachers (academics) differed in terms of classroom management practices, as well as, their beliefs on students' learning ability. However, Chudgar and Sankar (2008) found that female teachers were more effective in language teaching than on sciences. This was also supported by Maoga (2014) who rated male teachers (academics) as superior in teaching science subjects particularly STEM ones (science, technology, engineering and mathematics). An interesting study by Vecchione, Alessandri and Marsicano (2014) linked gender and motivation as key to the influence of the degree of education service delivery. They found that females did better than males, if the environment provided opportunities for deriving intrinsic motivation across all educational levels.

4.6.3 Race

In developed countries mainly, black and minority ethnic groups' service users feel that mainstream services were usually inappropriate for their needs and wants, as they were based on stereotypes and prejudice (Chahal & Ullah, 2004; Walton, Murphy & Ryan, 2015). Not much distinction has been found on whether race or ethnicity had a significant bearing on the level of service delivery or work performance in institutions of higher education, as other factors were the ones that had an impact or influence (McEvoy & Cascio, 1989). However, a study by Egalite, Kisida and Winters (2015) found that service delivery was more effective among lower-performing black and white students if they were assigned a race-congruent academic (teacher), who is of the same race.

4.6.4 Job title

A number of universities including those in Zimbabwe have the titles or ranks of academics namely assistant lecturer, lecturer, senior lecturer, associate professor and full professor, who perform different roles that have a bearing on service delivery (Moyo & Ngwenya, 2018). Rank has a direct and significant effect on service delivery of university teachers due to level of job satisfaction(Caplow, 2017;Oshagbemi, 1997). The number of senior lecturers and mostly professors has a bearing on university rankings that is a reflection of the quality of academics and perceived service delivery (Johnes, 2018; Marginson, 2014). A study among university academics by Oshagbemi (1997) revealed that assistant lecturers and lecturers were the least satisfied with their jobs followed by senior lecturers, associate professors and full professors. Oshagbemi (1997) also found that in terms of gender, female academics holding higher ranks such as senior lecturers, associate professors and full professors, were more satisfied than male academics of similar ranks.

4.6.5 Educational qualification

There has been a lot of controversy surrounding the academics qualifications vis-a-vis students' academic achievement (Aina & Olanipekun, 2015). Their study focused on seven indicators related to academics qualification. These are; formal education, duration of training, pedagogy studies, subject matter knowledge, professional development, certificate/licensing and relevant work experience. They analysed the relationship that emerged between these indicators and learners' academic achievement. They found that the academic's personal qualities such as; commitment and attitude, proved to be more important in actual service delivery, than the qualification or certification, as long as the minimum entry qualifications were met. On another dimension, attaining a specialised qualification was considered to produce better academic success in terms of imparting better knowledge to students and having them satisfied unlike a general qualification (Pucciarelli & Kaplan, 2016).

4.6.6 Work experience

Service delivery and the working experience of an academic has a bearing on work performance or service delivery. Long serving academics who are normally full-time appointees' tend to show their allegiance to the university (John et al., 2014). The best practice is that those who are senior and have met university requirements for promotion, they become tenured (Piennar & Bester, 2008; Pucciarelli & Kaplan, 2016). However, the tenure system based on experience is heavily criticised and under attack in countries like Canada and the United States of America (Altbach, 2015; Metcalfe et al., 2016). In these countries, those tenured fall below 30 per cent in both colleges and universities. A greater number is hired on a contractual basis. In these two countries, there is strong advocacy for the collapse of the tenure system as there is a strong feeling that tenure provides job security even for incompetent professors who are lazy, as they give the same lectures semester after semester without researching for contemporary learning material. In other countries, experience in a university work environment is regarded as very effective because for one to be promoted to tenure, one should have demonstrated a record of high-level research and publications, teaching, university and community service (Fontinha, Van Laar & Easton, 2018; Naidu, 2014). Generally, in universities, those who have stayed longer show a lot of promise in their work and strive to excel than relatively less experienced academics (Craft, Baker & Finn, 2017).

4.6.7 Administrative position

Although ODL academics hold administrative positions such as that of programme co-ordinator, programme leader, chairperson of a department or faculty dean, they should still have passion for teaching as core to their profession (Inegbedion, 2017). Higher learning institutions found that providing a high level of service quality can lead to potential earning of higher market share and that calls for total quality management system that includes all academics regardless of position or length of service (Ruben, 2018; Yousapronpaiboon, 2014). All academics should focus on service delivery because of its integral role towards the development of a competitive advantage, as well as attracting new and retaining existing students (Sultan &Wong, 2013). Similarly, within institutions of higher education, the provision of quality

services has become probably the most important priority around the world (Cadez, Dimovski & Zaman Groff, 2017).

4.6.8 Age (students)

The level of satisfaction among consumers (students) is not the same for sub-groups on the basis of age and the older generally are more satisfied than the younger ones with the service delivery they receive (Choi, Lee, Kim & Lee, 2005). Younger students tend to have a lot of expectations and enthusiasm emanating from the excitement of joining the university (Grosset, 1991) and the need to experiment the dictates of online learning (Robinson & Hullinger, 2008).

4.6.9 Gender (students)

The major goal of any university is to provide satisfactory tertiary level education to all students irrespective of their gender (Gutek, Cherry & Groth, 1999). Gender perceptions on service delivery do not vary much but compromised by attitude, personality and culture (Kwok, Jusoh & Khalifah, 2016). However, findings from a study conducted by Liu, Mei, Tian and Huebner (2016) showed that service delivery was positively associated with student satisfaction and that relationships among stakeholders were moderated by gender. In addition, the findings revealed that service delivery perceived by females seemed to influence the level of satisfaction relatively greater than that of males (Kwok et al., 2016).

4.6.10 Years of learning (students)

In distance learning, the length of study time to complete studies is usually at the discretion of the learner (De Witz & Walsh, 2002).Due to other commitments, distance learners may take longer time than was originally intended since deferment and postponement of studies are prevalent unlike for conventional learners (Richardson, 2000). Students who have had more years in a tertiary institute seem to be content with the service delivery than those with relatively less years who could still be excited and have lot of expectations (Delbanco, 2012).

The above section has addressed the following:

Research question 2

How does service delivery of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*) as explained by literature?

4.7 IMPLICATIONS OF SERVICE DELIVERY IN THE CONTEXT OF ODL SERVICE DELIVERY AND HUMAN RESOURCE MANAGEMENT

This section focuses on how global transformation in ODL has influenced service delivery of academics both positively and negatively, and how that has shaped the field of human resource management (HRM).

4.7.1 Global transformation

Transformation is inevitable and this has not spared the global world of work that continues to take different dimensions, including ODL academics' work in higher education (Bates, 2015; Becker, 2017; Welch, 2014). Such global transformations are also shaping the functions of academics in virtual environments, particularly on their attitudes, competencies and behaviour (Naidu, 2014; Sellgreen, Ekvall & Tomson, 2007). Therefore, the best way to counteract these forces, is to try to adapt continuously to transformation to avoid being found wanting (Eby, Butts & Lockwood, 2003; Sims & Robertson, 2017; Wilson, DeJoy, Vandenberg, Richardson & McGrath, 2004).

4.7.2 Resistance to change

Although transformation is an ongoing phenomenon, one of the significant obstacles to its effective occurrence, is employee (academic) resistance, which is being manifested through dysfunctional attitudes and negative behaviours (Buller, 2015; Olcott, 2008). Such behaviour can be caused by work overload that creates burnout and fatigue, as well as disengagement (Guasch, Alvarez & Espasa, 2010). The issue of work overload also appears to be a worrying problem among the ZOU academics (Tarusikirwa & Mafa, 2017; Zinyama & Ndudzo, 2013). The above trends have

opened up a need to have more understanding of the changing work roles of an ODL academic (Olcott, 2008; Roberts & Bezuidenhout, 2017). Therefore, any change is likely to face resistance.

4.7.3 Distance between academic and learner

As explained in section 4.4.1, the changing environment in ODL is largely attributed to the Transactional distance (Moore, 2009) where the student (learner) and tutor (academic) are separated physically, and this can cause psychological and communication gaps culminating in potential misunderstanding between the two (Henderson, Barnett & Barrett, 2017). Such disconnectedness may have an adverse impact on the motivation, performance and engagement of both the student and the academic.

4.7.4 Changing delivery mode

The roles of academics in ODL universities are changing because of the ever-changing global trends in the modes of delivery, students' changing expectations and globalisation (Asarta & Schmidt, 2017; Lyons & Ingersoll, 2010). This ranges from the use of hard printed copies like modules to contemporary approaches such as the use of electronic-learning (e-learning). E-learning reduces the physical contact between the academic (tutor) and the learner (student) (Bennet, Doherty, Margey & Stephens, 2014; Martin, Wang & Sadaf, 2018).

4.7.5 Streamlining and rationalising academics' roles

Unless human resource departments and university authorities work hand in hand with academic staff to rationalise their roles, the academics are likely to suffer from stress, burnout and fatigue, because of heavy workloads (Courtney, 2013; Di Biase, 2000; Santos, 2016). The heavy workloads could compromise the quality of tuition, which may affect service delivery, such as an inability to efficiently assess the students work and progress (Logan, Lundberg, Roth & Walsh, 2017; Mashile, 2014; Stedman & Coaldrake, 1999). ODL students may not get enough attention and guidance owing to academics' heavy job demands (Brown et al., 2014). This lack of

attention to students by academics due to heavy workloads, including a lot of administrative work, is often experienced in developing countries such as Zimbabwe where resources are inadequate (Masuku & Muchemwa, 2016; Moyo & Hadebe, 2018; Vutete & Uzhenyu, 2016; Zulu, 2015). There is therefore the need to streamline the roles of ODL academics by reducing their workload, so that they can have more time to pay attention to students (Barkhuizen et al., 2014; Di Biase & Rademacher, 2005).

4.8 PERCEPTIONS OF ACADEMICS AND STUDENTS IN ODL SERVICE DELIVERY CONTEXT

Service delivery is a key driver and indicator of marketing strategies effectiveness in institutions of higher learning and highly relates to student satisfaction (Entwistle & Ramsden, 2015; Richardson, Maeda, Lv & Caskurlu, 2017). Actually, Service delivery may bring about positive (favourable) or negative (unfavourable) attitudes of students towards the institution (Gruber, Fub, Voss & Gläser-Zikuda, 2010; Sallis, 2014; Zeithaml, Berry & Parasuraman, 1996). This may affect the image and reputation of the institution. On the importance of perceptions, the measurement of perceptions of students about the quality of service offered by a university could assist with the understanding of the degree of their overall satisfaction (Tomlinson, 2017; Zineldin, 2007). Owlia and Aspinwall (1996) proposed six quality dimensions in higher education: tangibility, competence, attitude, content, delivery and reliability. These dimensions are highly related to teacher-student relationship and are considered as appropriate for measuring service delivery in a university. Using the Servqual, Abidin (2015) found that students and lecturers had different perceptions on education service delivery. Lecturer perceived most of the dimensions of service delivery with a higher satisfaction level relative to students. These findings show that there are gaps between the perception of academics and students on higher education service delivery (Abidin, 2015; Gerdes & Mallinckrodt, 1994). Differences in attitude and perceptions towards learning, have also been identified as contributing to such differences (Hussain & Anwar, 2017; Matherly, Al Nahyan & Amin, 2017)

Musingafi et al. (2015) found different perceptions regarding challenges affecting service delivery in an ODL university. Students' concerns included; lack of sufficient time for study, difficulties in accessing and using ICT infrastructure, delays in the marking of assignments, lack of learning materials, as well as, inadequate student support services. Academics seemed to be more concerned about their welfare and cited unfavourable conditions of service and lack of research grants and staff development as adversely affecting their service delivery. Students' satisfaction could emanate from having committed and experienced faculty tutors who in turn provide quality teaching and learning (Workie, Fenta & Muluneh, 2017). In terms of ODL online teaching, both students and academics, agreed that service delivery could be compromised by the lack of physical interaction (Martínez-Argüelles & Busquets, 2016). Both students and academics agreed that learning resources were inadequate and affected online learning of distance education in Zimbabwe (Chabaya et al., 2011; Nyenya & Bukaliya, 2015; Zulu, 2015).

The above section has addressed the following:

Research question 3
Do academics and students have significant differences in their perceptions of service delivery in ODL?

4.9 INTEGRATION OF LITERATURE ON THE THREE STUDY CONSTRUCTS OF WORK STRESS, WORK ENGAGEMENT AND SERVICE DELIVERY

Having studied the three research constructs in detail, this section provides some insights on the nature of the relationship that exist between them by attempting to address the following research questions:

- Is there theoretically a relationship between work stress and service delivery?
- Is there theoretically a relationship between work engagement and service delivery?
- Is there theoretically a relationship between work stress and work engagement?
- Is there theoretically a relationship among work stress, work engagement and service delivery?

Secondly, the researcher proposed a conceptual model of the dynamic interrelationships that exist between work stress, work engagement and service delivery as manifested in the existing research results (researcher's own compilation). The researcher also formulated research hypotheses based on the anticipated relationships.

4.9.1 Relationship between work stress and service delivery

Uncontrolled work stress has a bearing on service delivery and on the quality of outputs or results (Hou, Hsieh & Ngo, 2018). Employees are the most important assets in any organization and should be protected against factors such as too much stress that can stifle their performance at work (Kinyita, 2015). Employees who increasingly exhibit high levels of stress at the workplace perform badly because of fatigue or burnout, which can cause health impairment (ill health) (Hakanen et al., 2006; Ntsoane, 2017). As a result, service delivery is adversely affected. A study by Kinyita (2015) showed that an inverse relationship between work stress and service delivery existed. She concluded that work stress had a very significant adverse impact on the performance of an individual and that ended up with poor service being accorded to a client or customer. This should be a prime responsibility of management, but some managers ignore the consequences and label it as unimportant (Rees & Smith, 2017; Rothwell, Hohne & King, 2018). In addition, stress management techniques are mostly disregarded or underutilised by management (Kinyita, 2015).

A combination of an overwhelming workload, too many simultaneous demands and a lack of peer and institutional support, contribute to frustration and panic as academics feel that there is inadequate time to execute work to their satisfaction (Ogbogu, 2017). In such a scenario, academics fail to meet performance standards. If these conditions persist or routinely require working overtime or forcing the academic to take work home, this results in continuous stress which can develop into burnout (Hallsten, 2017; Zabrodska et al., 2017). The affected academic, is therefore unable to perform to expectations or to meet deadlines and targets, culminating in poor performance or service delivery (Tijdink, Vergouwen & Smulders, 2014). The stress of the academics and their inability to manage their time efficiently, can fuel

resentment towards the university, as well as, negatively influencing their commitment and loyalty, translating to poor service delivery (Ogbogu, 2017).

Worrying statistics showed that almost half of all employees suffer from modest to severe stress while performing their jobs according to a survey conducted by ComPsych, an organisation that provides employee assistance programs (Smith, 2012). According to Smith (2012), 66% of the employees reported that they had trouble in focusing on their roles or tasks at the work place because of stress. This adversely affected service delivery and the World Health Organisation has since declared stress as the "health epidemic" of the 21st century and it is estimated that it would cost American businesses about $300 billion a year (Smith, 2012).

Unchecked stress causes disturbing productivity-sapping outcomes, ranging from reduced or inferior work quality to absenteeism, to interpersonal clashes at the workplace or even labour unrest (Jubenkanda, 2010; Ntisa, 2015). Other work stress theories and models have different connotations on how work stress relates to service delivery. For example, the JD-R model of work stress covered in detail on section 2.4.3 has two contrasting dimensions namely *job demands* and *job resources* regarding their relationship with service delivery (Demerouti et al., 2015; Mackey et al., 2017; Schaufelli & Bakker, 2004). *Job demands* increase work stress, which will adversely affect service delivery. Examples of job demands include work overload, job insecurity, role ambiguity, work pressure, conflicts and unrealistic targets (Bakker & Demerouti, 2007). On the hand, the existence of *job resources* helps to mitigate work stress (Bakker & Demerouti, 2017) and enhance service delivery. Examples of job resources include feedback, autonomy, role clarity, job control, cordial relationships, growth and development.

The above section has addressed the following:

Sub-question 1.1: What is the theoretical relationship between work stress and service delivery in ODL academics?

4.9.2 Relationship between work engagement and service delivery

There is a direct relationship between work engagement and service delivery and organisations should foster the development of worker engagement as a key driver

of improved service delivery (Gruman & Saks, 2011; Morgan, 2017). Performance management processes should be used to create and maintain high levels of worker engagement, which lead to higher levels of service delivery (Moura, Orgambídez-Ramos & Gonçalves, 2014). Engaged employees perform better by making an extra effort and energy to get the job done and are highly committed, motivated and very optimistic about their careers and work goals (Tuckey, Sonnentag & Bryan, 2018). As a result, companies with engaged employees experience lower staff turnover and provide quality service, thereby enjoying impressive business outcomes (Moura et al., 2014).

Research studies have confirmed that organisations with highly engaged workers outperform those without. They achieve greater satisfaction from their clients or customers, higher employee productivity and increased profitability (Lisbona, Palaci, Salanova & Frese, 2018). Organisations that do not focus or pay attention on increasing their workers' engagement levels tend to suffer decreases in service delivery (Barkhuizen, Mogwere & Schutte, 2014). Such decreases have often been attributed to low worker engagement, which in turn contribute to lower customer satisfaction, staff turnover and ultimately undesired low revenues. It is important to also note that work engagement varies from individual to individual even in the same department or unit and the magnitude can change on a daily or even hourly basis (Bakker & Leiter; 2010; Tuckey et al., 2018).

The above section has addressed the following:

Sub-question 1.2: What is the theoretical relationship between work engagement and service delivery in ODL academics?

4.9.3 Relationship between work stress and work engagement

There is a very strong inverse relationship between work stress and work engagement (Conway, Fu, Monks, Alfes & Bailey, 2016; Padulaet al., 2012). These authorities say that occupational stress is strongly associated with job dissatisfaction, because of excessive work demands. Too much work stress reduces work engagement, ultimately work performance, and can predispose workers to various

ailments or diseases (Padula et al., 2012; Tuckey et al., 2018). Padula et al. (2012) in their study, made up of 457 employees consisting of both sexes in a metallurgical industry, found that workers' health could be protected if attempts were made to lessen the impact of both psychological and somatic stress, which would improve work engagement by creating personal and professional satisfaction. The results showed that an association existed between work stress and work engagement. They concluded that the manner in which an individual deals with frustrations at the work place due to work stress had a strong bearing on one's work engagement.

A study conducted on 2 038 Finnish academics by Hakanen et al.(2006) found the following trends;

- Energetically taxing process (job demands) leads to stress/burnout and ultimately ill health.
- Motivational process (job resources) leads to engagement and ultimately organisational commitment.

The above shows the opposite outcomes coming from work stress and work engagement. It is evident that work stress can cause ill health (health impairment) whereas engagement enhances positive organisational characteristic of commitment (Hakanen et al., 2006; Kaur, 2018; Khairuddin & Nadzri, 2017). A variable that is closely associated with work stress and work engagement, even in teaching, is job satisfaction (Li et al., 2017; Skaalvik & Skaalvik, 2017). As such, work engagement and work stress are antecedents of job satisfaction (Alarcon & Lyons, 2011; Zhu, 2013). Job satisfaction has special significance in the study of both work stress and work engagement, because of its relationship with other important variables such as organisational commitment, staff turnover, tardiness and organisational citizenship (Moura et al., 2014). On the issue of job demands-resources and its relationship with personal and organisational outcomes, the presence of role stress and the absence of self-efficacy, predict burnout or excessive stress (Grover et al., 2017; Maslach, Leiter & Schaufeli, 2008). Burnout has negative consequences such as absenteeism, disengagement, reduction of personal or organisational commitment because of job dissatisfaction (Maslach et al., 2008; Seaward, 2017).

Most organisations that intend to compete in volatile market places should proactively address work stress, in order to enhance their employees' well-being and engagement (Bakker & Albrecht, 2018). Reinforcing the use of employee assistance programmes is a pivotal step in addressing workplace stress. The programmes should provide individual counseling, team building, interpersonal skill development and change management (Richmond, Pampel, Wood & Nunes, 2017; Smith, 2012). However, contrary to the general assumption that work stress is inversely related to work engagement, other literature suggest otherwise. For example, the JD-R model considers *job demands* as catalysts of work stress (Bakker, Demerouti & Verbeke, 2004; Conway et al., 2016) which then causes employees to be less engaged. On the hand, according to the JD-R model, the *job resources* enhance work engagement (Schaufeli et al., 2009). Job resources cushion the adverse effects of job demands on work stress and there is need to monitor how the two interact in order to manage work stress in each work environment so that employees become work engaged (Salas-Vallina & Fernandez, 2017).

In support of the JD-R model, Moura et al. (2014) foundthat the job resources could strongly predict positive outcomes at work, such as job satisfaction. Recently, there has been a great deal of interest in work engagement as a good predictor of organisational success, financial performance and customer satisfaction, albeit with only minimal work stress (Geralds et al., 2018), hence, the importance of eustress which was raised in Chapter 2.

The above section has addressed the following:

Sub-question 1.3: What is the theoretical relationship between work stress and work engagement in ODL academics?

4.9.4 Relationship among work stress, work engagement and service delivery

Although the above literature has shown that there is some relationship that exist between any of these two constructs or variables, there is no known study or existing literature that attempt to link all the three (work stress, work engagement and service delivery), especially in the context of an ODL university. Reputable research engines

(database) such as; *Google Scholar*, *EBSCOhost*, *Emerald Insight*, S*cience Direct*, *Research Gate, Education Resources Information centre and Microsoft Academic Search,* do not have existing literature linking the three constructs. Therefore, this study was built on the already existing body of knowledge of the three individual constructs, in order to come up with a framework that should create new knowledge in the areas of Human Resource Management within an ODL university context. The above section has addressed the following:

Research question 4

What evidence can be supported by existing literature that shows that there is close association between work stress, work engagement and service delivery?

Since no literature could be found on the interrelationships between work stress, work engagement and service delivery in ODL academics, the following Figure 4.5 shows the proposed conceptual model pertaining to the major variables (constructs) of this study. The model guided the researcher on the theoretical and conceptual frameworks, as well as, the empirical research section.
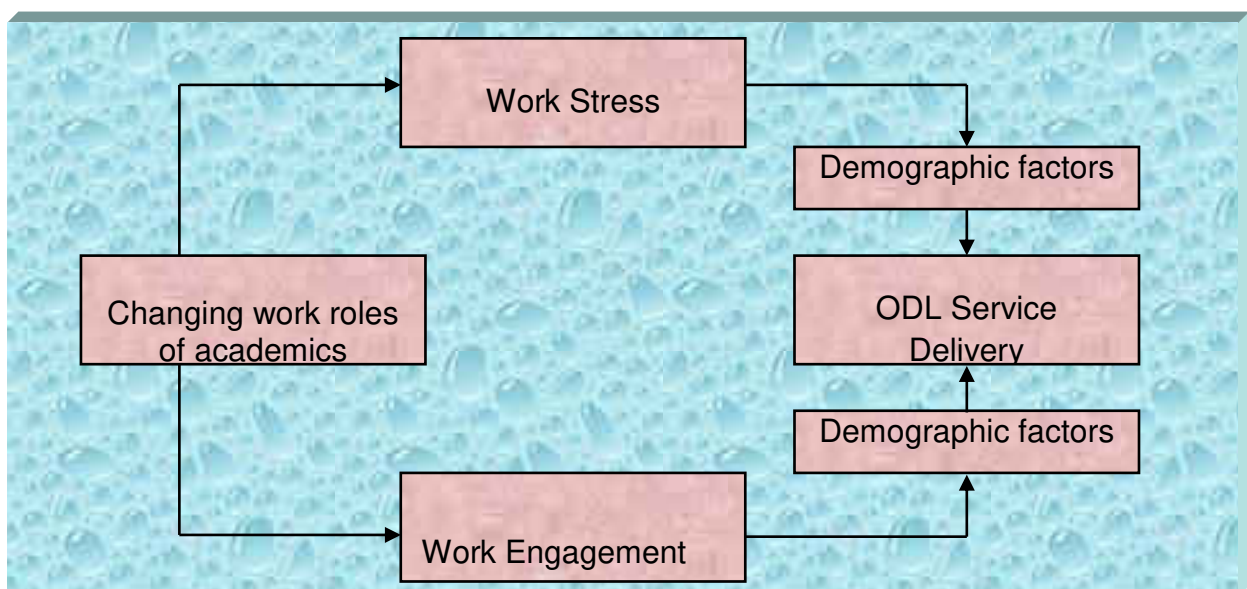
Figure 4.5 Proposed conceptual model on work stress, work engagement and service delivery for ODL academics (own compilation)

The model is premised on the following assumptions that;

(i)   High stress will lead to low service delivery (inversely/negatively related).

(ii)   High work engagement will lead to better service delivery and vice versa (directly/positively related).

(iii)   Low stress causes high work engagement (inversely/negatively related)

(iv)   A combination of low stress and high engagement will result in high service delivery.

This study therefore aimed to contribute to the body of knowledge in the discipline of Human resource management on areas covering the changing work roles, workloads, experience of stress and work engagement experienced particularly by ODL academics. Furthermore, the study aimed to bring new insights on how the changing roles of academics affect or impact on service delivery to students, especially on the quality of tuition they receive. There was need for this study to clearly link the effect of changing academic roles, which culminate in increased workload on work stress and work engagement, and how these affect academics performance as evidenced by the level of service delivery in ODL. The body of such knowledge on these relationships should be able to help human resource practitioners and senior management in ODL universities to come up with strategies that effectively prepare the ODL academics to adjust effectively to these emerging roles in their work.

The study should also influence the conditions of service of ODL academics by properly committing more resources for the ODL system to be more effective. *This study therefore endeavoured to come up with a new operational framework for an ODL academic to reduce work stress but enhancing work engagement and service delivery, taking into account the contemporary transition learning phases of ODL.* This should be feasible if the ZOU senior management and other policy makers like in the parent Ministry of Higher and Tertiary Education, Science and Technology Development, take on board recommendations that have been made by this study.

4.10   CHAPTER SUMMARY

The aim of this chapter was to provide some insights on what entails good service delivery and its importance to ODL. Moore's transactional distance theory, Kolb's

experiential learning theory and the Servqual model covered the conceptualisation of the service delivery construct. This chapter has successfully addressed the research aims pertaining to conceptualising and explaining the service delivery construct in ODL academics, as explained by theoretical models in the literature. Furthermore, the demographical variables that influence service delivery in an ODL context were explored. A synopsis of the relationships among the three constructs of work stress, work engagement and service delivery was given.

Reflecting on the research aims, this chapter managed to cover the following literature research aims pertaining to the construct of service delivery, as well as, its relationships with work stress and work engagement:

Research aim 1: To conceptualise and explain the construct of service delivery in ODL academics as explained by theoretical models in the literature.

Sub-aim 1: To conceptualise the theoretical relationship between work stress and service delivery in ODL academics.

Sub-aim 2: To conceptualise the theoretical relationship between work engagement and service delivery in ODL academics.

Sub-aim 3: To conceptualise the theoretical relationship between work stress and work engagement in ODL academics.

Research aim 2:To conceptualise how work stress, work engagement and service delivery of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

Research aim 3:To conceptualise if academics and students have different perceptions on service delivery in ODL as explained by literature.

Research aim 4: To conceptualise if academics' work stress, work engagement and service delivery have good relationships as explained by literature.

The next Chapter 5 looks at the Research design and methodology. It explains clearly the methods and techniques that were used in this study to put in place a framework for data collection and actual collection. The data were then presented and analysed in Chapter 6, in order, to come up with the results of this study.

CHAPTER 5: RESEARCH DESIGN AND METHODOLOGY

5.1   INTRODUCTION

This chapter covers the methods that were used during the planning, collection, presentation and analysis of data. The overview of the methodology used and the population and sampling technique used are described in detail. The measuring instruments used in this study and the subsequent procedures followed during data collection are discussed. The formulated hypothesis are also given, as well as, the methods used for the statistical data analysis.

The specific aims for the empirical study were as follows:

Research aim 1

To determine the interrelationships between work stress, work engagement and service delivery in ODL.

Sub-aim 1.1

To determine the relationship between work stress and service delivery in ODL academics.

Sub-aim 1.2

To determine the relationship between work engagement and service delivery in ODL academics.

Sub-aim 1.3

To determine the relationship between work stress and work engagement in ODL academics.

Research aim 2

To determine if work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based onage, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

Research aim 3

To determine if academics and students have different perceptions on service delivery in ODL.

Research aim 4

To determine if academics' work stress, work engagement and service delivery have a good fit with the data.

The following overview of the methodology and steps used to address these aims, were based on the research process, and represented by a metaphor of an onion as presented in Figure 5.1 below.

5.2 OVERVIEW OF THE RESEARCH DESIGN

Developed by Saunders, Lewis and Thornhill (2007), the research onion, describes the stages, which the researcher must scrutinise before formulating an effective methodology for his study. Foremost, the *research philosophy* should be spelt out followed by the appropriate *research approach*. The third step is the adoption of a *research strategy*, which is then followed by the fourth step of identifying *the time horizon*. The fifth step is when the data collection methods are identified. The following Figure 5.1 shows the research onion, which guided the research methodology used in this research.
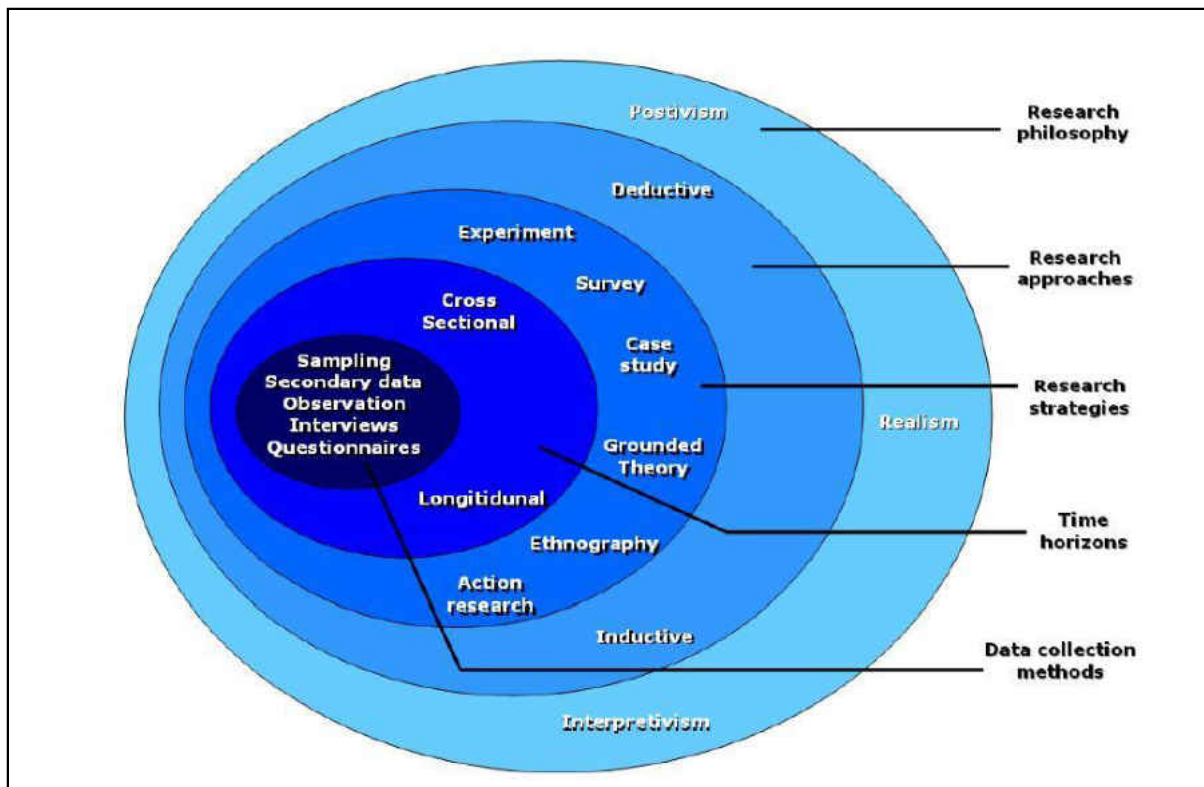
Figure 5.1   The research onion(Bryman, 2012; Saunders et al., 2007)

The research onion is very useful as it guides the researcher to understand a series of steps to be followed, from planning to conducting the study and setting the tone for analysing data and its interpretation (Knox, 2004; Sahay, 2016). The metaphor of the onion guided the research design and the researcher's comprehension of research methodology culminating in him compiling the following Figure 5.2 and Figure 5.3.
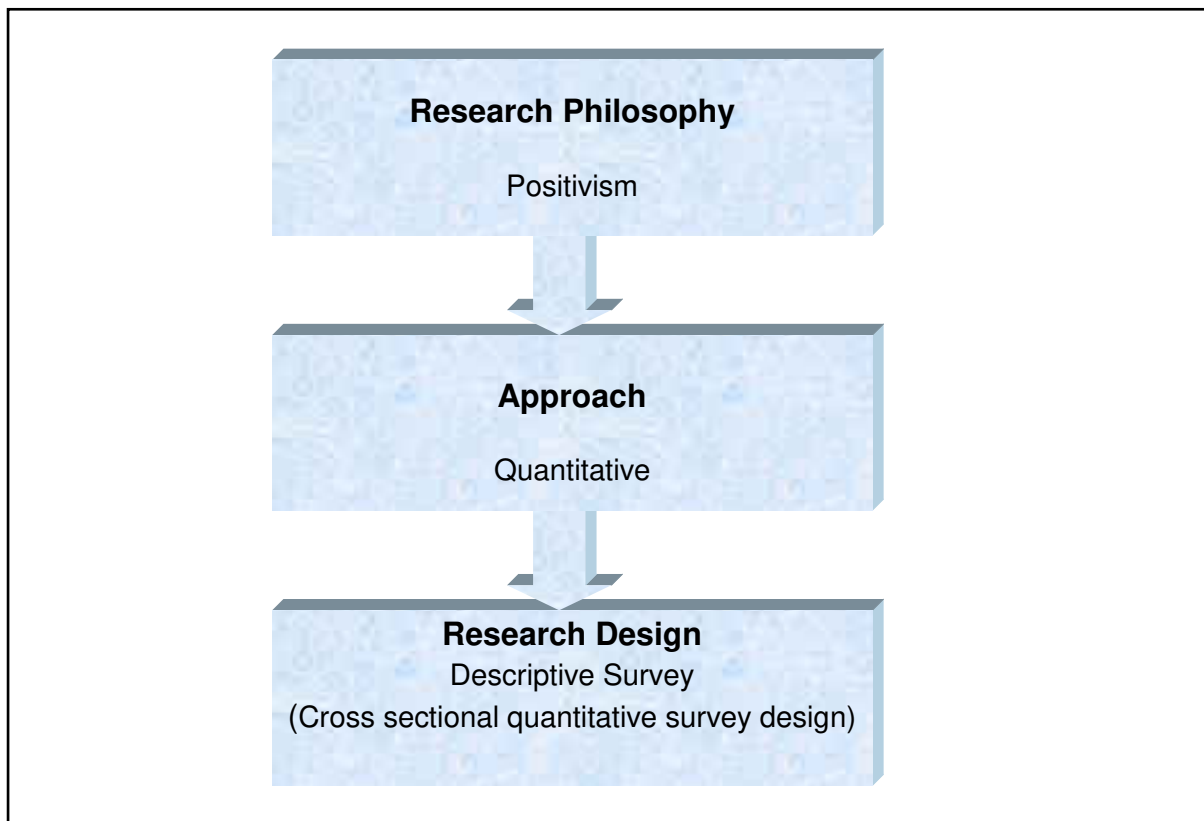
Figure 5.2   Overview of research methodology (own compilation)

The elements presented in Figure 5.2, are explained in more detail below.

5.2.1 Philosophy

The *positivism philosophy* guided this study. Positivism is premised on the belief that knowledge can be derived from 'positive information' (Collis & Hussey, 2014; Felgel, 2016). It is based on empirical data, which is derived from a reliable measurement or observation (Malec, 2018). The positivist philosophy emphasises the power of evidence. It works by generating hypotheses and assumes that the researcher seeks the truth and should be neutral in the entire process and not influenced by any relationship and pressure (Howitt & Cramer, 2000; Marczyk, DeMatteo & Festinger, 2017). Positivist research hinges on quantification and that the use of the correct technique (structured surveys for this study), should provide the correct answers. It is also concerned with prediction and control. It is premised on the assertion that every rationally justifiable assertion should be scientifically verified or capable of

mathematical proof. Positivism is not based on abstract deductions but 'positive' real facts. This therefore rejects metaphysics and theism (Felgel, 2016).

It was also important for the study to consider the *post positivism philosophy*. Post positivism accepts that theories, values, the background, and the knowledge of the researcher, can strongly influence what is observed (Henderson, 2011; Panhwar, Ansari & Shah, 2017). The fact that the researcher is an academic in the organisation where the study was conducted, the ZOU, helped him to take cue of the post-positivism philosophy in order to remain objective, by recognising the possible effects of being biased. He refrained from any bias to the best of his ability, and remained independent to ensure that results were not manipulated (Rubin & Babbie, 2014).

5.2.2 Approach

This study used a *quantitative paradigm*. This quantitative research used a combination of statistical analysis and logical deductive reasoning in order to draw out inferences from the presented results (Howitt & Cramer, 2000; Kothari & Garg, 2014; Markey & Gass, 2016).The quantitative approach was guided by the use of standardised research instruments which were valid and reliable (Krosnick, 2018; Leedy & Omrod, 2016; Neuman, 2013).

5.2.3 Research design

A *descriptive cross-sectional quantitative survey design* was used to cover different groups (Hanson & Mellinger, 2016) of academics and students at the same time. The researcher did not have control over the variables and only reported what was happening. The collected quantitative data from the survey was then subjected to scientific methods (quantitative methods) that analysed, examined and interpreted them in order to arrive at the generalisation and prediction of results (Nardi, 2018; Neeru, 2012). The study described the state of affairs, as they existed at the time of collecting data so that the reality was known. The study used a quantitative approach (Leedy & Omrod, 2016) which utilised structured questionnaires. A survey design was chosen as a research technique for this study to investigate work stress levels, work engagement and service delivery within the context of the changing work roles

of academics at the ZOU. The argument for choosing a descriptive survey was based on the fact that, surveys provide a quick, efficient and accurate means of assessing information about the population from which information is scarce (Creswell, 2014; Punch, 2014). The overall purpose of the research which was to come up with a framework to address work stress, work engagement and service delivery within a changing distance learning environment, also determined the research design that was used (Markey & Gass, 2016), since there was need to find the statistical relationships among these constructs. The following Figure 5.3 shows the steps that were followed in order to address the research aims.
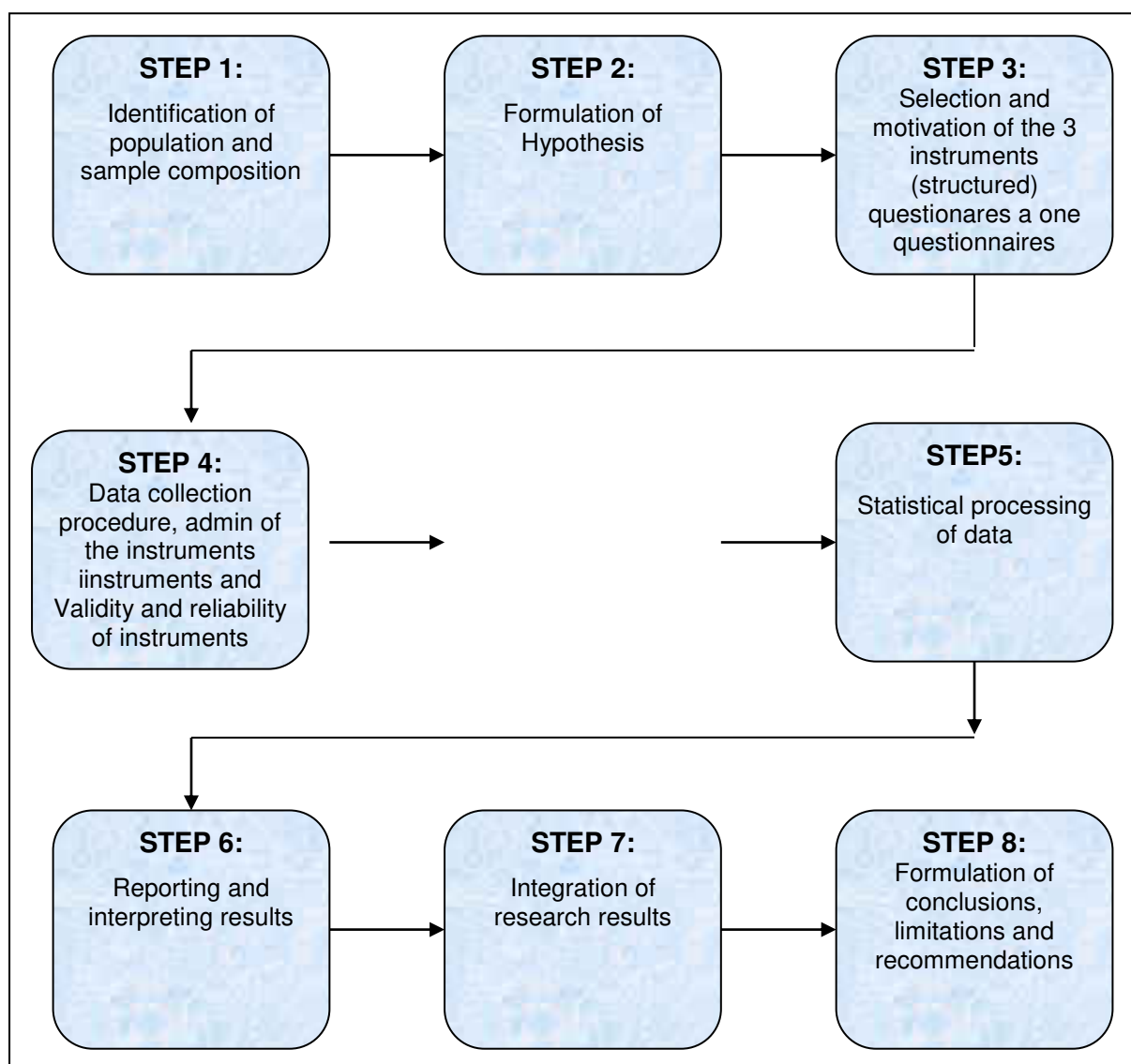
Figure 5.3   Research design showing the steps of the empirical study

Only steps 1 to 5 will be addressed in this chapter and steps 6 to 9 in Chapters 6 and 7.

5.3 DETERMINATION AND DESCRIPTION OF THE POPULATION AND SAMPLE

A *population* is any complete group consisting of individuals, groups, organisations, objects or events with at least one common characteristic (Munzara, 2013 p. 10). The population for this empirical study was made up of academics at ZOU, an ODL university in Zimbabwe and students, who had been with the university for at least two years and enrolled at the Harare regional campus, which has almost 60% of the total ZOU student population.

5.3.1 Sample 1: Academics

For the academics, the population consisted of all those who came for centralised marking for the end of semester examinations in November and December 2017 who included all full time academics and a few experienced part time academics drawn from all ZOU's eleven regional campuses. Due to challenges experienced with data collection, the convenience sampling technique was then used instead of the originally planned stratified sampling. The reasons for resorting to this strategy, instead of using the original *survey monkey,* are enunciated on 5.6 (data collection procedure and the administration of the measuring instruments).

The convenience sampling technique was used since the respondents (academics) were in proximity to the researcher and there was easy access to them at very low costs (Kennedy, 2009). The centralised marking for the ZOU end of semester examinations, involves all the different titles of academics drawn from all the six faculties who also hold different administrative positions. This method helped to select academics by ensuring that all different titles were accommodated for fair representation namely, assistant lecturers, lecturers, senior lecturers and professors who were employed either, on a full time or part time basis. Most of the part time academics, who come for the marking of examinations, are those on renewable or extended contracts usually after retirement. All administrative positions of academics were also considered, namely; programme coordinators, programme leaders, chairpersons and deans. The period for data collection was from December 2017 to mid-January 2018 when examination processing was in session.

5.3.2 Sample 2: Students

For students, these were drawn from all the six faculties at Harare regional campus and were at least in their second year of study. At least these students had been with the university for a fairly long time and had better knowledge of the university compared to relatively new students. Ten percent (10%) of the students were randomly selected using the Excel computer software package, Excel (Richard, 2010; Timothy, 2013). They were given the questionnaire when they came to collect their results or registering for the next semester by then. Programme information records clerks assisted with the distribution of the questionnaire since collection of results and registration is done through their offices. Data collection was done from beginning of January 2018 to end of February 2018.

From the academics sample, the study intended to establish how academics' changing work roles affected their work stress, work engagement and service delivery. The students were included so that they provided balanced information on the quality of service delivery they got from these academics and the university (ZOU). Participants were both males and females whose age range was 18 - 70 years. The following Table 5.1 shows information pertaining to the two samples.

Table 5.1

Summary of the ZOU target population, sample composition and the sampling techniques used

Category and sampling frame	Sampling method	Sample size issued with questionnaires
Sample 1: Academics drawn from all the 11 regional campuses marking examinations (140)	Convenience sampling (80%)	112
Sample 2: Second year and above students at Harare campus(2000)	Simple random (10%)	200
Total		**312**

The response rate for each sample is given in Chapter 6 on Section 6.2, Table 6.1.

5.4 FORMULATION OF HYPOTHESES

This descriptive study investigated the associations or relationships between work stress, work engagement and service delivery in an ODL institution, in light of the conceptual framework for this study. Service delivery is dependent upon the work stress and work engagement of academics. The research aims (objectives) were used as the basis for formulating the hypotheses. Each objective, would have two hypotheses (null and alternative), and these are then discussed in light of the research results presented in Chapter 6, from which each of the null hypothesis would be either rejected or failed to be rejected.

Research aim 1
To determine the interrelationships between work stress, work engagement and quality of service delivery in ODL.

Sub-aim 1.1
To determine the relationship between work stress and service delivery in ODL academics.

$H_{o1.1}$ There is no statistically significant relationship between work stress and service delivery in ODL academics.

$H_{a1.1}$ There is a statistically significant relationship between work stress and service delivery in ODL academics.

Sub-aim 1.2
To determine the relationship between work engagement and service delivery in ODL academics.

$H_{o1.2}$ There is no statistically significant relationship between work engagement and service delivery in ODL academics.

$H_{a1.2}$ There is a statistically significant relationship between work engagement and service delivery in ODL academics.

Sub-aim 1.3

To determine the relationship between work stress and work engagement in ODL academics.

Ho1.3 There is no statistically significant relationship between work stress and work engagement in ODL academics.

Ha1.3 There is a statistical significant relationship between work stress and work engagement in ODL academics.

Research aim 2

To determine if work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based onage, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

Ho2.1 There is no statistically significant difference on the relationship between different ages of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.1 There is statistically significant difference on the relationship between different ages of academics and work stress, work engagement and service delivery in an ODL system.

Ho2.2 There is no statistically significant difference on the relationship between different gender of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.2 There is statistically significant difference on the relationship between different gender of academics and work stress, work engagement and service delivery in an ODL system.

Ho2.3 There is no statistically significant difference on the relationship between different educational qualifications of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.3   There is statistically significant difference on the relationship between different educational qualifications of academics and work stress, work engagement and service delivery in an ODL system.

Ho2.4   There is no statistically significant difference on the relationship between different job titles of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.4   There is statistically significant difference on the relationship between different job titles of academics and work stress, work engagement and service delivery in an ODL system.

Ho2.5   There is no statistically significant difference on the relationship between different administrative positions of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.5   There is statistically significant difference on the relationship between different administrative positions of academics and work stress, work engagement and service delivery in an ODL system.

Ho2.6   There is no statistically significant difference on the relationship between different work experiences of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.6   There is statistically significant difference on the relationship between different work experiences of academics and work stress, work engagement and service delivery in an ODL system.

Ho2.7   There is no statistically significant difference on the relationship between difference in employment status of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.7   There is statistically significant difference on the relationship between difference in employment status of academics and work stress, work engagement and service delivery in an ODL system.

Ho2.8   There is no statistically significant difference on the relationship between different ages of students and service delivery in an ODL system.

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Ha2.8   There is statistically significant difference on the relationship between different ages of students and service delivery in an ODL system.

Ho2.9   There is no statistically significant difference on the relationship between different gender of students and service delivery in an ODL system.

Ha2.9   There is statistically significant difference on the relationship between different gender of students and service delivery in an ODL system.

Ho2.10   There is no statistically significant difference on the relationship between different number of years of learning of students and service delivery in an ODL system.

Ha2.10   There is statistically significant difference on the relationship between different number of years of learning of students and service delivery in an ODL system.

Research aim 3

To determine if academics and students have different perceptions on service delivery in ODL.

Ho3   There is no statistically significant differences on service delivery perceptions between academics and students in an ODL system.

Ha3   There is statistically significant differences on service delivery perceptions between academics and students in an ODL system.

Research aim 4

To determine if academics' work stress, work engagement and service delivery have a good fit with the data.

Ho4   The empirical relationship dynamics among the variables do not have a good fit with the theoretical model.

Ha4   The empirical relationship dynamics among the variables have a good fit with the theoretical model.

5.5 SELECTION AND MOTIVATING THE MEASURING INSTRUMENTS

One research instrument for academics was compiled, beginning with a section having demographical questions, as well as, 3 structured surveys incorporating the;

- J-DR questionnaire;
- Utrecht work engagement scale questionnaire; and
- Servqual questionnaire

Another research instrument (questionnaire) for students comprising the demographical variables and the Servqual questionnaire was also crafted. These measuring instruments are presented and described as follows:

5.5.1 Demographic profile instrument

This self-rating measure was developed to collect data from biographical variables of the respondents in order to have an insight of their composition. The demographical variables for academics were; age, gender, marital status, highest education level, faculty, race, job title, administrative position, years of service and employment status. For students, the demographical variables were age, gender, marital status, highest education level, faculty, race and years of learning at ZOU. These appeared as Section A in both questionnaires (See appendices).

5.5.2 The Job Demands-Resources (JD-R) work stress scale

Although there are a number of the JD-R scales that can be used to measure work stress, the 32-item version by Bakker and Demerouti (2007) was used in this research.

5.5.2.1 Purpose of the JD-R scale

The interaction between job demands and job resources is important for the development of work stress (Rhee, Hur & Kim, 2017). According to the JD-R model, job resources may cushion the impact of job demands on work stress but this

depends on the particular work environment. Thus, different types of job demands and job resources may interact, in the measurement and prediction of work stress (Liu & Cheung, 2015). This may help organisations to address the adverse effects of work stress.

5.5.2.2 Dimensions of the JD-R scale

The JD-R scale comprises 32 items using a five point Likert scale, namely 1(Never) to 5 (very often). The number of dimensions of job demands and job resources for the JD-R scale vary from 4 to 7 as there has been a tendency to combine some. This study utilised five dimensions provided by Jackson and Rothmann (2005) and supported by Bakker, Demerouti and Sanz-Vergel (2014). These are organisational support, overload, job insecurity, relationships and growth and advancement.

- Organisational support

Organisational support is the extent to which employees feel and believe that the organization considers their contributions as being significant, as well as, caring about their well-being and fulfilling their socio-emotional needs (Bakker & Demerouti, 2017; Jackson & Rothmann, 2005). Six items used for assessment are 16, 21, 29, 30, 31 and 32.

- Overload

Overload refers to the state of having to do too much work comprising mental load and emotional load (Van Wingerden, Bakker & Derks, 2017). Ten items used for assessment are 2, 3, 4, 5, 6, 7, 10, 11, 12 and 17.

- Job insecurity

Job insecurity refers to the feeling of lack of assurance that the current   job would remain stable with regard to the future (Jackson & Rothmann, 2005; Schaufeli, 2017). Three items used for assessment are 13, 14 and 15.

- Relationships

Relationships refer to one's relationship with the supervisor or manager including the communication in the organisation, involvement and social support by colleagues (Jackson & Rothmann, 2005; Shields, 2017). Seven items used for assessment are 8, 9, 19, 24, 25, 26 and 27.

- Growth and advancement

Growth refers to having enough variety, opportunities to learn and independence in one's work (Bakker & Demerouti, 2017). *Advancement* means moving forward within one's work and include remuneration training and career opportunities (Bakker & Demerouti, 2017). Growth and advancement were combined and treated as one dimension. Six items used for assessment are 1, 18, 20, 22, 23 and 28.

Overload and job insecurity are classified under *job demands,* whereas, organisational support, relationships and growth and advancement are classified under *job resources* (Bakker et al., 2014).

5.5.2.3 Administration of the JD-R scale

The JD-R scale is a self-administered instrument with the 32 items structured in a statement format (Bakker & Demerouti, 2008). There is also anonymity as the respondent remains unknown (Hanson & Mellinger, 2016). For this study, the selected respondents were given as part of the combined questionnaire and the JD-R scale appeared on Section B (See appendice).

5.5.2.4 Interpretation of the JD-R scale

Respondents are supposed to respond to the statements pertaining to the rating of a colleague or workmate performing an identical or similar job who has worked for a year by estimating how the situation on the ground would be rather than it may be in the future (Bakker & Demerouti, 2007). The JD-R scale measures the causal

relationships between two job characteristics, namely, job demands and job resources (Salas-Vallina, Alegre & Fernandez, 2017).

Job demands are those aspects of the job that need a lot of physical or mental effort that contribute to psychological and physiological costs. They are the *bad things* that are experienced at work that drain one's energy such as; work overload, potential conflicts with others and the likelihood of job insecurity (Bakker & Demerouti, 2017).

Job resources represent all the *good things* that can be defined as those aspects of the job that:
(i)   contribute to achieving work goals;
(ii)   reduce work stress and the associated psychological and also physiological costs; and
(iii)   stimulate individual growth and development.

Examples pertaining to job resources include support from others, job control, performance feedback to enhance learning, relationships, organisational support, growth and development.

5.5.2.5 Psychometric properties of the JD-R scale

The JD-R scale consists of 32 items. The JD-R scale used in this research, had five dimensions, made up of two (job demands) and three (job resources). These are; overload, job insecurity, relationship with others, organisational support, growth and advancement. The items are rated on a five-point scale which ranges from 1 (never/rarely experienced) to 5 (always/experienced very often). According to Jackson and Rothmann (2005), the JD-R scale using the Cronbach's Alpha coefficients, showed the five reliable factors as follows; organisational support (α = 0.88), overload (α = 0.75), job insecurity (α = 0.90), relationship with colleagues (α = 0.76), growth opportunities (α = 0.80) and advancement (α = 0.71). In their study, Barkhuizen and Rothmann (2008), found four reliable factors, namely; overload (α = 0.70), job insecurity (a = 0.90), growth and advancement (α = 0.85), structure and relationships (α = 0.92). For this study, the Cronbach's Alpha coefficients were;

0.733, 0.822, 0.784, 0.886 and 0.882 for overload, job insecurity, organisational support, relationships, and growth and advancement dimensions (sub-scales) respectively.

5.5.2.6 Rationale for using the JD-R scale

A study by Schaufeli et al. (2009) using the JD-R questionnaire, revealed that as job demands increased, work stress increased too. When resources increased, there was a reduction of work stress. The Cronbach's Alpha coefficient was 0.92. Another related study by Bakker and Demerouti (2007) using the same JD-R questionnaire had Cronbach alpha of 0.95. Cronbach's Alpha coefficients of at least 0.70 reflect the consistency and reliability of the utilised instruments (Andrew, Pedersen & McEvoy, 2011). A study by Pillay, Buitendach and Kanengoni (2014) on cross boarder bus drivers who ply Harare-Johannesburg (Zimbabwe and South Africa) route, who work under pressure (stress), revealed that as levels of stress increase, the driver's performance and work engagement deteriorated dramatically. The research showed that fatigued drivers could only maintain adequate performance through compensatory strategies such as having shifts or driving slower (Schaufeli & Bakker, 2010). The study reported Cronbach's Alpha coefficients of 0.89 for the JD-R scale. In the context of higher education, Habe and Tement (2016) studied 293 academics in Slovenia using the JD-R scale, on how job resources and demands related to their workflow using Cronbach's Alpha coefficient of 0.85. They found that workload alone, does not reduce workflow, but job resources like autonomy and variety, enhance work satisfaction and intrinsic work motivation. These studies convinced this researcher that the JD-R questionnaire was a reliable instrument to measure work stress.

5.5.3 The Utrecht Work Engagement Scale (UWES)

The UWES is a self-rating instrument that is used to determine an individuals' level of work engagement (Schaufeli & Bakker, 2003; Schaufeli, Bakker & Salanova, 2006; Schaufeli, Martinez, Pinto, Salanova & Bakker, 2002). The construct of work engagement is increasingly popular and can be measured by means of the UWES (Schaufeli & Bakker, 2015; Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002).

For this study, the 17-item version of the UWES, which was developed by Schaufeli and Bakker (2003), was used to measure the ODL academics work engagement. The following sections focused on the purpose, dimensions, administration, interpretation, as well as, the psychometric properties of the UWES. Finally, the researcher justified the use of the UWES for this study.

5.5.3.1 Purpose of the UWES

It is a survey that measures work engagement for both individuals and groups (Fernet et al., 2012; Schaufeli et al., 2006). Its major strengths depend on the use of multi-sample and longitudinal datasets, which require rigorous statistical methods. Standardisation of UWES scores, allows meaningful comparisons to be made. Managers and policy makers should be able to make better-informed decisions when using work engagement data to determine the level of their workers to develop positive behaviour and positive work-related state of mind, that lead to desired outcomes (Schaufelli & Bakker, 2010).

5.5.3.2 Dimensions of the UWES

The instrument is made up of 17 items. A seven-point frequency scale is used for scoring and ranges from 0 (never) to 6 (always) (Redelinghuys, 2003). The UWES uses three sub-dimensions to assess the degree of work engagement comprising, vigour, dedication and absorption (Schaufeli et al., 2006).

Vigor is characterised by an individual who exhibits high levels of energy, mental resilience and the desire to invest lots of effort in his work as well as persevering even under difficult circumstances. Six items used for assessment are 1,4,8,12,15 and 17.

Dedication is denoted by strong involvement in one's work culminating in feelings of experiencing enthusiasm, relevance, inspiration, pride and a sense of significance. It is assessed by five items, which are 2, 5,7,10 and 13.

Absorption is epitomised by having difficulties to detach oneself from work because of total concentration and happily engrossed in such work, time is seen to be '*flying'*. It is assessed by six items, which are 3,6,9,11,14 and 16.

5.5.3.3 Administration of the UWES

The UWES is a self-administered instrument, which can be completed in about 15-20 minutes. All the 17 items are structured and given in a statement format and the aggregate score for the independent dimensions (Vigor, dedication and absorption), measures the work engagement construct (Schaufeli & Bakker, 2003; Schaufeli et al., 2006). The section for the UWES on the combined questionnaire, appear as Section C.

5.5.3.4 Interpretation of the UWES

Each dimension (vigour, dedication and absorption) is independently measured and reflects the level of work engagement of the respondents. If the score is high, it means that the level of work engagement is high, an indication that the respondents are energetic, resilient, dedicated, proud and passionate about their work (Schaufeli &Bakker, 2003). Respondents who score low on vigour do not use much energy and stamina with reference to their work. A low score on dedication shows that those respondents do not value work as meaningful or challenging. They lack enthusiasm about their work (Kasparkova, Vaculik, Prochazka & Schaufeli, 2018; Schaufeli & Bakker, 2003).

5.5.3.5 Psychometric properties of the UWES

Schaufeli and Bakker (2003) supported by other researchers (De Braine & Roodt, 2011; Naude & Rothmann, 2003) have reported that there is internal consistency on the use of the three dimensions of the 17 items version of the UWES. The Cronbach's Alpha coefficients of the UWES should vary between 0.7 and 0.91 internationally (Schaufeli & Bakker, 2003) and can be acceptable if the coefficient is within the guideline of at least 0.70 (Kasparkova et al., 2018; Nunnally & Bernstein, 1994).

For each of the three dimensions, Schaufeli & Bakker (2003) came up with reliability estimates for each as follows, Vigour ranges from 0.81 to 0.90, Dedication ranges from 0.88 to 0.96 and for Absorption, the range is from 0.70 to 0.88. The internal consistency reliabilities in this study were 0.861, 0.813 and 0.781for vigour, dedication and absorption dimensions (sub-scales) respectively.

5.5.3.6 Rationale for using the UWES

The use of the UWES has been validated extensively in a number of countries, including Finland (Hakanen et al., 2006; Mauno et al., 2007), China (Yi-wen & Yi-qun, 2005), South Africa (Goliath-yarde & Roodt, 2011), the Netherlands (Schaufeli & Bakker, 2003), Spain (Schaufeli et al., 2002), Greece (Xanthopoulou et al., 2012). The confirmatory factor analyses that were applied to these different studies confirmed that the fit of the three factor hypothesised structure to the data was better to that of any other alternative factor structures. Furthermore, the internal consistencies proved to be sufficient in each study.

Goliath-yarde and Roodt (2011) conducted their study in South Africa using the 17 item UWES to study different cultural groups in a South African company by assessing the Differential Item Functioning (DIF) of UWES and the Cronbach's Alpha coefficients for the sub-scales ranged between 0.85 and 0.95. Another study that used the UWES was conducted by Girtie (2005), to establish the level of work engagement among academics in South Africa's institutions of higher education. The results showed that job and personal resources, contributed highly to work engagement, using Cronbach's Alpha scores for the three sub-scales ranging from 0.68 to 0.91.

Schaufeli and Bakker (2003), basing on results of previous research, concluded that the UWES psychometric properties are valid and acceptable because:
- All the three dimensions remain internally consistent as well as being stable across time.
- The three-factor structure is invariant across samples from many different countries.

However, certain studies have refuted the three-factor model of the UWES. Rothmann, Jorgensen and Marais (2011) established that after performing both the principal components analysis and the factor analysis and then inspecting eigen-values, they failed to extract one single factor. Similarly, Diedericks (2016) was unable to confirm the three-factor structure at the University of South Africa (Unisa).

5.5.4 The Servqual scale

5.5.4.1 Purpose of the Servqual

Servqual is a multi-dimensional instrument, specifically designed to capture the consumers' expectations and their perceptions of a service based on the five dimensions that represent service delivery (quality) (Chong & Ahmed, 2015; Parasuraman et al., 1990). For this study, the consumer was the ZOU student. The *service quality* model forms the basis for the creation of the conceptual framework that is used for the development of the scale (questionnaire). The instrument is widely applied in different contexts and cultural settings, and has been found to be relatively robust. It has become the most dominant measurement scale used in the domain of service delivery (Gupta & Kaushik, 2018).

5.5.4.2 Dimensions of the Servqual

The questionnaire is crafted after examining five key dimensions of service quality namely reliability, responsiveness, assurance, empathy and tangible (Perera & Abeysekera, 2015; Parasuraman et al., 1990; Rodrigues et al., 2013). Table 5.2 below shows how the 22 items of the Servqual questionnaire, are distributed among the five dimensions.

Table 5.2

Distribution of items among the five dimensions of the Servqual

Dimension	No. of Items in Questionnaire	Definition
Reliability	5	The ability to adhere and perform the promised service reliably and accurately. Items/statements, 5 to 9.
Assurance	4	The knowledge and the courtesy of management and workers and their ability to demonstrate confidence and trust. Items/statements, 14 to 17.
Tangibles	4	The appearance and attractiveness of physical facilities, infrastructure, equipment, work force and communication materials statements, 1 to 4.
Empathy	5	The provision of hospitality, caring, individualised attention to customer. Items/statements 18 to 22.
Responsiveness	4	The eagerness to assist customers and provision of prompt service. Items/statements, 10 to 13.

5.5.4.3 Administration of the Servqual

The Servqual is a self-administered instrument with 22 questions that can be completed in less than 25 minutes. All the 22 items are structured and given in a statement format. There is anonymity on the part of the respondent, which makes it an objective measure of service quality (Nardi, 2018) even in higher education (Noaman et al., 2017). The section for the Servqual on the combined questionnaire was Section D for academics and Section B for students (see appendices).

5.5.4.4 Interpretation of the Servqual

For each dimension of service quality above, Servqual measures both the expectation and perception of the service on a scale of 1 to 7, consisting of 22 questions in total. Any 'mismatch' between the perceived service qualities that customers receive and what they expect, is known as a *gap* (Chong & Ahmed, 2015). Usually five gaps arise and these are:

- Consumer expectation – management perception gap.
- Management perception – service quality expectation gap.
- Service quality specifications – service delivery gap.

- Service delivery – external communications to consumer's gap.
- Expected service – perceived service gap.

Each of the five dimensions is then weighted according to customer importance, and each dimension score is then multiplied by the weighting. After this, the *Gap score* is then calculated for each dimension by subtracting the Expectation score from that of the Perception score (Chong & Ahmed, 2015; Fernet et al., 2012). A negative gap score shows that the actual service was below what was expected. A 7-point scale is used to rate both expectations and perceptions based on the level of agreement or disagreement (1 denotes strongly disagree and 7 denotes strongly agree). Service quality scores are the difference between the perception and expectation scores (P-E) with a possible range of values from -6 to +6 (-6 means very dissatisfied whereas +6 means very satisfied). The quality score shows the service gap of how expectations exceed perceptions. A positive gap indicates that there is satisfaction of the service being consumed and a negative gap reflects dissatisfaction If the P-E scores becomes more positive, it shows that the level of service quality becomes increasingly higher and that leads to a higher customer satisfaction level. In the event that expectation equals perception, the service quality is satisfactory.

In this study, the gap score was not used since the respondents had not been issued with the questionnaire before they got the service and after as well for comparative purposes. The respondents were already in the ZOU as either academics or students, and they only assessed the situation as it was at the time of investigation using their prior knowledge and experiences with the ZOU. Using Servqual, service providers could obtain an indication of the level of quality of their service provision, and highlight areas requiring improvement (Tan & Kek, 2010). The use of the Servqual was important to really measure the academics effectiveness on ODL service delivery under their changing work roles (Noaman et al., 2017).

5.5.4.5 Psychometric properties of the Servqual

A study conducted by Sekaran and Bougie (2010) to find the psychometric properties of the Servqual scale for measuring service delivery of online distance

learning in a Nigerian university, confirmed that it was ideal and relevant. The internal consistency of the distance learning service delivery was determined using item total analysis and the results showed that the 22 items scale had an average level of internal consistency with overall Cronbach's Alpha of 0.827. This implies that all the items of the scale were consistent in measuring distance learning service delivery. Based on the strong Cronbach's Alpha coefficient, the researcher was convinced that the instrument was reliable taking into account that the study was conducted in a similar learning environment.

5.5.4.6 Rationale for using the Servqual

Servqual is the most widely used and tested general measure of service quality (Bennington & Cummane, 1998). This instrument has been widely adopted for a long time by both managers (Parasuraman, Berry & Zeithaml, 1991) and academics (Babakus & Boller, 1992; Crompton & MacKay, 1989) to evaluate customer perceptions of service delivery for a variety of services. The Servqual has been used to explore service delivery in higher education.

Govender, Veerasamy and Noel (2014) used the Servqual to study the service expectations and perceptions of international students who enrolled with South African universities. For reliability, they used the Cronbach's Alpha coefficient values of 0.916 and 0.901 for the expectations and perceptions dimensions respectively. Another study by Green (2014) using the Servqual, found that both the students and academics were generally not happy with service delivery at a University of Technology in South Africa. The Cronbach's Alpha coefficient s for the five sub-scales (dimensions) ranged between 0.790 and 0.899. These studies are a testimony of the suitability of the Servqual scale as a measuring instrument for service delivery. For this study, the Cronbach's Alpha coefficients were 0.819, 0.839, 0.877, 0.862 and 0.872 (academics) and 0.783, 0.811, 0.847, 0.849 and 0.826 (students) for the dimensions (sub-scales) of tangibles, reliability, responsiveness, assurance and empathy respectively.

This section has explored the three measuring instruments (the JD-R scale, the UWES and Servqual scale) in terms of how they can be better understood in terms

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of their properties, which include the various dimensions (sub-scales) that comprise them to facilitate their interpretation. Furthermore, the reliability of each of the measuring instruments supported by other related studies has been provided to prove and justify the suitability of using each instrument in this study.

5.6 DATA COLLECTION PROCEDURE AND THE ADMINISTRATION OF THE MEASURING INSTRUMENTS

The biographical instrument and the three measuring instruments, namely; the JD-R scale, the UWES and the Servqual scales, that have been discussed and justified in section 5.2, were integrated into one questionnaire for easy administration and convenience.

Originally, the intention was to integrate the measuring instruments into one online or electronic document, taking cognisance of the fact that all the academics have easy access to e-mail facilities. However, due to circumstances beyond the control of the researcher, the use of the *survey monkey* was not feasible, as the researcher could not access foreign currency to pay for its services. Serious shortage of foreign currency in the country in which this study was conducted, Zimbabwe, has been a national teething problem especially over the past two years due to economic hardships (Chamboko, Kadira, Mundia & Chamboko, 2017; Skalnes, 2016). The researcher made several attempts and exhausted all channels which included going through the organisation where he is employed, the ZOU, the parent ministry of higher education, his bank and even the central bank (Reserve bank of Zimbabwe), but to no avail. All foreign currency in Zimbabwe has been controlled and distributed by the Reserve bank. Priority for foreign currency allocation has always been given to national utilities like; importation of fuel, electricity as well as medicinal drugs (Machamire, 2017), and even to date, there seems to be no immediate respite to forex shortages (Mhlanga, 2018). The researcher after appraising the supervisor of the problem, in consultation with the ZOU registrar, utilised the opportunity when all full time ZOU academics come together for centralised marking at the end of each semester exams in Harare where all exams are processed. He got assistance from all the six Faculty Deans who then requested their faculty administrators to assist with the distribution and collection of the questionnaires from the respondents. This

arrangement helped the researcher to overcome the problem of failing to use the *survey monkey,* and it proved to be a worthy and better alternative. As a result, the response rate was relatively high and it was cheaper and convenient (Leedy & Omrod, 2016). A letter of invitation was attached to the questionnaire and it explained that participation was voluntary. For the students, the Servqual questionnaire was distributed through the main ZOU regional campus, Harare. The respondents were assured of total anonymity as well as confidentiality. The collected data were then used to systematically present the results of the study.

5.7   DATA ANALYIS

All data were presented and analysed using statistical methods by utilising the Statistical Package for Social Sciences programmes (SPSS) Version 25 for the Microsoft windows platform, and AMOS Version 24 (Field, 2013, Pallant, 2010, 2013). Statistical analysis determined the interrelationships between work stress, work engagement and service delivery in a changing world of work for academics in distance learning in Zimbabwe. The analysis, which comprised three phases, is indicated in the following Figure 5.4.

Phase 1 Descriptive statistical analysis	Phase 2 Validity, reliability and construct	Phase 3 Inferential statistical analysis

• **Biographical Variables**
 	
 • **Item descriptives - frequency tables, means, standard, deviations, skewness, and kurtosis**
	• **Validity**
	    - **Exploratory factor analysis**
	
	    - **Confirmatory factor analysis**
	 • **Reliability**
	    - **Cronbach's alpha**
	 • **Construct descriptives**
		• **Structural equation modelling (SEM)**
		
		 • **Tests for significant mean differences**

Figure 5.4   Data analysis procedure (adapted Diedricks, 2016 and contextualised to this study)

5.7.1 Phase 1: Descriptive statistical analysis

Calculation of descriptive statistics was ideal to summarise and describe in numerical data the sample characteristics of the three constructs and the biographical variables. The analysis results were described using the tables, graphs or both in some cases. The descriptive statistics used were frequency tables, percentages, means, standard deviations, skewness and kurtosis (Nardi, 2018; Ross, 2017).

5.7.1.1 Biographical variables

The sample profiles were described by the biographical variables namely; age, gender, marital status, educational level, job level and years of service. This section was included in order to investigate if there were significant differences that existed between the respondents as defined by the above-mentioned biographical variables.

5.7.1.2 Item descriptives

This research used frequency and percentage distributions to summarise data for better comprehension by showing the number of times a given score appeared within the data set (Cox, 2017; Leon-Guerrero & Frankfort Nachmias, 2017). Frequency and percentage distributions were illustrated in the form of graphs or tables to present and describe data distribution of the sample population.

a) Frequency tables

Frequency tables were mostly used in this research to show the distribution scores for the demographic variables, represented by tallying how often each variable or item occurred (Coolican, 2017). Since the questions were structured and categorical in nature, the responses were presented using a frequency distribution (Cohen, Manion & Morrison, 2011; Mitchell, 2018). Ordinal scales were largely used in the designing of the questionnaires and the use of ratio scales allowed the application of a wide range of descriptive and inferential statistics in this study.

b)   *Means and standard deviations*

The mean was calculated to provide the "central" value of a group of scores or set of numbers. The main strength of the sample mean is that it is used as a measure of central tendency that is meant to estimate the population mean (Cohen et al., 2011). The standard deviation measures the extent to which a particular set of scores varies about the mean (Leon-Guerrero & Frankfort-Nachmias, 2017; Tredoux and Durrheim, 2002, 2013). The means and standard deviations for work stress, work engagement and service delivery were determined for this research.

c)   *Skewness and kurtosis*

Skewness measures the degree of symmetry, which shows the extent to which data distribution differs from a normal distribution (Ho & Yu, 2015; Treiman, 2014). In many circumstances, variables and data sets hardly resemble a normal distribution. Kurtosis measures the degree of '*peakedness*' of data in relation to the normal distribution(Cain, Zhang & Yuan, 2017). If the values for skewness range between -3 and +3 and for kurtosis between -1.96 and +1.96, the data should be accepted as normally distributed and ideal for conducting parametric tests (Cohen et al., 2011; Kukreti, 2017). Variables (sub-scales) that fall outside the ranges of the normal distribution as defined by these skewness and kurtosis range values should be eliminated from further statistical analysis especially where normality is considered. However, Sowell (2017) suggests that sampling distributions also depend on the sample size and a decision cannot just be reached to prove normality without providing additional information.

5.7.2 Phase 2: Validity, reliability and construct descriptives

This phase consisted of calculations to measure data validity and reliability using exploratory factor analysis, confirmatory factor analysis, and Cronbach's alpha coefficients and construct descriptives. Validity and reliability are two key aspects in quantitative research that ensure credibility and accuracy of the research (Krosnick, 2018).

5.7.2.1 Validity

Validity refers to how a scientific test actually measures what it intends to, or how it reflects the reality that it claims to represent (Adams & Lawrence, 2018).The validity of the instruments that were used for this study, namely structured surveys, provided the information as required by the study. Validity had to be ensured so that this study was able to get the desired and intended results (Neuman, 2013; Njaya & Choga, 2011). In this research, both internal and external validity were critical and measures were put in place to ensure the validity of the data that was used for statistical analysis.

Internal validity refers to the degree to which instruments used or procedures used, measure what they are supposed to measure (Vijesh, 2012). For this study internal validity was ensured through;

(i)   Using applicable literature, theories, models and principles commensurate with the research topic and problem, aims and research questions.

(ii)   Using tried and tested (standardised) instruments that follow the previously mentioned theories and models (Leedy & Omrod, 2016).

Furthermore, a *pilot study* was conducted to pre-test the instruments in order to improve their validity (Durand & Chantler, 2014). Eight academics and ten students were kindly requested to answer the surveys (questionnaires). They were then asked to provide input on the relevance of the questions to this study or to suggest what could be done, in order to improve the validity of the questionnaires. They had to write their comments in the space that was provided at the end of the questionnaire. This was done in order to refine the surveys and correct any vague or ambiguous questions (Howitt & Cramer, 2000). The pilot study was very helpful as a few biological variables were then added and some items of the Servqual questionnaire had to be reworded so that the items were customised and contextualised to ODL. In addition, factor analysis was also used to check the validity of the instruments if they were the best for the study (Hossein, 2014). The pilot study helped to improve internal validity (correct measurement of purpose) and external validity (to improve results for generalisability). However, those who participated in the pilot study did

not take part in the actual study but their comments and input were considered (Collis & Hussey, 2014; Njaya & Choga, 2011).

External validity refers to results that can be generalised beyond the immediate study (Vijesh, 2012). An attempt was made to carefully select a representative sample of the target population of academics and students. A representative sample would ensure that the results of this study could be generalised to ODL academics in similar institutions, particularly, in other developing countries where the mode of delivery has not yet fully developed to be virtual or entirely based on e-learning. The results were not intended to be generalised to ODL institutions in developed countries that are already utilizing e-learning to their full potential, as the two contexts are very different.

a)   Exploratory factor analysis

Exploratory factor analysis was used in this research to determine if each of the three measures (JD-R scale, UWES and Servqual score) individually confirmed the validity of its factor structure in the sample population. Factor rotation was used to determine the pattern of loadings (Jennrich, 2018; Zhang & Preacher, 2015). Each factor could either have high or low loadings of certain variables on it (Akhtar-Danesh & Mirza, 2017; Pallant, 2010). There were comparisons of those items that had the highest load on each factor with the other sub dimension in order to evaluate the validity of the factor structures in this research. For exploratory factor analysis, Catell's scree tests, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were used.

- *Catell's scree tests*

Catell's scree test was used to determine the optimal number of factors graphically that should be retained or extracted in the final solution (Cattell, 1966; Ledesma, Valero-Mora& Macbeth, 2015). It is a plot of the eigen values that are associated with each factor extracted, against each other factor to determine the factor solution (Pallant, 2010). The eigen values were evaluated in order to ascertain the number of factors that were used for the factor analysis. Eigen values whose total is higher than

1.0, indicate a strong extraction and those below 1.0 are considered insignificant (Pallant, 2010, 2013; Shirota & Chakraborty, 2016). The eigen values should be illustrated on a graph so that the weighting of each factor becomes apparent (Field, 2005). The cut-off point that should be used for selecting factors is the point of the curve's inflexion of the curve (Catell, 1977; Reio & Shuck, 2015; Winter, Mayala & Namayanja, 2017).

- *Kaiser-Meyer-Olkin (KMO) & Bartlett's Test of sphericity*

These were used to measure the sampling adequacy in order to test whether the data set was suitable for factor analysis (Bollen, 1989; Kline, 2014, 2015). The KMO was tested to measure the sample adequacy and to examine the appropriateness of factor analysis. The KMO ranges from 0 to 1 the benchmark or widely accepted index is over 0.6 although in some put it at 0.5 (Cerny & Kaiser, 1977). Bartlett's Test of sphericity was used to test whether the data sets were suitable for factor analysis as well as showing the validity and suitability of the responses to the problem under investigation to be addressed through the study (Hair, Anderson, Tatham & Black, 1998; Marsh, Morin, Parker & Kaur, 2014). For Factor analysis to be recommended as suitable for the study, the Bartlett's Test of Sphericity should be less than 0.05 (Marsh et al., 2014).

(b)   Confirmatory factory analysis (CFA)

CFA is a multivariate statistical procedure that tests how well the measured variables represent the constructs, that is, *construct validity* (Brown, 2014). It identifies the underlying relationships that exist between the measured variables. There are three steps in construct validation (Brown, 2014; Brown & Moore; 2012; Terre-Blanche, Durrheim & Painter, 2006), namely:
(i)   specifying an arranged theoretical relationship between constructs;
(ii)   testing the hypotheses empirically; and
(iii)   describing the pattern of relationship by looking at how they are able to clarify the construct measure.

In this research, the CFA was used to determine the construct validity on all the three measuring instruments (Work stress, UWES and Servqual) by using AMOS software (García-Santillán, 2017).

5.7.2.2 Reliability: Cronbach's Alpha coefficient

According to Njaya and Choga (2011), *reliability* refers to the consistency of an instrument in its ability to get the same results of respondents even if replicated or used at different times. The reliability of the empirical study was ensured using:

(i)   A stratified sample of the identified population that was made of those who were involved with the subject matter, who were the academics and students.

(ii)   Cronbach alpha coefficients of at least 0.70 were used to determine consistency and reliability of the utilised instruments.

(iii) The use of standardised instruments of which reliability has been proven in past researches (studies).

Internal reliability refers to how consistently all items in a scale measure the concept in question (Green & Yang, 2015). Attempts to ensure internal reliability was based on using standardised surveys, namely, the JD-R, UWES and Servqual scales, and then finding the relationships between them and making comparisons. Cronbach scores were also tested. The Cronbach's Alpha is a popular and widely used method that calculates the internal reliability consistency of different measuring instruments (Crutzen & Peters, 2017). The higher the Cronbach Alpha, α, coefficient, usually more than 0.70, implies that the items (standardised surveys) have shared covariance and measured the same underlying concept (Andrew et al., 2011; Vaske, Beaman & Sponarski, 2017). The Cronbanch's Alpha coefficient ranges from 0 (there is no internal consistency) to 1 (maximum internal consistency). A reliability coefficient of at least 0.70 is considered adequate for a research instrument to be reliable (Andrew et al., 2011; Tredoux & Durrheim, 2013; Vaske et al., 2017). In this research, the best practice of observing a Cronbach's Alpha coefficient of at least 0.70 was used to determine if the JD-R scale, UWES and Servqual scores obtained, were reliable and trustworthy.

External reliability refers to the ability of a study to produce the same or similar results even at different times of measurement (Brown, 2014). This researcher endeavoured to ensure external reliability by not making general findings to individuals and groups who had different characteristics from those who actually participated in the study. Only academics and students were selected as they were well versed with service delivery in distance learning.

5.7.2.3 Descriptive statistics of the research constructs

Descriptive statistics are instrumental to the understanding of inferential statistics as well as the interpretation of the research results (Malec, 2018). They enable the presentation of data to be in a more meaningful way, thereby allowing simpler interpretation (Mooi, Sarstedt & Mooi-Reci, 2018). In this research, the data were computed using descriptive statistics, which comprised, the means, standard deviations, kurtosis and skewness of the data and these were reported and interpreted for each item of the JD-R, UWES and Servqual scales.

5.7.3   Phase 3: Inferential statistical analysis

Inferential statistics refer to the use of the sample data to generalise about the population (Lindstromberg, 2016). Inferential statistics are used to make judgments using probability that observed differences between samples, groups are linked and dependable, or they might have occurred by chance (Gravetter & Wallnau, 2016). In this study, this phase comprised correlational analysis, structural equation modelling (SEM) and tests to measure any significant mean differences.

5.7.3.1   Structural Equation Modelling (SEM)

SEM is a widely used multivariate statistical procedure that tests the theoretical models containing hypothesised sets of variables in order to define constructs and hypothesised relationships between them (Byrne, 2016; Hooper, Coughlan & Mullen, 2008; Kline, 2012). The SEM process validates the measurement model by getting estimates of the model parameters and then assessing whether the model can provide a good fit to the data (Garson, 2008; Lowry & Gaskin, 2014). It incorporates

causal modelling or path analysis that tests whether the variances or co-variances of each of the theoretical models seem like a good fit to the data. This was essential for this study in order to compile a "framework" that could be used. The results were then discussed by consolidating them with literature reviewed.

The structural equation modelling works as follows (Blunch, 2012; Byrne, 2016):

- Stating the way that the variables are assumed to be inter-related, usually using a *path diagram*;
- Determining the implications of the variances and covariances of the variables after observing some complex internal rules;
- Testing whether the variances and covariances fit the model;
- Reporting the results of the statistical testing, parameter estimates and standard errors for the numerical coefficients that are in the linear equations; and
- Basing on the information emanating from the results, a decision is then made to confirm whether the model seems to be a good fit to the data.

For this study, the SEM procedure enabled the researcher to differentiate between direct and indirect relationships between variables as well as analysing interrelationships between latent variables and their indicators without random error. For this research, the validation of the measurement model was conducted by using CFA (Blunch, 2012). CFA models are used to evaluate the role of measurement error in the model, validate a multifactorial model, and determine group effects on the factors (Garson, 2008; Hair, Sarstedt, Ringle & Mena, 2012; Schreiber, Nora, Stage, Barlow & King, 2006). The model suitability and relevance was evaluated by the The Chi-square statistic, the Goodness-of-Fit Index (GFI), the Root Mean Square Error of Approximation (RMSEA) and Comparative Fit Index (CFI) and were used as measures or indicators of model fit (Hair et al., 2012). According to McDonald and Ho (2002), for the model to be accepted, the ratio between chi-square and degrees of freedom should be 2:1, whereas the GFI and CFI values should be at least 0.90, and for the RMSEA, should be lower than 0.08.

After specifying the structural model and the data selected, the AMOS computer program (García-Santillán, 2017; Hu & Bentler, 1999) did estimation of the model.

The selection of the AMOS computer program was based on its ability to suit all the stages of data analysis (Byrne, 2016, Kline, 2014, Schumacker & Lomax, 2010).

5.7.3.2 Tests for significant mean differences

There are a number of tests that could potentially be used to measure whether significant differences exist between variables or samples, and the following were used in this study.

- The Analysis of variance (ANOVA) test

ANOVA is used to find out if results of a survey or experiment among group means in a sample have significant differences (Kirkman, 2015). It tests three or more groups to determine if there is a difference between them (Judd, McClelland & Ryan, 2017). For this study, ANOVA tests were used to determine whether there were any significant differences that existed between the different categories of respondents, as elucidated, by their socio-demographical variables. The variables for academics were age, gender, marital status, highest educational level, faculty, race, job level, administrative position, years of service and employment status. For students, the variables were, age, gender, marital status, highest educational level, faculty, race, years of learning. These acted as moderators since they affected the direction and/or strength of the relationship between the dependent and independent variables (Williams, Sweeney & Anderson, 2012). For this study, these were work stress and work engagement (*independent*) and service delivery (*dependant*).

- The Student's test (t-test)

The t-test compares two samples' averages (means), in order to establish if there is significant difference from each other or not, and whether such differences could possibly have occurred by chance (Pyrczak, 2016). The t-test is an important statistical test that analyses the data difference between the mean scores of two groups (Kim, 2015; Williams et al., 2012). If the t-score is larger, it means there is more difference between the groups and if small, it indicates more similarity between

the groups. Every t-value has a corresponding p-value to go with it. A p-value denotes the probability that the samples results from data occurred by chance (Wasserstein & Lazar, 2016). Low p-values are used and inmost cases the analysis can only be significant and valid, if the probability is below p ≤ 0.05 (5%) which means that the data is valid (Tredoux & Durrheim, 2013). The t-test was used to analyse if academics and students had significant differences on their perceptions about service delivery.

5.7.3.3 Other important indices and statistical measures used.

The following statistical measures were used to assist with the data screening and validation to evaluate the model in this research by adequately assessing its fit (Bollen, 1989; Hu & Bentler, 1999, Kline, 2015):

- Standardised regression weights

Standardised regression weights were used to describe the significance or magnitude of the influence of a variable in a model (Arbuckle, 2007, 2009). If the standardised beta value is > 0.8, the influence is large, if between 0.5 and 0.8, the influence is moderate, and < below .5, then the influence is low.

- Rotated Component Matrix

It is used for principal components analysis by estimating the correlations between each variable and the estimated number of components (Adams, Khan, Raeside & White, 2007). Rotation helps to maximise high item loadings as well as minimising low item loadings, in order to produce a better interpretable and simplified solution(Osborne, 2015). Rotated Component Matrix was used for the three constructs namely work stress, work engagement and service delivery.

5.8   ETHICAL AND LEGAL CONSIDERATIONS

The following salient points raised by Naagarazan (2006) and Porter (2014), were borne in mind by the researcher when he conducted this study:

(i)   Informed Consent

Participants made overt decisions to take part in the research after the purpose of the research was clearly explained to them. The researcher did not have trouble in getting informed consent of participants since research is considered an integral part of the ODL university, where the research was conducted. In addition, doctorate degree studies are fully supported by the ZOU senior management. A Letter of permission to conduct this study was obtained from the Registrar and shown to all participants; so that they knew that, everything was above board.

(ii)   The right of privacy, confidentiality and protection of sources

Anonymity was observed by not revealing the identities of the participants. The researcher explained to respondents that the data was to be treated with strict confidentiality since it was solely for academic purposes. There was need to protect those who provided the data by not disclosing their names on the questionnaires.

(iii)   Honesty and Integrity

 The research process avoided fabrication or dishonest manipulation of data including the presentation of the results. This researcher acknowledged fully and fairly the contribution of those who were involved in the research.

(iv)   Risk and Safety

 There was assessment of risk to avoid creating controversies or tension among different groups of participants.

(v)   Observance of rules, procedures and standards of authority

In this case, the researcher complied with the requirements of the Unisa Policy on research ethics, particularly on Part 2, on guidelines for research involving human participants (Unisa, 2015*)*. The researcher successfully applied for ethical clearance from the University Research Ethics Committee and adhered to the following moral principles of ethics (Unisa, 2015*)*:

- Autonomy (the study respected the rights and dignity of ZOU participants who remained anonymous).

- Beneficence (the study should add value to the welfare of academics and enhance service delivery to students).

- Non-maleficence (the study did not cause harm or damage to the participants or other stakeholders in general).

(vi)   Acknowledgement of sources

All literature provided by various sources and authorities have been acknowledged by citing the authors, as well as, the sources in this study. All the sources are shown at the end on the Reference list.

5.9   SUMMARY

This chapter explained the methodology that was used in the empirical investigation for this study. The study, which was quantitative, used a variety of relevant statistical techniques. The research onion was described and it helped a lot towards the formulation of the research framework for the empirical phase of this study. The positivist philosophy guided the researcher to rely on facts to avoid subjectivity throughout the study. The desire for objectivity had a bearing on the determination and description of the population, sampling methods used and the subsequent samples, as well as, the formulation of the research hypotheses. The chapter also covered the rationale for choosing the three measuring instruments namely, the JD-R scale, the UWES and the Servqual scale, including the methods that were used to ensure data validity and reliability, as well as, how these measuring instruments

were administered. A description of the data collection procedure was given. The descriptive and inferential statistics were described including how they assisted with the presentation, analysis and generalisation of data.

The next Chapter 6 focuses on steps 6 and 7 of the research design shown on Figure 5.3, and covers the reporting, interpretation and integration of the research results of this study.

CHAPTER 6: RESEARCH RESULTS

6.1 INTRODUCTION

This chapter reports on the results of the research, attained through an analysis of the data. The statistical results are reported and interpreted in terms of descriptive statistical analysis, validity, reliability and construct descriptives of the three measuring instruments, inferential statistical analysis, as well as, Structural equation modelling (SEM). The last section integrates the results in order to come up with major decisions that should help to make the empirical study's conclusions and recommendations in chapter 7.

The research objectives that are addressed by this chapter are:

Research aim 1

To determine the interrelationships between work stress, work engagement and service delivery in ODL.

Sub-aim 1.1
To determine the relationship between work stress and service delivery in ODL academics.

Sub-aim 1.2
To determine the relationship between work engagement and service delivery in ODL academics.

Sub-aim 1.3
To determine the relationship between work stress and work engagement in ODL academics.

Research aim 2

To determine if work stress, work engagement and service delivery of groups in the ODL context differ for respective socio-demographic groups (*based onage, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

Research aim 3

To determine if academics and students have different perceptions on service delivery in ODL.

Research aim 4

To determine if academics' work stress, work engagement and service delivery have a good fit with the data.

The following Figure 6.1 depicts the flow diagram of the sequence that was followed to present the statistical analysis.
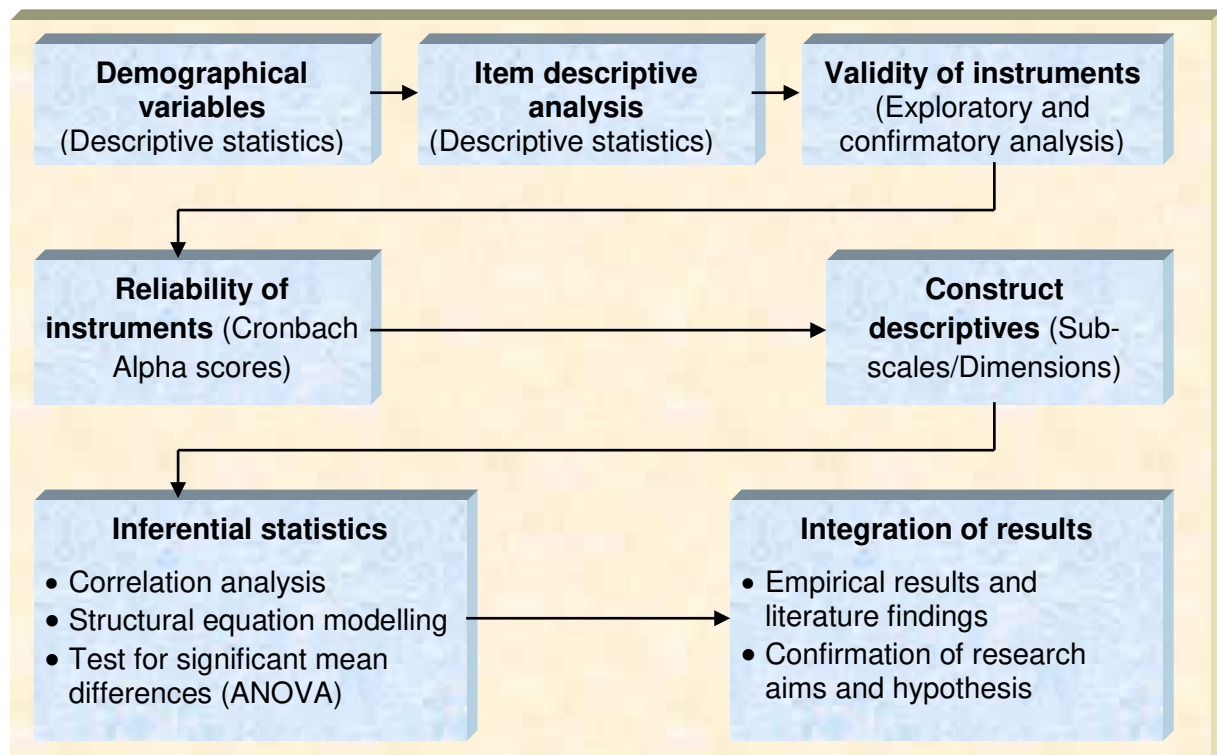
Figure 6.1   Flow diagram of the sequence of the statistical analysis (own compilation)

6.2   REPONSE RATE

The following Table 6.1 presents the responses to the questionnaires that were distributed to collect data from two samples used in this study, namely, that for academics and the other one for students.

Table 6.1

Questionnaires response rate

Sample	Questionnaires distributed	Questionnaires returned	Response rate %
Academics	112	83	74
Students	200	101	50.5

The results show satisfactory response rates for both academics (74%) and students (50.5%). Normally, questionnaires tend to have relatively low response rates and anything above 50% is satisfactory for large samples (n >30) (Leedy & Omrod, 2016, Nardi, 2018).

6.3   DESCRIPTIVE STATISTICAL ANALYSIS

Descriptive statistics have been used to prepare for the inferential statistics by summarising and describing the numerical data of the sample characteristics of the demographical variables and the three research constructs. Firstly, the demographical variables are presented.

6.3.1   Demographical variables

This section presents the profiles of the two samples' respondents (academics and students) who completed the measuring instruments used in the research. The common demographical variables for the two samples were, age, gender, marital status, highest educational level, faculty and race. In addition, for academics, the job title, administrative position, years of service and employment status were added, whereas, for students, only the number of years of learning with ZOU was added.

6.3.1.1   Demographical variables for academics

The demographical variables for the academics considered in this research are; age, gender, marital status, highest educational level, faculty, job title, administrative position, years of service and employment status.

(a)   Age composition of sample

Table 6.2 and Figure 6.2 present the distribution of academics who participated in the study according to their age groups.

Table 6.2

Age composition of sample (N = 83)

Age	Frequency	Percentage	Valid Percentage	Cumulative Percent
25-30years	1	1.2	1.2	1.2
31-37 years	13	15.7	15.7	16.9
37-46 years	22	26.5	26.5	43.4
46-56 years	27	32.5	32.5	75.9
57-58 years	6	7.2	7.2	83.1
59-70 years	14	16.9	16.9	100.0
Total	83	100.0	100.0	
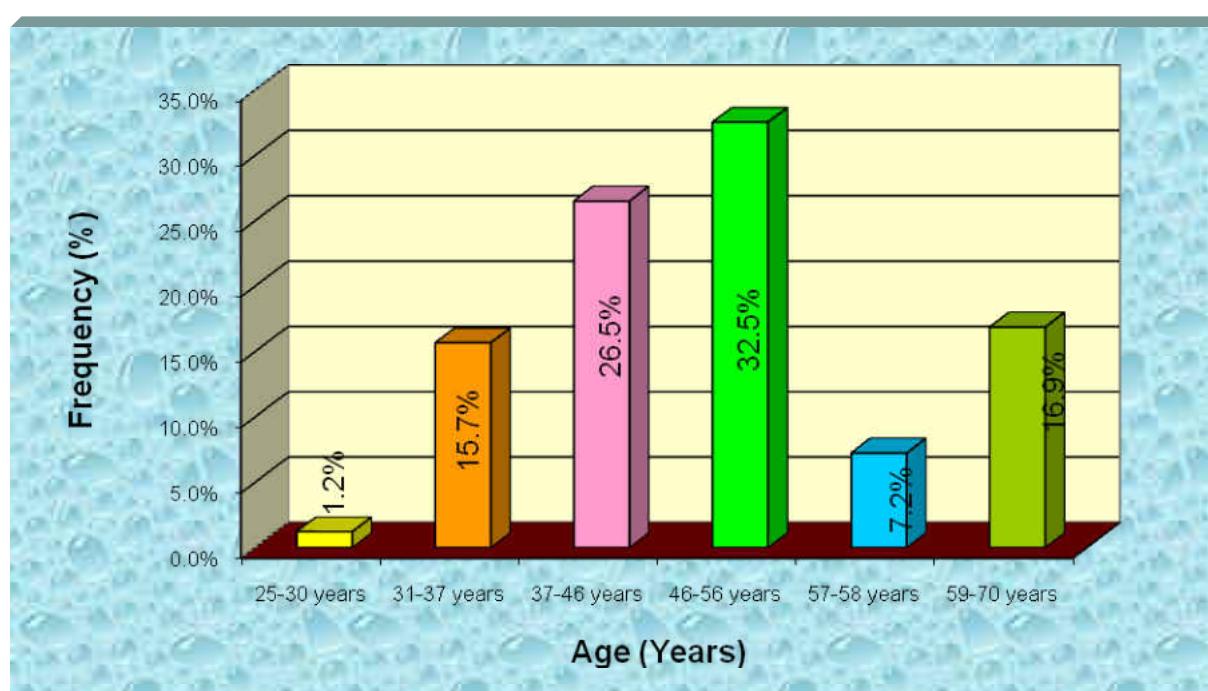
Figure 6.2   Age composition of sample (n = 83)

About 26.5% were between 37 and 46, 32.5% were between 46 and 56 years. The sample was largely made up of academics whose ages ranged from 37-56 years showing that they were in general mature individuals.

(b)   Gender composition of respondents

Table 6.3 and Figure 6.3 present the distribution of academics who participated in the study according to their gender.

Table 6.3

Gender composition of sample(N = 83)

Gender	Frequency	Percentage	Valid Percentage	Cumulative Percent
Female	25	30.1	30.1	30.1
Male	58	69.9	69.9	100.0
Total	83	100.0	100.0	
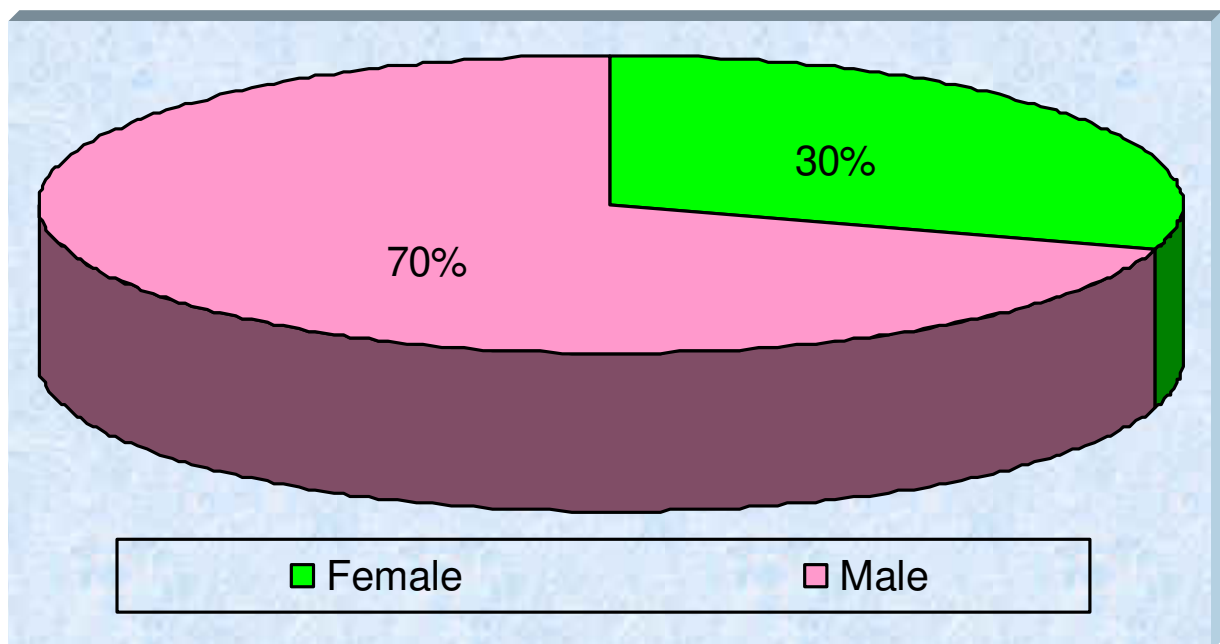
Figure 6.3   Gender composition of respondents (n = 83)

About 70% of the academics were males, while 30.1% of them were females. There was male dominance among the academic staff that participated in the study at the

ZOU. The results are close to the academics gender distribution at the university, which as at end of July 2018 stood at 65% for males and 35% for females (ZOU, 2018a). It could thus be accepted that the sample reflected the total population at ZOU. The pattern also supports the general assertion that in universities, the majority of academics are males (Higher Education, 2010; O'Brien, 2017).

(c)   Composition of sample according to marital status

Table 6.4 and Figure 6.4 indicate the sample distribution according to marital status.

Table 6.4

Composition of sample according to marital status(N = 83)

Marital Status	Frequency	Percentage	Valid Percentage	Cumulative Percent
Living with partner	3	3.6	3.6	3.6
Married	62	74.7	74.7	78.3
Separated	3	3.6	3.6	81.9
Single	10	12.0	12.0	94.0
Widowed	3	3.6	3.6	97.6
Indifferent/secretive	2	2.4	2.4	100.0
Total	83	100.0	100.0	
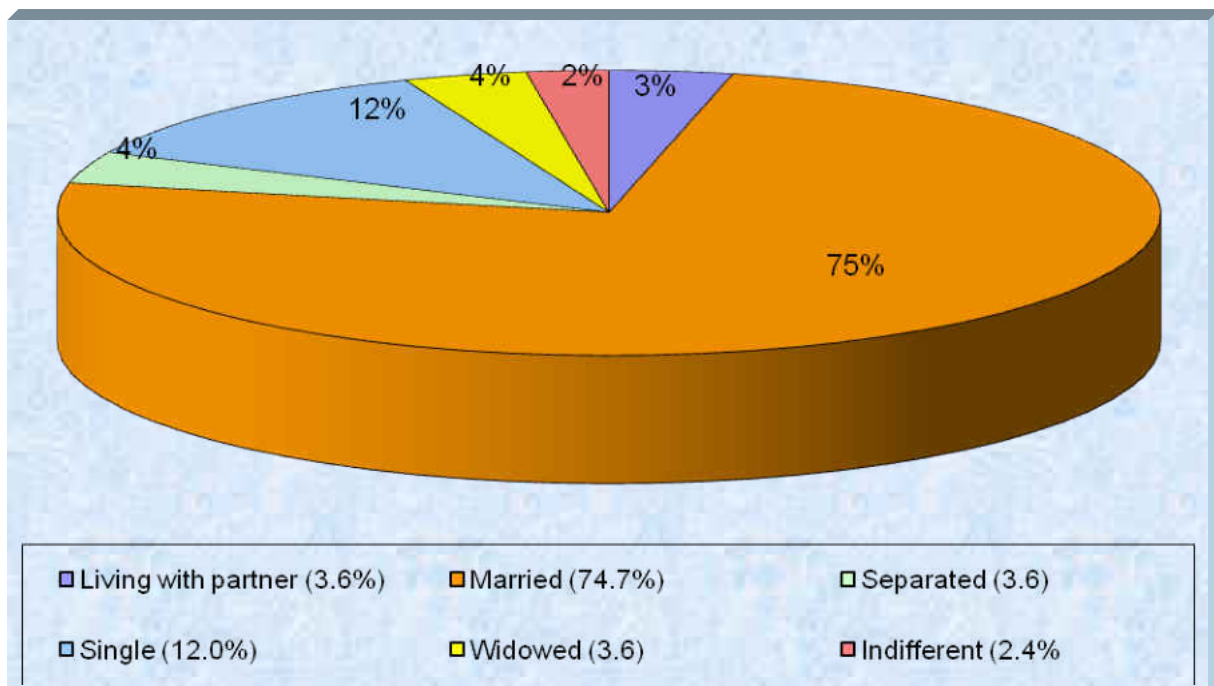
Figure 6.4   Composition of sample according to marital status (n = 83)

Four percent of the academics were widowed, while 12 % were single and 74.7% were married. The sample was made up of largely married academics and very few were either separated with their spouses or were widowed or cohabitating.

(d)   Sample composition according to educational qualification (N = 83)

Table 6.5 and Figure 6.5 indicate the sample distribution according to educational qualifications.

Table 6.5

Composition of sample according to educational level(N = 83)

Education level	Frequency	Percentage	Valid Percentage	Cumulative Percent
Degree	1	1.2	1.2	1.2
Master's degree	71	85.5	85.5	86.7
Doctoral degree	11	13.3	13.3	100.0
Total	83	100.0	100.0	
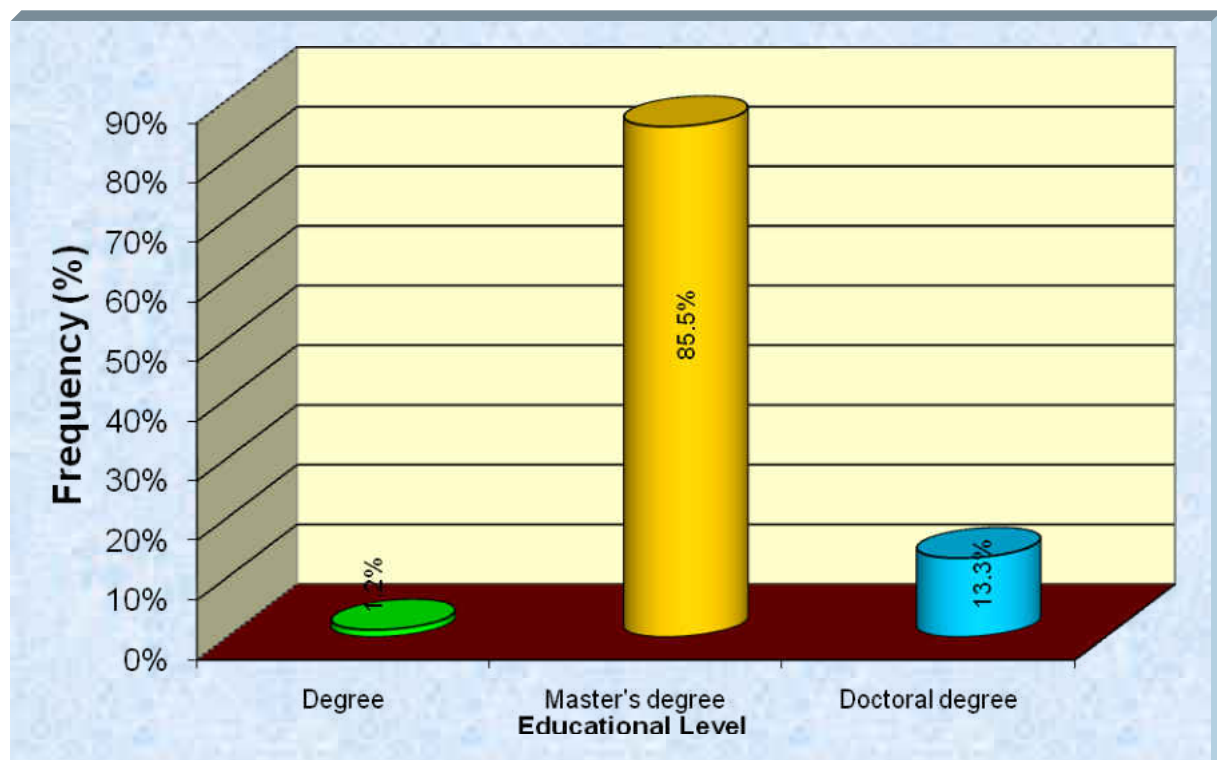
Figure 6.5   Composition of sample according to educational level(n = 83)

About one percent of the academic staff had a degree as their highest level of education, while 85.5% possessed a master's degree and 13.3% had obtained doctoral degrees. Most academics were holders of a Master's degree. The results are typical of the whole population, as the minimal entry qualification for academics in the university is a master's degree, which according to staff records of the whole population stood at 78% holders, doctorate degree holders were 13% and those with first degree only were 9% (ZOU, 2018a). This further supports the fact that the realised sample is representative of the total population.

(e)   Composition of sample according to faculty

Table 6.6 and Figure 6.6 indicate the composition of the sample according to Faculty.

Table 6.6

Composition of sample according to faculty (N = 83)

Faculty	Frequency	Percentage	Valid Percentage	Cumulative Percent
Applied social sciences	19	22.9	22.9	22.9
Arts and education	21	25.3	25.3	48.2
Commerce and law	21	25.3	25.3	73.5
Agriculture	6	7.2	7.2	80.7
Science and technology	14	16.9	16.9	97.6
IT and multi-media communication	2	2.4	2.4	100.0
Total	83	100.0	100.0	
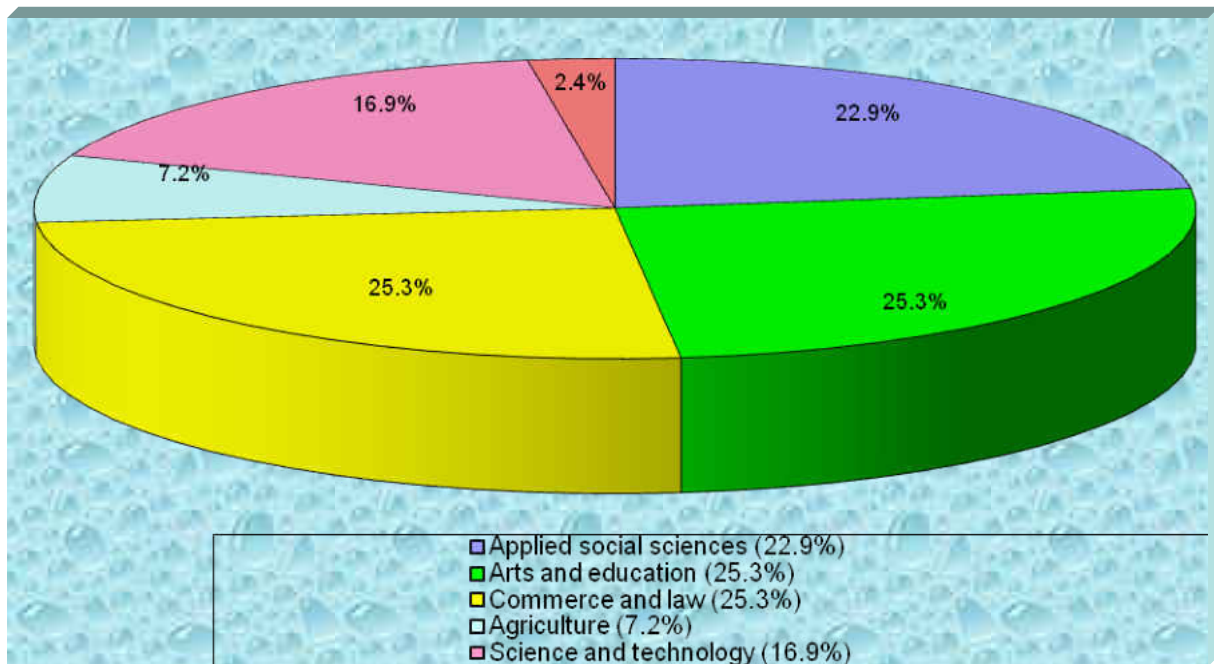
Figure 6.6   Composition of sample according to faculty(n= 83)

About 23% of the academics that participated in this study were from the Applied Social Sciences faculty, while 25.3% were from Arts and Education and 25.3% from Commerce and Law. The larger number of respondents was drawn from the faculties of Arts and Education, Commerce and Law and Applied Social Sciences. The university trend varies a bit with the results. According to staff records as at the end of July 2018, the Arts and Education faculty had the highest number of academics at 24.8%, followed jointly by Commerce and Law and Applied Social Sciences at 19.9 % each (ZOU, 2018a).

(f)   Composition of sample according to job title

Table 6.7 and Figure 6.7 indicate sample composition according to job title.

Table 6.7

Composition of sample according to job title

Job title	Frequency	Percentage	Valid Percentage	Cumulative Percent
Assistant lecturer	13	15.7	15.7	15.7
Lecturer	38	45.8	45.8	61.4
Senior lecturer	27	32.5	32.5	94.0

Associate professor	4	4.8	4.8	98.8
Full professor	1	1.2	1.2	100.0
Total	83	100.0	100.0	
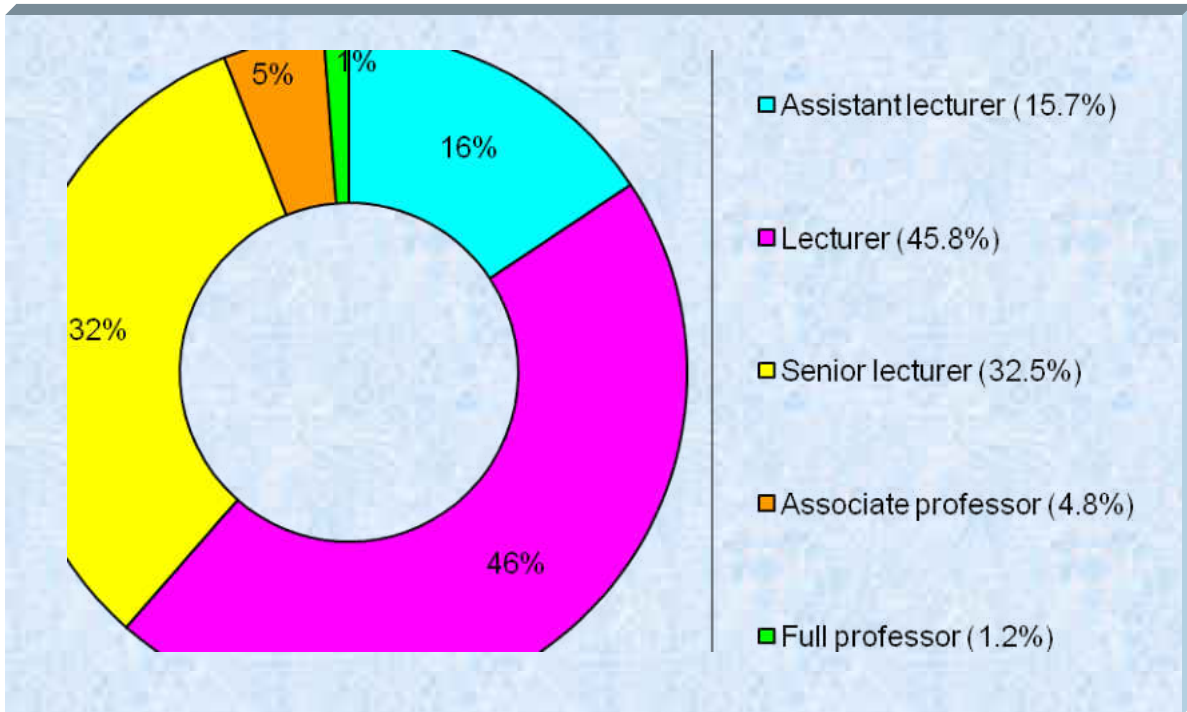
Figure 6.7 Composition of sample according to job title(n= 83)

About one percent of the academics were full professors and 32.5% were senior lecturers. The majority of the respondents were lecturers followed by senior lecturers. The results are confirmed as true in the actual population in which lecturers constituted 43.4%, senior lecturers 30.2%, assistant lecturers (teaching assistants)16.2%, associate professors 6.4% and full professors 3.8% (ZOU, 2018a).

(g)   Composition of sample according to administrative position

Table 6.8 and Figure 6.8 indicate the sample composition according to administrative position held.

Table 6.8

Composition of sample according to administrative position(n = 83)

Admin position	Frequency	Percentage	Valid Percentage	Cumulative Percent
Regional programme coordinator	19	22.9	22.9	22.9
Programme leader	21	25.3	25.3	48.2
Chairperson	8	9.6	9.6	57.8
Dean	1	1.2	1.2	59.0
Other	34	41.0	41.0	100.0
Total	83	100.0	100.0	
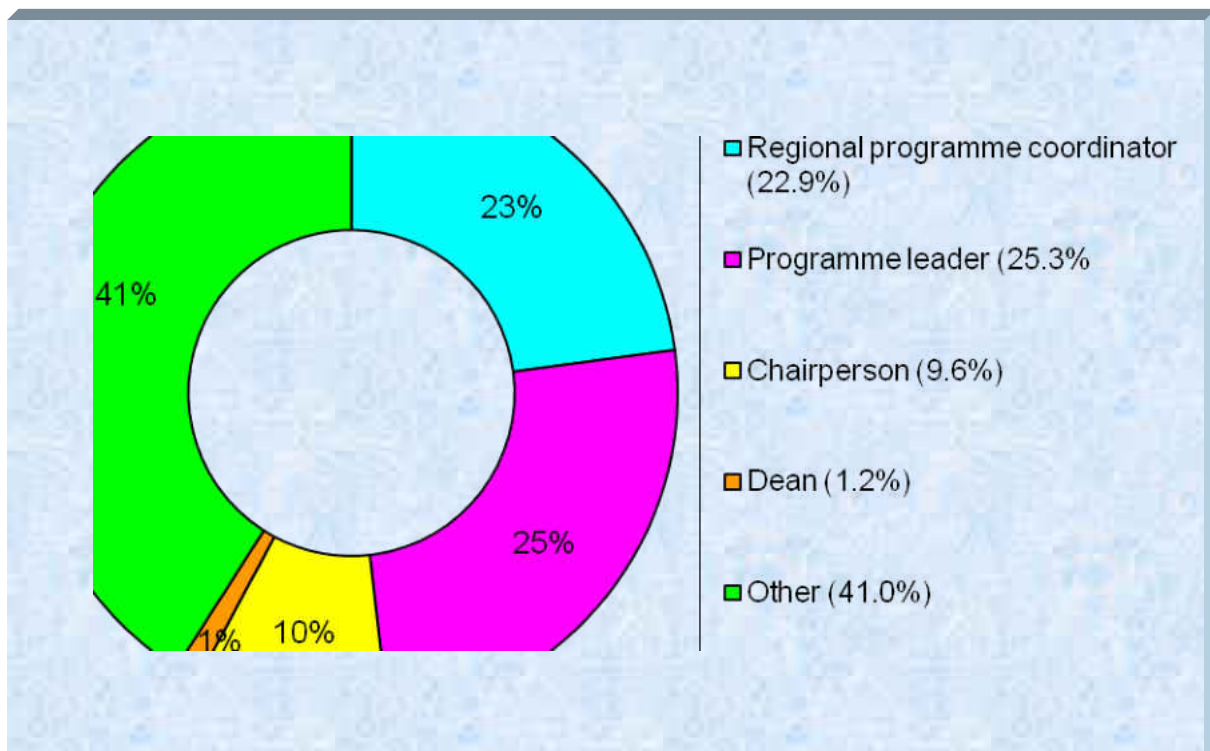
Figure 6.8   Composition of sample according to administrative position (n = 83)

About 23% of the academics were regional programme co-ordinators, 1.2% were deans and 41% did not hold any other administration position. In terms of administrative duties, most academics were either regional programme coordinators or programme leaders. The results support the administrative composition in the university as deans only constituted a very small number (5.3%) and chairpersons only 13.8%. Regional programme co-ordinators and programme leaders were

relatively more and a large number of academics did not hold any administrative posts, as was expected.

(h)   Composition of sample according to years of service (work experience)

Table 6.9 and Figure 6.9 indicate the sample composition according to experience.

Table 6.9

Composition of sample according to work experience*(n = 83)*

Years	Frequency	Percentage	Valid Percentage	Cumulative Percent
Less than 2 years	2	2.4	2.4	2.4
2-5 years	8	9.6	9.6	12.0
6-10 years	49	59.0	59.0	71.1
11-20 years	24	28.9	28.9	100.0
Total	83	100.0	100.0	
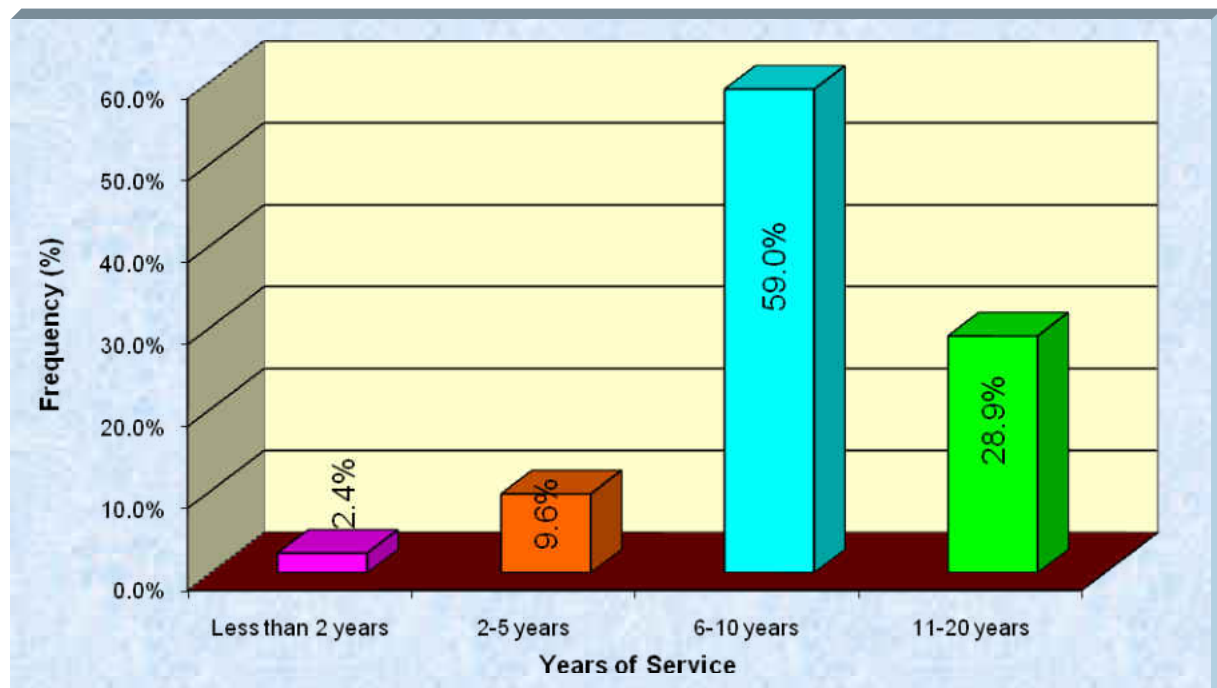
Figure 6.9   Composition of sample according to work experience of service (n = 83)

About 59% of the academics had work experience in the university for a period ranging between 6 and 10 years, and 28.9% between 11 and 20 years. The majority of respondents had experience between 6-10 years and a sizeable number had

experience between 11-20 years. This shows that a big portion of the academics had served in the university for longer years and were therefore experienced academics.

(i)   Composition of sample according to employment status

Table 6.10 and Figure 6.10 indicate the composition of the sample based on one's employment status.

Table 6.10

Composition of sample according to employment status(N = 83)

Employment Status	Frequency	Percentage	Valid Percentage	Cumulative Percent
Full time	66	79.5	79.5	79.5
Part time	17	20.5	20.5	100.0
Total	83	100.0	100.0	
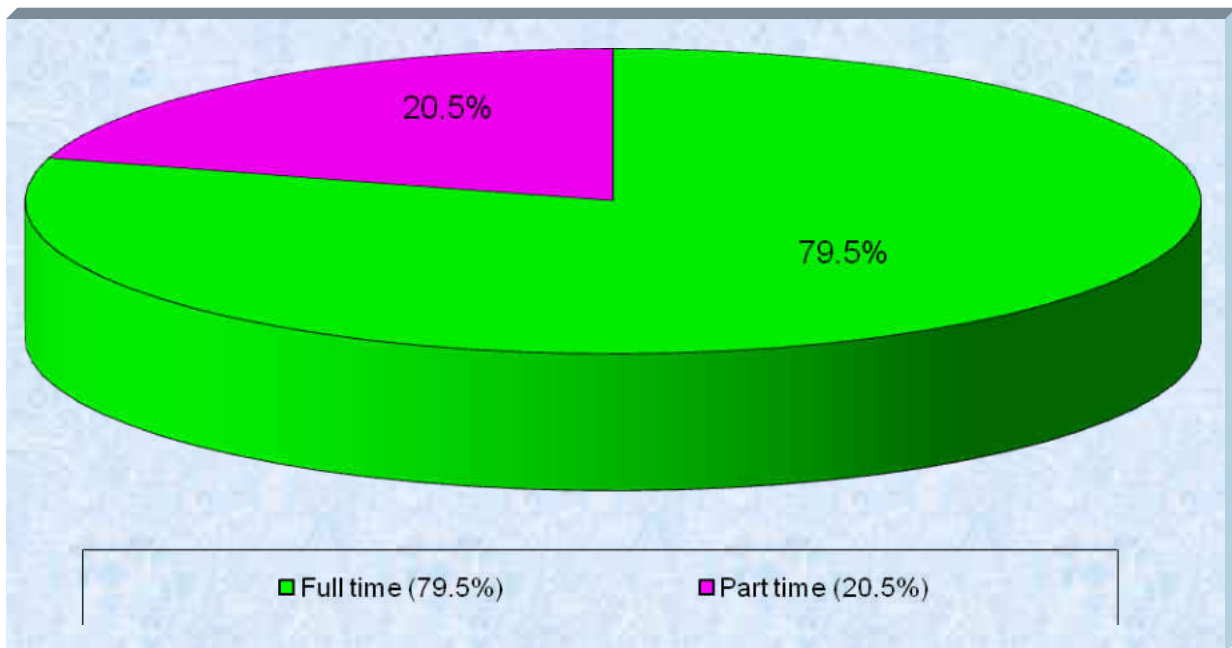
Figure   6.10 Composition of sample according to employment status(n = 83)

About 20% of the respondents were part time employees of the ZOU, whilst 79.5% were employed full time. The sample was largely dominated by full time academics.

In summary, the academics' sample can thus be described as comprising those who were mature, experienced, the majority being males, married, holders of a master's degree, drawn mostly from the faculties of Arts and Education and that of Commerce and Law. In addition, the majority of them held the title of lecturer, but did not hold significant administrative positions and were tenured, full time ODL academics.

6.3.1.2 Demographical variables for students

The demographical variables for students considered in this research are; age, gender, marital status, highest educational level, faculty, number of years of learning with the university.

(a)   Composition of sample according to age

Table 6.11 and Figure 6.11 indicate the composition of the sample according to the age of respondents.

Table 6.11

Composition of sample according to age (N = 101)

Age	Frequency	Percentage	Valid Percentage	Cumulative Percent
18-23 years	19	18.8	18.8	18.8
24-30 years	19	18.8	18.8	37.6
31-36 years	30	29.7	29.7	67.3
37-43 years	14	13.9	13.9	81.2
44-51 years	18	17.8	17.8	99.0
52-60 years	1	1.0	1.0	100.0
Total	101	100.0	100.0	
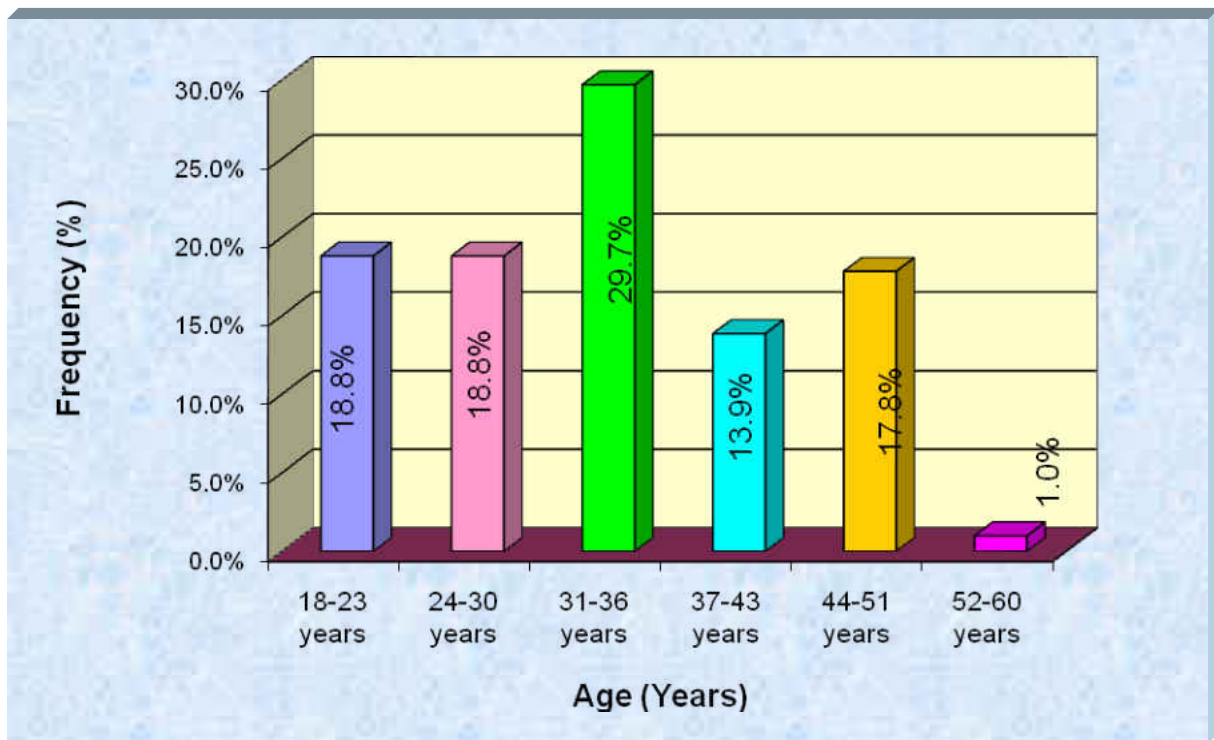
Figure 6.11   Composition of sample according to age (n = 101)

About 19% of the students were aged between 18 and 23 years, 29.7% between 31 and 36 and 17.8% between 44 and 51. The majority of students were in the age group of 31-36 years. The results characterise the student population for distance learning institutions where the majority are adult students, who are usually working and had failed to access university education direct from secondary school (Mwenje & Saruchera, 2013).

(b)   Composition of sample according to gender

Table 6.12 and Figure 6.12 indicate the composition of the sample according to gender.

Table 6.12

Composition of sample according to gender (N = 101)

Gender	Frequency	Percentage	Valid Percentage	Cumulative Percent
Female	57	56.4	56.4	56.4
Male	44	43.6	43.6	100.0
Total	83	100.0	100.0	
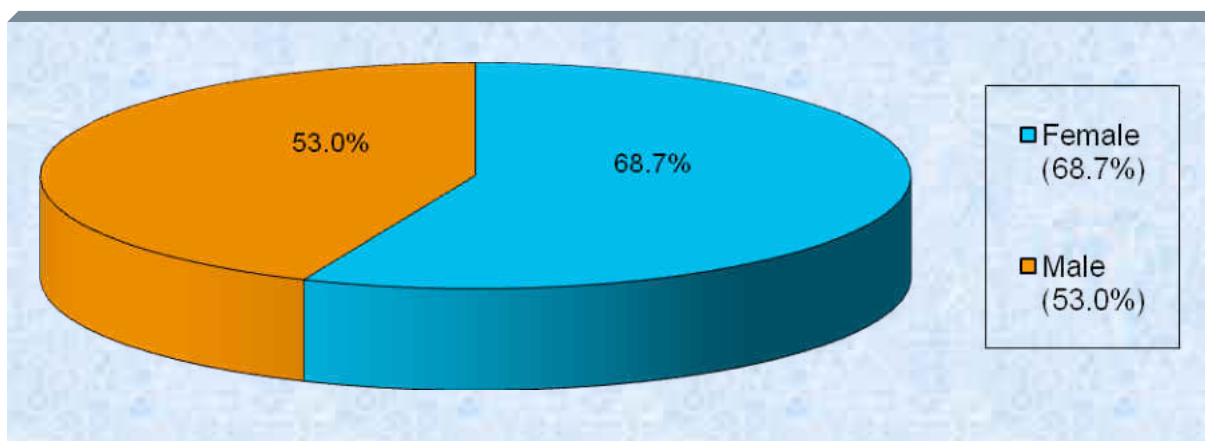
Figure 6.12   Composition of sample according to gender (n = 101)

About 56% of the students were females, while 43.6% were males. More female students than males participated in this study. The results confirm the recent enrolment pattern in the ODL university. The first semester of 2018 enrolment statistics, show that the university had a total of 12 606 students. Females were 7 055 (56%) and males were 5 551 (44%) (ZOU, 2018b). The sample was therefore a true reflection of the student gender composition in the university.

(c)   *Composition of sample according to marital status*

Table 6.13 and Figure 6.13 indicate the composition of sample according to marital status.

Table   6.13

Composition of sample according to marital status (N = 101)

Marital status	*Frequency*	*Percentage*	*Valid Percentage*	*Cumulative Percent*
Divorced	1	1.0	1.0	1.0
Living with partner	2	2.0	2.0	3.0
Married	55	54.5	54.5	57.4
Separated	3	3.0	3.0	60.4
Single	37	36.6	36.6	97.0
Widowed	2	2.0	2.0	99.0
Reserved (secretive)	1	1.0	1.0	100.0
Total	101	100.0	100.0	
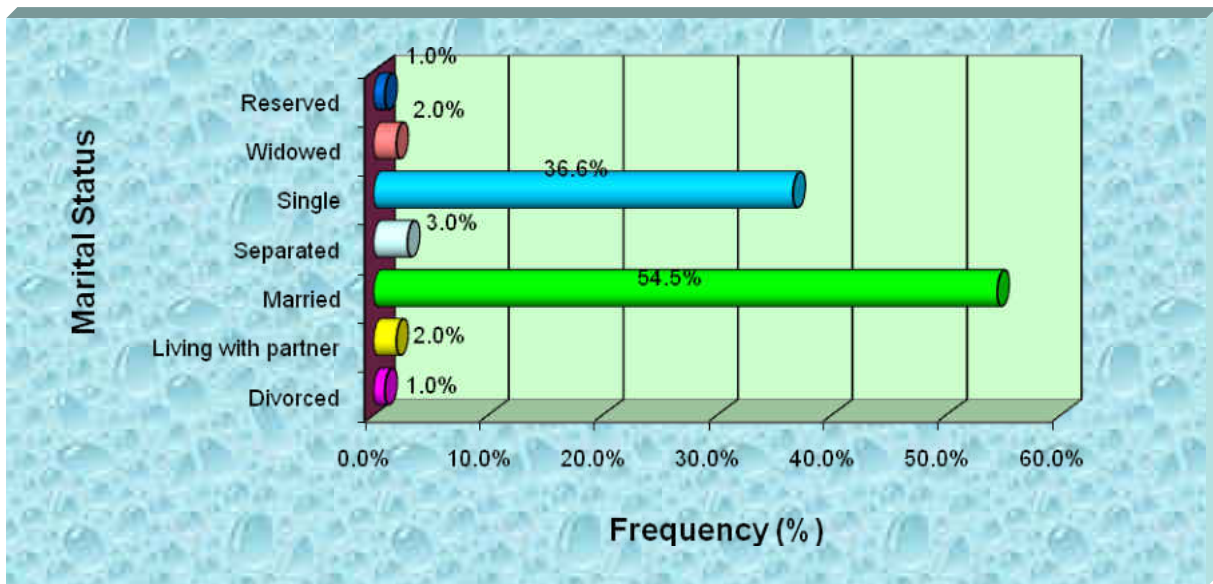
Figure 6.13   Composition of sample according to marital status (n = 101)

About two percent of the students were widowed, 54.5% were married and 1% were reserved. From the empirical evidence, it can be seen that the majority of students were married, which is indicative of adult learners being the majority at the university. The results are confirmed by a study conducted by Russell, Tekleselassie, Turnbull, Arthur and Burnham (2008) which showed that in distance learning universities, the majority of the students are relatively older (25 years and above) than conventional students.

(d)   Composition of sample according to educational qualification under study

Table 6.14 and Figure 6.14 indicate the composition of the sample according to the education programme that was being studied.

Table 6.14

Composition of sample according to educational qualification under study (N = 101)

Educational Qualification	Frequency	Percentage	Valid Percentage	Cumulative Percent
Certificate	10	9.9	9.9	9.9
Diploma	30	29.7	29.7	39.6
Bachelor's degree	39	38.6	38.6	78.2
Honour's degree	14	13.9	13.9	92.1
Master's degree	7	6.9	6.9	99.0
Other qualification	1	1.0	1.0	100.0
Total	101	100.0	100.0	
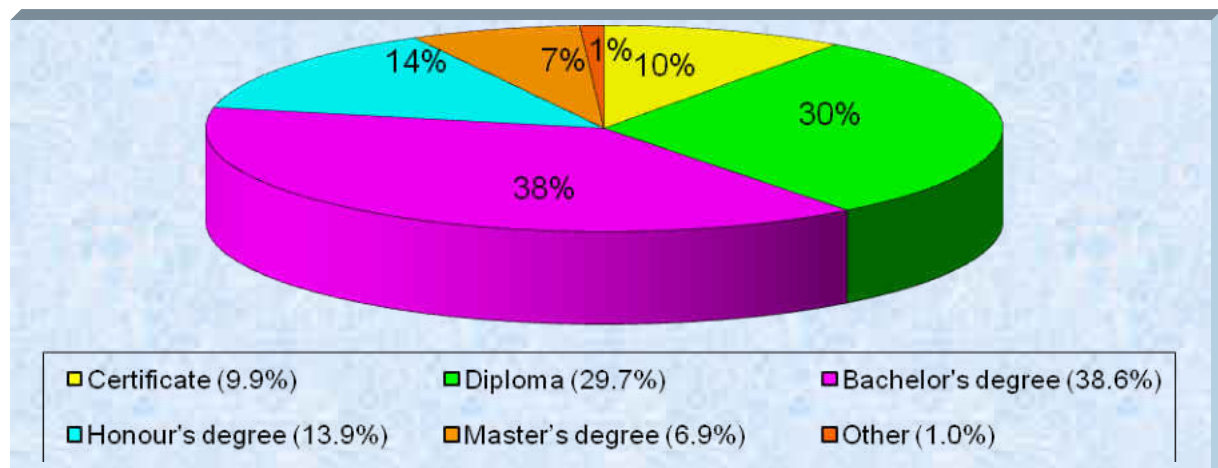
Figure 6.14   Composition of sample according to educational qualification being studied (n = 101)

About 38.6% were studying for a Bachelor's degree and 13.9% for an Honours degree. The majority of students were thus pursuing a bachelor's degree. The trend is synonymous with Zimbabwe's universities where many students enrol for an undergraduate degree programme and fewer for Masters programmes and very few for doctorate degrees, similar to many other countries (Ramos, Alviña&Martinez, 2017).

(e)   *Composition of sample according to faculty*

Table 6.15 and Figure 6.15 indicate the composition of the sample according to Faculty.

Table 6.15

Composition of sample according to faculty (N = 101)

Faculty	Frequency	Percentage	Valid Percentage	Cumulative Percent
Applied social sciences	19	18.8	18.8	18.8
Arts and education	41	40.6	40.6	59.4
Commerce and Law	21	20.8	20.8	80.2
Agriculture	4	4.0	4.0	84.2
Science and technology	8	7.9	7.9	92.1
Information Technology and Multimedia communication	8	7.9	7.9	100.0
Total	101	100.0	100.0	
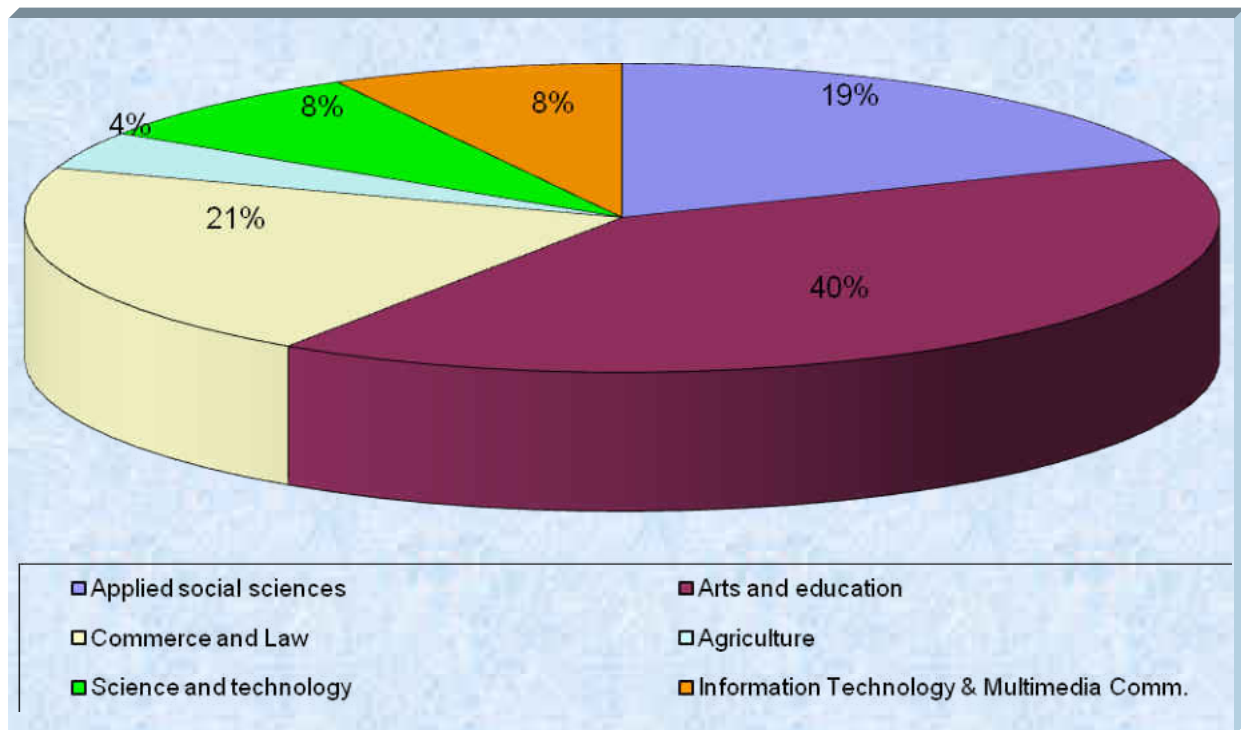
Figure 6.15   Composition of sample according to faculty (n = 101)

About 40.6% of the students were from the faculty of Arts and Education and 20.8% from Commerce and Law. Most of the students were from the Faculty of Arts and Education. The results do not differ much with the 2018 first semester enrolment statistics, in which the faculty of Arts and Education was the biggest (41%), followed by Applied Social Sciences with 22%, Commerce and Law with 21% (ZOU, 2018b).

(f)   *Composition of sample according to race*

Table 6.16 and Figure 6.16 indicate the composition of sample according to race.

Table 6.16

Composition of sample according to race (N = 101)

Faculty	*Frequency*	*Percentage*	*Valid Percentage*	*Cumulative Percent*
Black	94	93.1	93.1	93.1
Coloured	3	3.0	3.0	96.0
White	1	1.0	1.0	97.0
Other	3	3.0	3.0	100.0
Total	101	100.0	100.0	
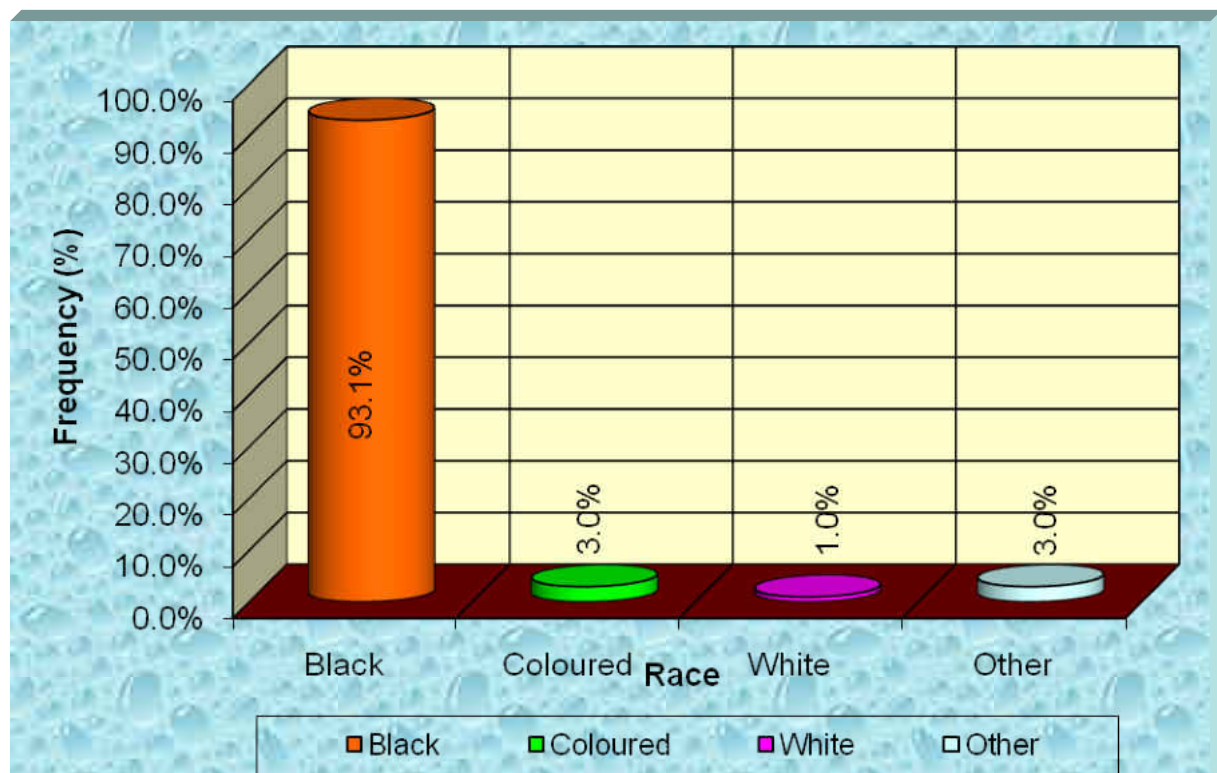
Figure 6.16   Composition of sample according to race (n = 101)

About 93% of the students were blacks, 3% coloured and only 1% whites. The majority of the respondents were blacks as was largely expected.

(g)   *Composition of sample according to years of learning*

Table 6.17 and Figure 6.17 indicate the composition of the sample according to years of learning.

Table 6.17

Composition of sample according to years of learning (N = 101)

Years of learning	Frequency	Percentage	Valid Percentage	Cumulative Percent
Below 2 years	33	32.7	32.7	32.7
Between 2 < 3 years	15	14.9	14.9	47.5
Between 3 < 4 years	31	30.7	30.7	78.2
4 years and above	22	21.8	21.8	100.0
Total	101	100.0	100.0	
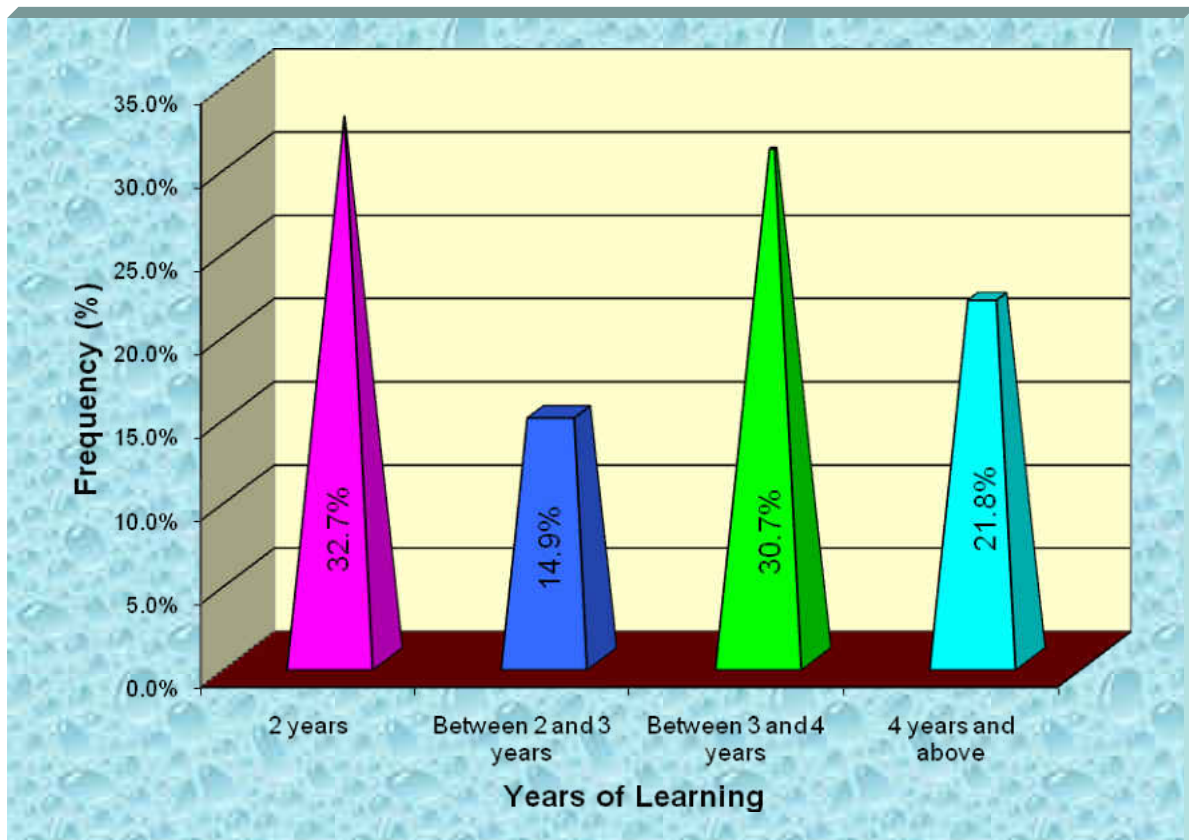
Figure 6.17   Composition of sample according to years of learning (n = 101)

About 30% of the students had been learning at ZOU for less than two years, while 30.7% had learnt for 3 to less than 4 years. Most programmes take up to four years to complete but the ODL university can grant a student additional time to complete his/her programme, but without exceeding 8 years from initial enrolment, taking

cognisance of other commitments faced by distance learners which may warrant deferment of studies should need arise or to redo failed courses (ZOU, 2008). The majority of the students had been with the university for two years and a considerable number between three and four years. The students were familiar with the university, including its service delivery, since they were not new students and their responses were from an informed position.

In summary, the student sample can thus be described as comprising mostly of those who were dominantly of the black race, older, the majority being females, married, pursuing an undergraduate degree programme, majority from the Faculty of Arts and Education and had been with the university for at least two years.

6.3.2 Descriptive Statistical Analysis for constructs items

This section reports on the item descriptive statistics pertaining to each of the measuring instruments, the JD-R scale, UWES and the Servqual scale. For each item, the information presented consists of the computation of means, standard deviations, skewness and kurtosis. The interpretation of the results follows at the end of this section.

6.3.2.1   JD-R scale items

The following Table 6.18 shows the descriptive information pertaining to the JD-R 5-point Likert scale items used, with a score of 1 meaning that the item was rarely experienced, 3 being occasionally experienced and 5 meaning experienced very often.

Table 6.18

Item descriptives for JD-R scale (n = 83)

Item	N	Mean	Std. Deviation	Skewness		Kurtosis	
					Std. Error		Std. Error
	Statistic	Statistic	Statistic	Statistic	Error	Statistic	Error
1. Employee to make complex decisions at work	83	3.5783	.84277	-.440	.264	.857	.523

2. Employee to display high concentration and precision levels at work	83	3.8916	.73272	-.018	.264	-.671	.523
3. Employee to solve work related problem within limited time frame	83	3.9398	.81674	-.438	.264	-.247	.523
4. Employee to remember many things simultaneously	83	3.8313	.85282	-.391	.264	.227	.523
5. Employee to perform lots of mentally taxing work	83	3.8434	.87627	-.689	.264	1.081	.523
6. Employee to deal with people having unrealistic expectations	83	4.0361	.87577	-.629	.264	.264	.523
7. Employee to control emotions to complete tasks within limited time frame	83	4.0723	3.31950	8.243	.264	72.579	.523
8. Employee to deal with people whose problems touch emotionally	83	3.6506	.95552	-.616	.264	.552	.523
9. Employee to deal with people who can get angry with him easily	83	3.4337	.93955	-.708	.264	.942	.523
10. Employee to do lot of emotionally draining work	83	3.6988	.89354	-.623	.264	.712	.523
11. Employee to perform lot of physically strenuous tasks on the job	83	3.3253	1.00132	-.698	.264	.213	.523
12. Employee to stretch and or bend a lot at work	83	3.3735	.99647	-.436	.264	.279	.523
13. Employee to work in uncomfortable or impractical postures to do work	83	3.1205	1.02882	-.385	.264	-.014	.523
14. Employee to lift or move heavy objects at work	83	2.6386	1.07724	-.069	.264	-1.047	.523
15. Employee to perform physical activity quickly and continuously	83	2.8434	1.06476	-.238	.264	-.593	.523
16. Employee to take mental break when task requires lots of concentration	83	2.9639	.88958	-.354	.264	.692	.523
17. Employee to be at times emotional even if against his feelings towards others	83	2.9036	1.08891	-.211	.264	-.424	.523
18. Employee to vary complex with simple tasks if need arises	83	3.3253	.91209	-.205	.264	-.138	.523
19. Employee to receive information from others when solving complex tasks	83	3.6627	.84503	-1.026	.264	2.035	.523
20. Employee to use personal knowledge and intellectual skills to solve complex tasks	83	3.7711	.70409	-.290	.264	.122	.523
21. Employee to personally access information on his own to solve complex tasks	83	3.6627	.78518	.061	.264	-.504	.523

	N	Mean	Std. Deviation	Skewness		Kurtosis	
22. Employee to have opportunity to determine own work method	83	3.4578	.84538	.073	.264	-.540	.523
23. Employee to stop emotional interactions with others whenever he wants	83	3.3012	.87979	-.745	.264	1.107	.523
24. Employee to feel esteemed at work by others	83	3.6747	.75075	-.976	.264	2.576	.523
25. Employee to get emotional support from others when potential threat at work occurs	83	3.8675	.67663	-.318	.264	.320	.523
26. Employee can express emotions after threatening situation without fear of reprisal	83	3.3253	.97666	-.539	.264	.243	.523
27. Employee to be listened to by others if facing a threatening situation	83	3.5904	.78143	-.387	.264	.654	.523
28. Employee can plan and manage work to avoid physical straining work	83	3.3855	.85299	-.478	.264	.892	.523
29. Employee able to use adequate technical equipment to accomplish physical strenuous tasks	83	3.2530	.94796	-.268	.264	.151	.523
30. Employee can decide posture to use to perform physically strenuous tasks	83	3.2892	.96941	-.533	.264	.537	.523
31. Employee can take physical break when work gets physically strenuous	83	3.0843	1.02654	-.242	.264	-.202	.523
32. Employee can receive physical help from others in lifting heavy objects	83	3.4458	1.01517	-.637	.264	.249	.523
Valid N (listwise)	83						

From Table 6.18, it is clear that items 6 and 7 had the highest mean which had values in excess of 4, indicating that there was fairly strong agreement among the academics that a new employee taking up their current position, needed to control their emotions in order to complete tasks within the allocated times. They also needed to deal with people whose problems touched them emotionally. The academics were also expected to pay a lot of concentration on their work and to perform lots of mentally taxing and emotionally draining work. Furthermore, the work involved at times moving heavy objects at work and performing physical activities, which were rather manual and administrative. This may be an indication that academics were working under a lot of pressure due to many expectations that may be unrealistic within the allocated time. This could lead to the new academics

experiencing high stress levels. The other values ranged from 2.9 to 3.5, which indicated that the overall job demands and resources were moderate.

The problem of prevalence of work stress among academics is not only peculiar to ZOU but also even in other universities. A related study done using the JD-R scale pertaining to Australian academic staff had similar scores on academics experiencing increased teaching loads and performing administrative duties thereby reporting high levels of occupational stress (Bakker, Boyd, Dollard, Gillespie, Winefield & Stough, 2011). Even a recent study conducted at an ODL university in South Africa, academic staff experience significantly higher stress due to mainly high workload, lack of role clarity, time pressure, exclusion from decisions pertaining to their work that affect them (Poalses &Bezuidenhout, 2018).

6.3.2.2   UWES items

The following Table 6.19 shows the descriptive information pertaining to the UWES 7-point Likert scale items used with a score of 0 meaning that there was no feeling or experiencing of the item at all (never), 3 being sometimes and 6 indicating that the item was experienced at all times (always). For each item, information consists of computation of means, standard deviations, skewness and kurtosis.

Table 6.19

Items descriptives for UWES scale

Item	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
1. At my work, I feel bursting with energy	83	4.0843	1.14981	-.958	.264	2.470	.523
2. I find the work that I do full of meaning and purpose	83	4.3494	1.17321	-.626	.264	.267	.523
3. Time flies when I am working	83	4.5060	1.02854	-.533	.264	.021	.523
4. At my job I feel strong and vigorous	83	4.2169	1.23019	-.991	.264	1.865	.523
5. I am enthusiastic about my job	83	4.5181	1.25291	-1.300	.264	2.647	.523
6. When I am working, I forget everything else around me	83	3.8434	1.22456	-.673	.264	1.350	.523
7. My job inspires me	83	4.5301	1.09697	-1.129	.264	3.176	.523
8. When I get up in the morning I feel like going to work	83	4.2048	1.14507	-.464	.264	.165	.523
9. I feel happy when I am working intensely	83	4.1928	1.12030	-.659	.264	1.752	.523

10. I am proud of the work that I do	83	4.7349	.96379	-.361	.264	-.406	.523
11. I am immersed in my work	83	4.5783	.89879	.018	.264	-.752	.523
12. I can continue working for very long periods at a time	83	4.7952	1.03310	-.527	.264	-.271	.523
13. To me, my job is challenging	83	4.3253	1.38025	-1.037	.264	1.229	.523
14. I get carried away when I am working	83	4.0241	1.38789	-1.026	.264	1.550	.523
15. At my job, I am very resilient, mentally	83	4.5663	1.12827	-.952	.264	1.951	.523
16. It is difficult to detach myself from my job	83	4.3012	1.06765	-.634	.264	2.257	.523
17. At my work I always persevere, even when things do not go well	83	4.9880	.91723	-.753	.264	.348	.523

Most of the items had means of above 4 which indicated an overall agreement that there was a high level of work engagement among the academics. Academics agreed that when they were working they forgot about everything else which was surrounding them. Item 17 had the highest mean of 4.9880, which suggested that academics at the ZOU persevered even when things were not going on well. The results show that academics were engrossed in their work and were resilient in order to try and meet set targets and goals, despite experiencing at times unfavourable working situations.

Other related studies using the UWES went further by elaborating on other key aspects of academics that have an influence on work engagement. A study conducted at the University of Lahore in Pakistan among academics suggested that personality traits influenced work engagement (Zaidi, Wajid, Zaidi, Zaidi & Zaidi, 2013). Four traits namely, conscientiousness, extraversion, openness and agreeableness have positive relationship with work engagement, whereas, neuroticism is negatively related since it relates to an academic who usually experiences negative emotions. Barkhuizen and Rothmann (2006) studied work engagement of academics in higher education institutions in South Africa, and found that different groups had statistically significant differences on work engagement based on demographical variables of qualifications and different job levels.

6.3.2.3 Servqual scale items for academics

The following Table 6.20 shows the descriptive information pertaining to the Servqual 7-point Likert scale items. The scores reflected the extent to which the academics believed the features could be best described in the statements provided. A score of 1 showed total disagreement (never), a 4 sometimes and 7 strong agreements. For each item, computation of the mean, standard deviation, skewness and kurtosis has been done.

Table 6.20

Items descriptives for Servqual scale for academics

	N	Mean	Std. Deviation	Skewness		Kurtosis	
					Std.		Std.
	Statistic	Statistic	Statistic	Statistic	Error	Statistic	Error
1. ZOU academics have modern looking equipment	83	3.7831	1.18988	-.012	.264	.433	.523
2. ZOU academics offices and buildings physical features visually appealing	83	3.5542	1.22228	.138	.264	.071	.523
3. ZOU secretaries and information records clerks' offices are neatly appearing	83	3.6627	1.06241	.030	.264	.405	.523
4. Materials associated with the service (such as pamphlets or timetables) are visually appealing in Academics offices or in their secretaries or admin office	83	3.5422	1.07410	.342	.264	1.298	.523
5. When ZOU academics promise to do something for students by a certain time, they do so	83	3.9901	1.47983	-.176	.264	-.459	.523
6. When students have problems, ZOU academics show a sincere interest in solving them if they are in their domain or scope.	83	5.0482	1.01096	.482	.264	-.360	.523
7. ZOU academics perform the service right at the first time.	83	4.6265	1.05589	.231	.264	.153	.523
8. ZOU academics provide service at the time they promise to do so.	83	4.6627	1.10737	.266	.264	-.117	.523
9. ZOU academics insist on error free records.	83	5.0482	1.08092	-.216	.264	.144	.523
10. ZOU academics tell students exactly when the service(s) will be performed.	83	4.9277	1.23746	-.176	.264	-.459	.523
11. ZOU academics will give students prompt service.	83	4.5301	1.05157	.789	.264	.008	.523

12. ZOU academics are always willing to help students.	83	5.0964	1.05477	.187	.264	-.737	.523
13. ZOU academics are never too busy to respond to students requests.	83	4.7831	1.21020	-.035	.264	-.608	.523
14. The conduct or behaviour of ZOU academics instil confidence in students.	83	5.0964	1.10005	.087	.264	-.901	.523
15. Students feel safe when being in ZOU Academics' offices.	83	5.3293	1.20754	-.450	.266	.035	.526
16. ZOU academics are consistently courteous with students.	83	4.9036	1.03139	.402	.264	-.739	.523
17. ZOU academics have the knowledge to answer students' questions.	83	5.5060	.99233	-.477	.264	-.352	.523
18. ZOU academics give students individual attention.	83	4.8072	1.15249	.388	.264	-.582	.523
19. ZOU academics operating hours are convenient to all their students.	83	4.4699	1.30044	.630	.264	-.577	.523
20. ZOU academics prefer personal attention if student requests so.	83	4.6988	1.13412	.467	.264	-.157	.523
21. ZOU academics have students' best interests at heart.	83	5.4578	1.22276	-.618	.264	.007	.523
22. ZOU academics understand students' specific needs.	83	4.8795	1.06379	.121	.264	-.208	.523
Valid N (listwise)	83						

The lowest means were scored for the tangibles indicating that there was a low degree of satisfaction with the tangibles by academics at the ZOU. The highest scores of 5.4578 and 5.5060 affirmed that the ZOU academics agreed that they had the knowledge to answer students' questions and had the students' best interests at heart. The mean scores for a number of items were above 4.5 showing that academics felt that in most cases they often provided service to satisfactory levels on empathy, responsiveness and assurance.

A study by Manik and Sidharta (2017) using Servqual scale at a university in Bandung , Indonesia, confirmed the same results of this study that tangibles needed to be improved in order to improve service delivery as they played significant influence on student satisfaction. However, a study at Fahd University, Saudi Arabia showed that academics were satisfied with the tangibles contrary to the low rating by the ZOU academics on the same dimension (Yeo, 2008). Whilst all service delivery dimensions were critical, De Jager and Gbadamosi (2010) even found that there were significant relationships between service delivery in higher education and the intention by both students and academics to leave higher education institutions in South Africa, centred on the level of trust in university management and overall service delivery.

6.3.2.4   Servqual scale items for Students

Table 6.21 shows the descriptive information pertaining to the Servqual 7-point Likert scale items. The scores reflected the extent to which the students rated the statements provided. A score of 1 showed total disagreement (never), a 4 sometimes and 7 strong agreement. The scale items are for the students. For each item, computation has been done for the mean, standard deviation, skewness and kurtosis.

Table 6.21

Items descriptives for Servqualfor students

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
1. ZOU academics have modern looking equipment.	101	3.8218	1.66371	.316	.240	-.874	.476
2. ZOU's academics offices and buildings physical features are visually appealing.	101	4.0693	1.61405	.046	.240	-1.220	.476
3. ZOU's academic secretaries or records clerks' offices are neat appearing.	101	4.6040	1.60049	-.133	.240	-.697	.476

4. Materials associated with the service (such as pamphlets or timetables) are visually appealing in Academics offices or in their secretaries or admin office.	101	4.4455	1.67616	-.202	.240	-.869	.476
5. When ZOU academics promise to do something for students by a certain time, they do so.	101	3.9901	1.47983	-.039	.240	-.510	.476
6. When students have problems, ZOU academics show a sincere interest in solving them if they are in their domain or scope.	101	4.5644	1.29935	.023	.240	-.139	.476
7. ZOU academics perform the service right at the first time.	101	4.5050	1.30095	-.122	.240	-.220	.476
8. ZOU academics provide service at the time they promise to do so.	101	4.0891	1.39355	.155	.240	-.516	.476
9. ZOU academics insist on error free records.	101	4.5545	1.29209	-.477	.240	-.180	.476
10. ZOU academics tell students exactly when the service(s) will be performed.	101	4.4851	1.36098	-.259	.240	.307	.476
11. ZOU academics will give students prompt service.	101	4.5941	1.32799	.002	.240	-.003	.476
12. ZOU academics are always willing to help students.	101	5.0891	1.27357	-.081	.240	-1.037	.476
13. ZOU academics are never too busy to respond to students requests.	101	4.6238	1.46868	.022	.240	-.830	.476
14. The conduct or behaviour of ZOU academics instil confidence in students.	101	4.8911	1.42759	-.709	.240	.391	.476
15. Students feel safe when being in ZOU Academics' offices.	101	5.1287	1.37596	-.847	.240	.521	.476
16. ZOU academics are consistently courteous with students.	101	4.7030	1.34569	-.494	.240	.020	.476
17. ZOU academics have the knowledge to answer students' questions.	101	5.0396	1.44859	-.715	.240	.327	.476
18. ZOU academics give students individual attention.	101	4.6832	1.51612	-.499	.240	-.092	.476

19. ZOU academics operating hours are convenient to all their students.	101	4.2871	1.68723	-.082	.240	-.980	.476
20. ZOU academics prefer personal attention if student requests so.	101	4.4455	1.27652	-.097	.240	-.372	.476
21. ZOU academics have students' best interests at heart.	101	4.7129	1.30642	-.328	.240	-.250	.476
22. ZOU academics understand students' specific needs.	101	4.6040	1.56894	-.442	.240	-.585	.476
Valid N (listwise)	101						

The students had a low perception of the tangibles at the ZOU just as was the case with the academics. The lowest mean value was for item 1 with a mean score of 3.8218, which indicated that students perceived that the ZOU academics did not have modern looking equipment. The highest mean value was for item 15 indicating that students felt safe when being in ZOU offices. Generally, students saw service delivery as generally good despite rating the equipment used by academics as not modern, meaning that it could have been outdated or obsolete. Other dimensions of assurance, empathy, reliability and responsiveness were between the mean score of 4.5 and 5 showing that academics often performed to expectations.

In a related study conducted by Donlagić and Fazlić (2015) using the Servqual scale in a university in Bosnia and Herzegovina, students were satisfied with the reliability and assurance which related to the quality of academics in terms of their knowledge and competencies to perform reliably as initially promised. However, in another study conducted at a university of technology in South Africa, students had high expectations in tangibles, assurance and reliability, but these did not match their expectations, prompting the need by senior management to identify cost effective means of reducing service delivery gaps (Green, 2014).

Interpretation

The data obtained for the items in this research indicate that academics do experience moderate stress generally in a changing ODL environment. Seventeen items out of 32 had mean scores of less than 3.5 to support that (see Table 6.18).

The results refuted the earlier assumption by the researcher that the work stress should have been very high given the additional roles of an academic, as evidenced by his job description, which shows a significant increase on tasks and duties to be performed increasing the workload (ZOU, 2017). In addition, the acute shortage of resources at the distance learning institution like other universities in Zimbabwe (Zulu, 2015) is also an indicator of how the academics work stress would have been relatively higher than what the results suggest. However, there are areas of concern involving academics, particularly that they deal very often with people who have unrealistic expectations (high mean score of 4.0361). An example of unrealistic expectation pertains to the exam-processing period that is given three weeks to complete by the responsible unit, the Academic registry, yet the number of examiners (markers) may be relatively small given the demands of the task to be performed. It seems as if the enforcing of deadlines or due dates within the environment of limited resources, creates a lot of stress (Job demands vs job resources). Even students complained of getting late feedback for marked assignments (ZOU, 2015b) despite the fact that on-line marking was a new mode of assessment, which may require more time for academics to familiarise with. In addition, they are expected to solve work tasks within limited period (mean score of 3.9398), to perform lots of work that is mentally taxing (mean score of 3.8434) as well as remembering so many things simultaneously (mean score of 3.8313). By imposing limited timeframe for the academic to deliver, the results support the literature finding that academics' work is becoming complex with unrealistic targets, which may increase stress (Barkhuizen et al., 2014, Gregory & Lodge, 2015).

In terms of work engagement, the data indicated that the academics were determined to perform their roles and persevere even when at times they faced challenges (mean score 4.9880). The mean scores for some items reflect regular satisfaction by the academics who were proud of their work (mean score 4.7349) and continue to work for longer periods (mean score 4.7952), which enhance their positive relation with work success and organizational outcomes (Bakker & Bal, 2010). The fact that academics are very resilient mentally (mean score 4.5663), also demonstrates their ability to manage stress especially working under pressure, hence the reason that they experience moderate stress as alluded to earlier on.

Furthermore, the data indicated that in terms of service delivery, the tangibles scores were low reflecting the use of outdated equipment by academics as well as the premises and offices that were not visually appealing to both academics and students. This is supported by the literature findings that ODL institutions had challenges with their infrastructure and equipment due to inadequate funding for maintenance, as well as procurement of computer hardware and software (Abidin, 2015; El Mansour & Mupinga, 2007).

6.4 VALIDITY

This section reports on the validity of the three measuring instruments, namely the JD-R scale, the UWES and the Servqual scale.

6.4.1 Exploratory and confirmatory analysis

The exploratory factor analysis was used to reduce the data to a smaller set of summary variables, as well as, exploring the underlying theoretical structure of each phenomenon. Confirmatory factor analysis was used to test whether the data fitted a hypothesised measurement model.

6.4.1.1   JD-R Scale

(i)   Exploratory factor analysis of the JD-R Scale

The initial value of the determinant for the correlation matrix was 1.27×10^{-9}, which indicated that there was a high level of multi-collinearity, making the data unsuitable for factor analysis to proceed (Frost, 2013; Siembida, Moss, Kadan-Lottick & Bellizzi, 2018). To rectify this, correlations were determined and where items had correlations that were significant at a level of 0.01, one of the items was excluded from the analysis. Kline (2014), as well as, Siembida et al. (2018) state that items with high correlation are the most likely cause of an extremely low determinant in factor analysis. The resulting value of the determinant was 0.015, which is greater than 0.0001, thereby making the data suitable for factor analysis. The value of

Kaiser-Meyer-Olkin's (KMO) measure of sampling adequacy was 0.702. KMO had a value, which is larger than 0.5 and Bartlett's test for sphericity had a significant p-value of 0.00 that confirmed that the data was suitable for factor analysis to proceed (Marsh et al., 2014). Four factors were extracted which explained 27.83%, 12.98%, 9.18% and 8.79% of the variation. In all the four factors combined, they explained 58.78% of the variation.

Table 6.22

Component matrix for JD-R

Item	Organisational support	Job insecurity	Relationships	Overload	Growth and advancement
Employee to make complex decisions at work					.518
Employee to deal with people having unrealistic expectations				.345	
Employee to control emotions to complete tasks within limited time frame				.546	
Employee to work in uncomfortable or impractical postures to do work		.593	.312		
Employee to perform physical activity quickly and continuously		.746	.308		
Employee to be at times emotional even if against his feelings towards others		.371		.820	
Employee to vary complex with simple tasks if need arises			.362		.421
Employee to personally access information on his own to solve complex tasks	.492		.303		
Employee to have opportunity to determine own work method			.322		.624
Employee to stop emotional interactions with others whenever he wants					.319
Employee to feel esteemed at work by others	.331		.521		
Employee to get emotional support from others when potential threat at work occurs			.761		

Employee can express emotions after threatening situation without fear of reprisal	.337	.493	-.349
Employee to be listened to by others if facing a threatening situation		.583	
Employee can take physical break when work gets physically strenuous	.820	-.572	
Employee can receive physical help from others in lifting heavy objects	.633		
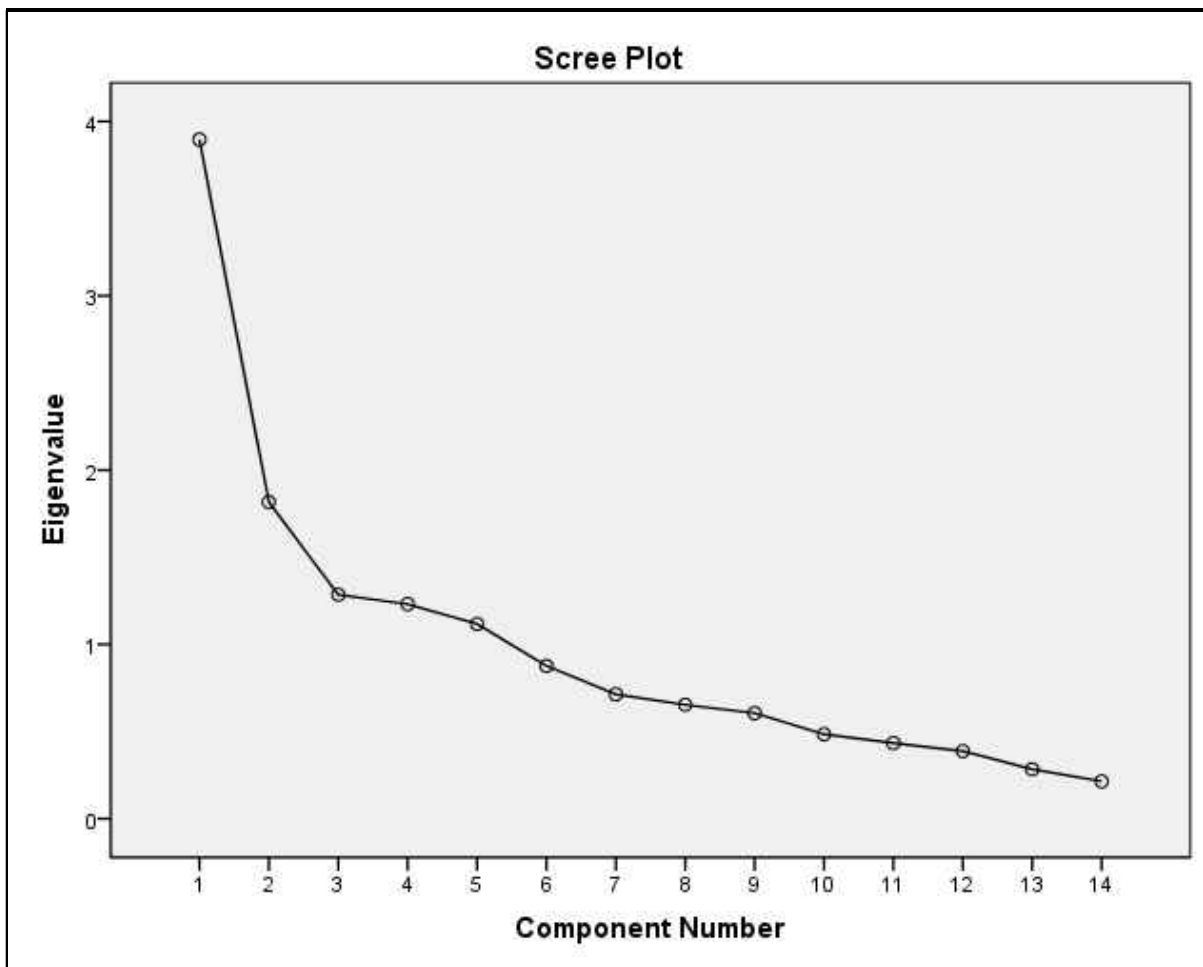
Figure 6.18   Scree plot for JD-R

The scree plot confirms that the graph levels off after the fourth factor, indicating that the first four factors are the most significant. According to Williams et al. (2012) the factors which are on the steep slope are the most important. These four factors (sub-scales) would be used for further analysis pertaining to normality (normal distribution).

ii)   Confirmatory factor analysis

To confirm construct validity, the 32 items of the JD-R scale and the five constructs, job insecurity, overload, growth and advancement, organisational support and relationships were subjected to confirmatory factor analysis. The resulting measurement model is presented in the following Figure 6.19.
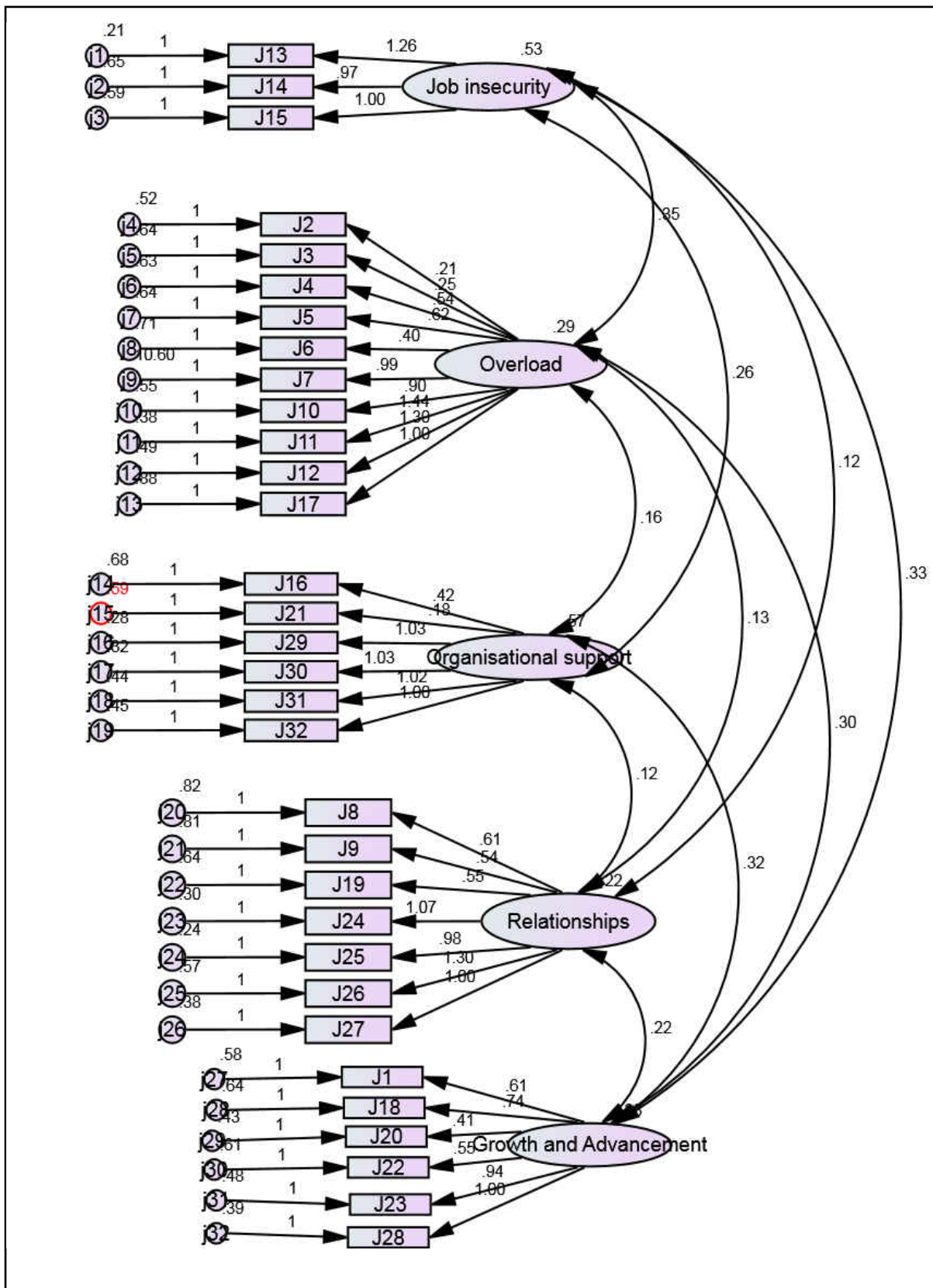
Figure 6.19   Measurement model (JD-R scale)

The standardised regression weights are presented in Table 6.23.

Table 6.23

Standardised regression weights

Subscale			Estimate
Jobinsecurity3	<---	Job_insecurity	.687
Jobinsecurity2	<---	Job_insecurity	.657
Jobinsecurity1	<---	Job_insecurity	.894
Overload10	<---	Overload	.500
Overload9	<---	Overload	.710
Overload8	<---	Overload	.786
Overload7	<---	Overload	.548
Overload6	<---	Overload	.163
Overload5	<---	Overload	.249
Overload4	<---	Overload	.387
Overload3	<---	Overload	.344
Overload2	<---	Overload	.168
Overload1	<---	Overload	.155
Organisationalsupport6	<---	Organisational_support	.750
Organisationalsupport5	<---	Organisational_support	.759
Organisationalsupport4	<---	Organisational_support	.811
Organisationalsupport3	<---	Organisational_support	.827
Organisationalsupport2	<---	Organisational_support	.179
Organisationalsupport1	<---	Organisational_support	.361
Relationships7	<---	Relationships	.607
Relationships6	<---	Relationships	.632
Relationships5	<---	Relationships	.688
Relationships4	<---	Relationships	.677
Relationships3	<---	Relationships	.311
Relationships2	<---	Relationships	.274
Relationships1	<---	Relationships	.300
Growthandadvancement6	<---	Growth_and_advancement	.675
Growthandadvancement5	<---	Growth_and_advancement	.615
Growthandadvancement4	<---	Growth_and_advancement	.376
Growthandadvancement3	<---	Growth_and_advancement	.336
Growthandadvancement2	<---	Growth_and_advancement	.470
Growthandadvancement1	<---	Growth_and_advancement	.414

Interpretation

Most of the items had values between 0.5 and 0.8, which exhibited a moderate effect, although there were a few, which showed significant effect or low effect. The Non-normed fit index (NNFI), which is also known as TLI, and the Confirmatory factor index (CFI), had values of 0.490 and 0.533 respectively, which indicate that the model was not a good fit. TLI and CFI compare the target mode fit to the fit of a null or independent model (Brown & Moore, 2012). In terms of the value of the Root mean square error of approximation (RMSEA), it was 0.122, which is larger than 0.08. The model was significant as it had a chi square value of 1007.003 with 454 degrees of freedom and a p-value of 0.00. The model fit did not reach the acceptable levels possibly due to the relatively sample size that was used. According to Gatignon (2010, p. 33), "Correlation coefficients fluctuate from sample to sample, much more so in small samples than in large ones. Therefore, the reliability of factor analysis is also dependent on the sample size."

6.4.1.2   UWES

i)   Exploratory factor analysis

The value of the determinant was 0.000181 which is greater than 0.0001, thereby making the data suitable for factor analysis (Brown & Moore, 2012). According to Brown & Moore (2012) when the determinant is closer to zero, factor analysis cannot be done on the set of variables. They recommended the limit for the determinant for data to be considered suitable for factors analysis should be at 0.0001. The value of the Kaiser-Meyer-Olkin's (KMO) measure of sampling adequacy was 0.909. KMO had a value, which is larger than 0.5 and Bartlett's test for sphericity had a significant p-value of 0.00 that confirmed that the data was suitable for factor analysis to proceed. The items loaded on to three factors, which were taken using the criteria of having eigenvalues with a value above 1. Three factors were extracted which explained 54.26%, 9.84% and 6.75% of the variation. The three factors explained 70.85% of the variation when combined. The three factors that were extracted were the same as the theoretical factors.

The Component matrix is presented in Table 6.24

Table 6.24

Component matrix for UWES

Item	Factor		
	Vigour	**Absorption**	**Dedication**
At my work, I feel bursting with energy	.792		
I find the work that I do full of meaning and purpose		.324	.806
Time flies when I am working		.434	
At my job I feel strong and vigorous	.813		
I am enthusiastic about my job			.795
When I am working, I forget everything else around me		.542	
My job inspires me			.880
When I get up in the morning I feel like going to work	.694		
I feel happy when I am working intensely		.592	
I am proud of the work that I do	.442		-.495
I am immersed in my work		-.546	.311
I can continue working for very long periods at a time	.757		
To me, my job is challenging		.400	.513
I get carried away when I am working		.682	
At my job, I am very resilient, mentally	.632	.326	
It is difficult to detach myself from my job		.583	
At my work I always persevere, even when things do not go well	.622	.314	

The items were loaded on three factors, which were the same as the theoretical constructs for the UWES scale. The study therefore maintained the theoretical variables without any transformations during further analysis.

The scree plot for UWES is presented in the Figure 6.20.
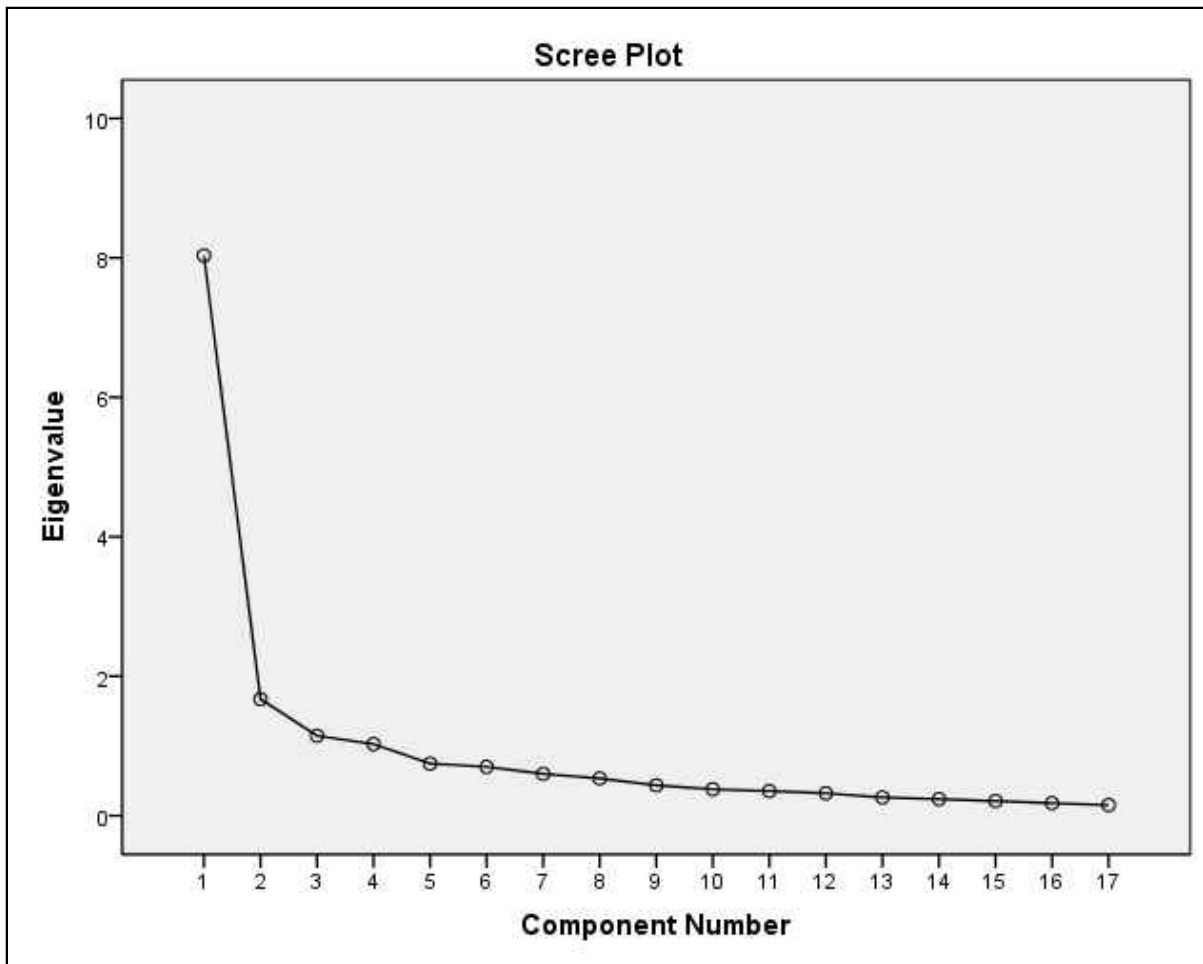
Figure 6.20   Scree plot for UWES

The scree plot levels off after the third component, which confirms that, all the important information is covered by the first three factors. A three-factor structure as proposed by the original model was evident in this sample. The study therefore maintained the theoretical variables without any alteration during further analysis.

ii)   Confirmatory factor analysis

In order to confirm that there was construct validity, the 17 items in the UWES and their three constructs were subjected to confirmatory factor analysis. The measurement model for UWES is shown in the following Figure 6.21.
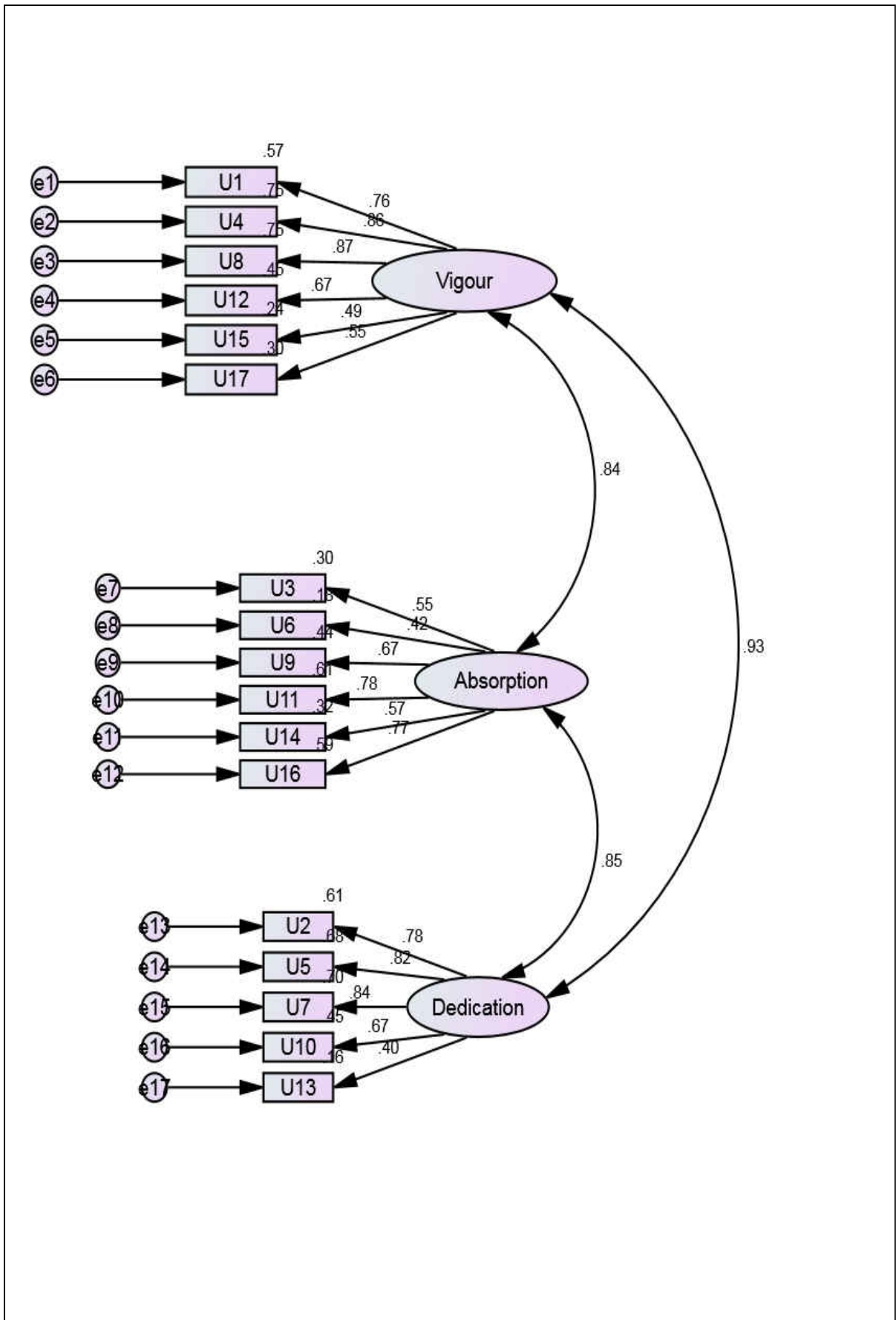
Figure 6.21   Measurement model (UWES)

The standardised regression weights are presented in Table 6.25.

Table 6.25

Standardised regression weights (UWES)

Subscale			Estimate
Vigour6	<---	Vigour	.552
Vigour5	<---	Vigour	.486
Vigour4	<---	Vigour	.671
Vigour3	<---	Vigour	.865
Vigour2	<---	Vigour	.864
Vigour1	<---	Vigour	.755
Absorption6	<---	Absorption	.770
Absorption5	<---	Absorption	.566
Absorption4	<---	Absorption	.782
Absorption3	<---	Absorption	.666
Absorption2	<---	Absorption	.421
Absorption1	<---	Absorption	.552
Dedication5	<---	Dedication	.405
Dedication4	<---	Dedication	.671
Dedication3	<---	Dedication	.837
Dedication2	<---	Dedication	.825
Dedication1	<---	Dedication	.780

Interpretation

Most of the items were between 0.5 and 0.8, which exhibited a moderate effect although there were four items that showed significant effect and one that showed low effect (Ullman & Bentler, 2012). According to Ullman and Bentler (2012) standard regression weights above 0.8 can be considered to reflect significant effect of the underlying variable. TLI and CFI had values of 0.825 and 0.851 respectively, which fell just short of the minimum for a good fit. The value of RMSEA was 0.077 which is lower than 0.08 and satisfies the conditions for a good fit. The model was significant as it had a chi square value of 458.048 with 232 degrees of freedom and a p-value of 0.00. The model fit did not reach acceptable levels, possibly because the sample size, which was used, was relatively small (Brown & Moore, 2012). According to Brown and Moore (2012) goodness of fit indices in factor analysis can be significantly influenced by sample size. The fact that the RSMEA satisfied the conditions for a good fit and taking into account Brown and Moore's (2012) sentiments given above, the data was considered consistent with the theoratical scales of the UWES, thereby ensuring construct validity and all the three dimensions (sub-scales) were consired for further analysis.

6.4.1.3   Servqual scale

i)   Exploratory factor analysis

The determinant for the correlation matrix was 0.001, which meant that the data was suitable for factor analysis. The value of Kaiser-Meyer-Olkin's (KMO) measure of sampling adequacy was 0.865. KMO had a value, which is larger than 0.5 and Bartlett's test for sphericity had a significant p-value of 0.00, which confirmed that the data was suitable for factor analysis to proceed. The items loaded on to four factors, which were identified using the criteria of having eigen values with a value above 1. Four factors were extracted which explained 45.60%, 10.96%, 7.53% and 5.59% of the variation. The four factors explained 69.68% of the variation when combined.

The components that were extracted are shown in Table 6.26.

Table 6.26

Component matrix for Servqual

	Factor				
	Responsiveness	**Reliability**	**Tangibles**	**Empathy**	**Assurance**
ZOU academics have modern looking equipment	.540		.645		
ZOU academics offices and buildings physical features visually appealing			.660		
ZOU secretaries and information records clerks offices are neatly appearing			.571	.405	
Materials associated with the service (such as pamphlets or timetables) are visually appealing in Academics offices or in their secretaries or admin office	.403		.543		
When students have problems, ZOU academics show a sincere interest in solving them if they are in their domain or scope.					.671
ZOU academics perform the service right at the first time.					.917
ZOU academics provide service at the time they promise to do so.					.832
ZOU academics insist on error free records.		.513			.662
ZOU academics tell students exactly when the service(s) will be performed.				.603	
ZOU academics will give students prompt service.				.806	

	1	2	3	4
ZOU academics are always willing to help students.				.710
ZOU academics are never too busy to respond to students requests.				.653
The conduct or behaviour of ZOU academics instil confidence in students.				.620
Students feel safe when being in ZOU Academics' offices.	.629	.405		
ZOU academics are consistently courteous with students.	.730			
ZOU academics have the knowledge to answer students' questions.	.574			
ZOU academics give students individual attention.	.637			
ZOU academics operating hours are convenient to all their students.	.673			
ZOU academics prefer personal attention if student requests so.	.625	.471		.447
ZOU academics have students' best interests at heart.	.505	.490		
ZOU academics understand students' specific needs.	.661			

The scree plot is shown in Figure 6.22
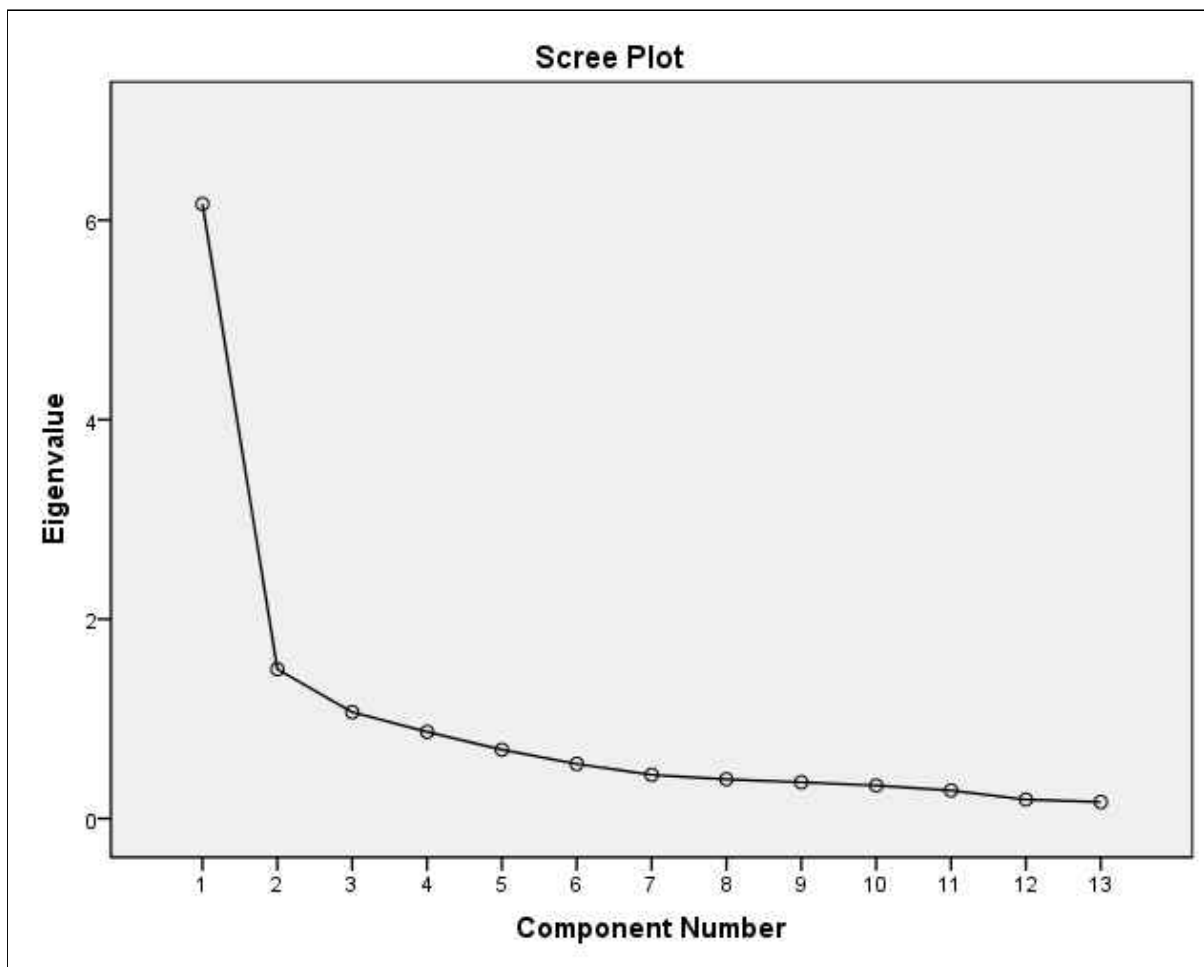
Figure 6.22   Scree plot for Servqual

The scree plot for Servqual levelled off after the first four components indicating that these were the significant components for explaining the variation. These four factors (sub-scales) would be used for further analysis pertaining to normality in this study.

ii)   Confirmatory factor analysis

To confirm construct validity in the Servqual, confirmatory factor analysis was conducted on the 22 items and the constructs tangibles, reliability, responsiveness, empathy and assurance. The measurement model is presented in Figure 6.23
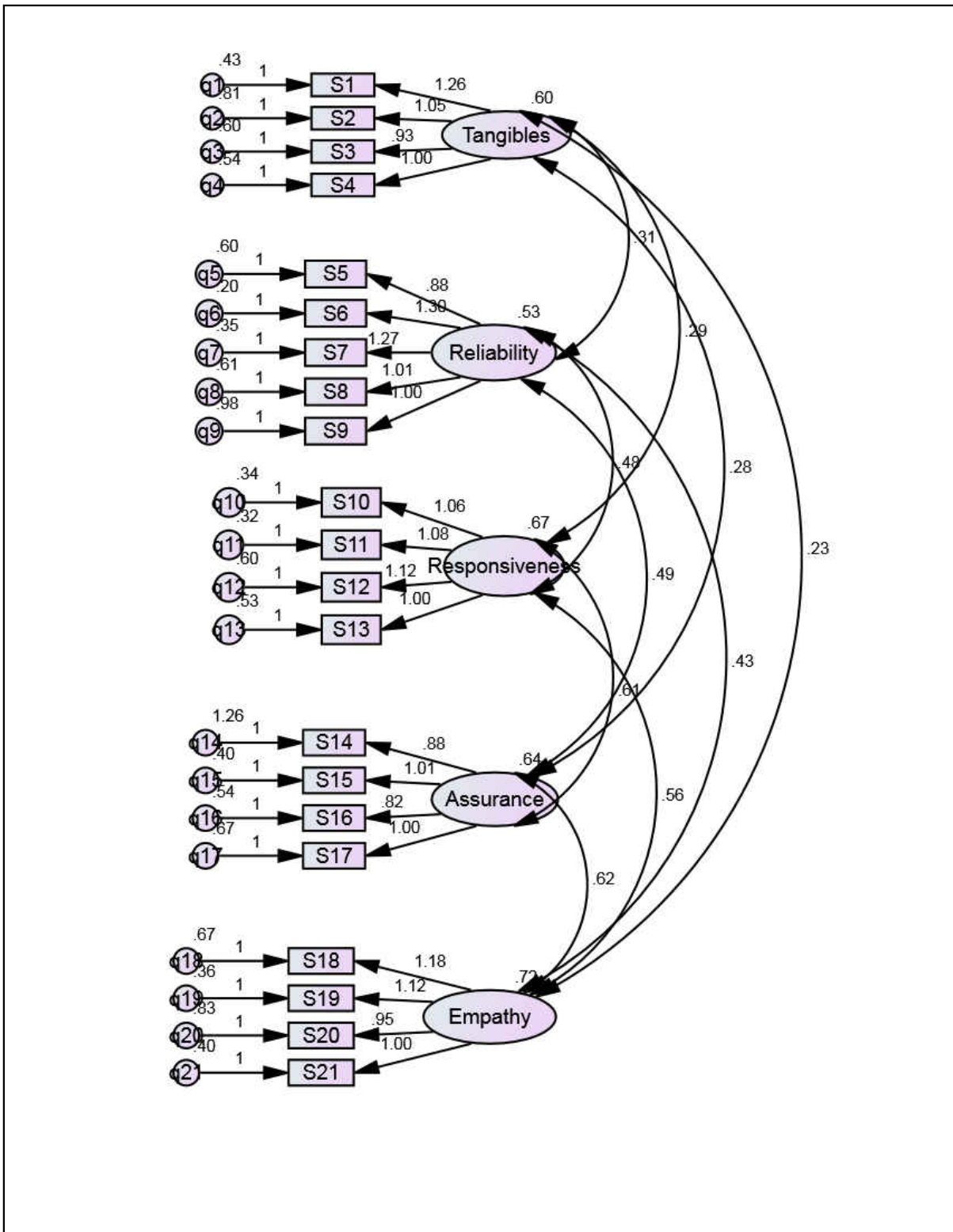
Figure 6.23   Measurement model for Servqual

The standardised regression weights are presented in Table 6.27.

Table 6.27

Standardised regression weights (Servqual)

Subscale			Estimate
Responsiveness4	<---	Responsiveness	.748
Responsiveness3	<---	Responsiveness	.764
Responsiveness2	<---	Responsiveness	.841
Responsiveness1	<---	Responsiveness	.832
Assurance4	<---	Assurance	.699
Assurance3	<---	Assurance	.669
Assurance2	<---	Assurance	.788
Assurance1	<---	Assurance	.531
Empathy4	<---	Empathy	.804
Empathy3	<---	Empathy	.663
Empathy2	<---	Empathy	.846
Empathy1	<---	Empathy	.773
Tangibles4	<---	Tangibles	.728
Tangibles3	<---	Tangibles	.682
Tangibles2	<---	Tangibles	.671
Tangibles1	<---	Tangibles	.831
Reliability5	<---	Reliability	.594
Reliability4	<---	Reliability	.689
Reliability3	<---	Reliability	.845
Reliability2	<---	Reliability	.905
Reliability1	<---	Reliability	.636

Interpretation

Most of the items were between 0.5 and 0.8, which exhibited a moderate effect, although there were six items, which showed significant effect. According to Ullman and Bentler (2012) standard regression weights above 0.8 can be considered to reflect significant effect of the underlying variable. TLI and CFI had values of 0.769 and 0.803 respectively that fell just short of the minimum for a good fit. The value of RMSEA was 0.122 which is greater than 0.08 and does not satisfy the conditions for a good fit. The model was significant as it had a chi-square value of 398.643 with 179 degrees of freedom and a *p*-value of 0.00. The model fit did not reach acceptable levels, possibly because the sample size that was used was relatively small (Brown & Moore, 2012). According to Brown & Moore(2012) goodness of fit indices in factor analysis can be significantly influenced by sample size.

The data for the study was found to be very close to the theoretical scales of JD-R, UWES and Servqual, respectively, thereby, ensuring their validity in the study.

6.5   RELIABILITY: Cronbach's Alpha coefficient

The Cronbach's Alpha coefficient was obtained to estimate the internal consistency of all the three measurement instruments used in this research, namely the JD-R scale, the UWES and the Servqual scale.

6.5.1   Reliability analysis: JD-R Scale

This section looks at the Cronbach Alpha coefficients for the five dimensions (sub-scales) of the JD-R scale, which indicate whether they were internally consistent and if they met the requirements for being used to estimate the model. The following Table 6.28 shows these dimensions (sub-scales) and their items.

Table 6.28

Items included in the JDR scale

Oganisational Support

employee able to use adequate technical equipment to accomplish physical strenuous tasks

Employee can decide posture to use to perform physically strenuous tasks

employee can take physical break when work gets physically strenuous

employee can receive physical help from others in lifting heavy objects

employee to take mental break when task requires lots of concentration

employee to personally access information on his own to solve complex tasks

Overload

employee to be at times emotional even if against his feelings towards others

employee to do lot of emotionally draining work

employee to perform lot of physically strenuous tasks on the job

employee to stretch and or bend a lot at work

employee to solve work related problem within limited time frame

employee to remember many things simultaneously

employee to perform lots of mentally taxing work

employee to deal with people having unrealistic expectations

employee to control emotions to complete tasks within limited time frame

employee to deal with people whose problems touch emotionally

Job insecurity

employee to work in uncomfortable or impractical postures to do work

employee to lift or move heavy objects at work

employee to perform physical activity quickly and continuously

Relationships

employee to feel esteemed at work by others

employee to get emotional support from others when potential threat at work occurs

employee can express emotions after threatening situation without fear of reprisal

employee to be listened to by others if facing a threatening situation

employee to receive information from others when solving complex tasks

employee to deal with people whose problems touch emotionally

employee to deal with people who can get angry with him easily

Growth and **Advancement**

employee can plan and manage work to avoid physical straining work

employee to make complex decisions at work

employee to vary complex with simple tasks if need arises

employee to use personal knowledge and intellectual skills to solve complex tasks

employee to have opportunity to determine own work method

employee to stop emotional interactions with others whenever he wants

---

For overload, the original value of the Cronbach's Alpha was 0.578 for 10 items, but eliminating the item "*employee to control emotions to complete tasks within limited*

time frame" improved the value of Cronbach's Alpha to 0.733. The reason for this problematic item that had to be eliminated could stem from the fact that it was rather ambiguous in that academics are not really forced to execute their duties and the nature of their work is not so emotional. They do not need to be emotional to complete tasks in specified timeframes. The item was therefore eliminated from the analysis. The following Table 6.29 presents the reliability statistics for the constructs under the JD-R scale.

Table 6.29

Reliability statistics for JD-R scale

Variable	N	Alpha
Organisational support	6	0.784
Overload	9	0.733
Job insecurity	3	0.822
Relationships	7	0.886
Growth and advancement	6	0.882

Values of Cronbach's Alpha for organisational support and overload were in the range between 0.7 and 0.8, which according to Tavakol and Dennick (2011) is acceptable since the minimum threshold value is 0.7. For the other variables namely, job insecurity, relationships and growth and advancement, the Cronbach's Alpha values were in the range between 0.8 and 0.9 which is considered to be good internal consistency. All the constructs under JD-R scale were theerfore internally consistent and satisfied the requirement for being used in estimating the model.

When compared with the Cronbach's Alpha values on a study using the same measuring instrument (JD-R Scale) on school educators in Pietermaritzburg, Kwazulu-Natal by Main (2011), they were; overload (0,736), job insecurity (0, 932), growth and advancement (0,762) and relationships (0,776), the results were relatively similar.

6.5.2   Reliability analysis: UWES

This section looks at the Cronbach's Alpha coefficients for the three dimensions (sub-scales) of the UWES which indicate whether   they were internally consistent

and also if they met the requirements for being used to estimate the model. The following Table 6.30 shows these dimensions (sub-scales) and their items.

Table 6.30

Items included in the UWES scale

Vigour
At my work, I feel bursting with energy
At my job I feel strong and vigorous
When I get up in the morning I feel like going to work
I can continue working for very long periods at a time
At my job, I am very resilient, mentally
At my work I always persevere, even when things do not go well
Dedication
I find the work that I do full of meaning and purpose
I am enthusiastic about my job
My job inspires me
I am proud of the work that I do
To me, my job is challenging
Absorption
Time flies when I am working
When I am working, I forget everything else around me
I feel happy when I am working intensely
I am immersed in my work
I get carried away when I am working
It is difficult to detach myself from my job

The following Table 6.31 presents the reliability statistics for the three constructs in the UWES scale.

Table 6.31

Reliability statistics for UWES scale

Variable	N	Alpha
Vigour	6	0.861
Dedication	5	0.813
Absorption	6	0.781

The value of Cronbach's Alpha for Absorption was 0.781 and this indicates that the items under the construct had internal consistency that was acceptable. For the other two constructs, the values of Cronbach's Alpha were between 0.813 and 0.861. This means that there was good internal consistency among the items. Regarding internal consistency for the UWES by other studies, Storm (2002) obtained reliable Cronbach's Alpha coefficients as follows, Vigour (0.78), dedication (0.89) and absorption (0.78) and Schaufeli et al. (2002) obtained the Cronbach's Alpha coefficients between 0.68 and 0.91, which confirms the almost similarity with this study.

6.5.3   Reliability analysis: Servqual

This section looks at the Cronbach's Alpha coefficients for the five dimensions (sub-scales) of the Servqual scale that indicate whether they were internally consistent and if they met the requirements for being used to estimate the model. The following Table 6.32 shows these dimensions (sub-scales) and their items.

Table 6.32

Items included in the Servqual scale

Tangibles
ZOU academics have modern looking equipment.
ZOU's academics offices and buildings physical features are visually appealing.
ZOU's academic secretaries or records clerks' offices are neat appearing.
Materials associated with the service (such as pamphlets or timetables) are visually appealing in Academics offices or in their secretaries or admin office.
Reliability
When ZOU academics promise to do something for students by a certain time, they do so.
When students have problems, ZOU academics show a sincere interest in solving them if they are in their domain or scope.
ZOU academics perform the service right at the first time.
ZOU academics provide service at the time they promise to do so.
ZOU academics insist on error free records.
Responsiveness
ZOU academics tell students exactly when the service(s) will be performed.
ZOU academics will give students prompt service.
ZOU academics are always willing to help students.
ZOU academics are never too busy to respond to students' requests.
Assurance
The conduct or behaviour of ZOU academics instil confidence in students.

Students feel safe when being in ZOU Academics' offices.
ZOU academics are consistently courteous with students.
ZOU academics have the knowledge to answer students' questions.
Empathy
ZOU academics give students individual attention.
ZOU academics operating hours are convenient to all their students.
ZOU academics prefer personal attention if student requests so.
ZOU academics have students' best interests at heart.
ZOU academics understand students' specific needs.

Table 6.32 shows how all 22 items of the Servqual instrument are distributed among its five dimensions (sub-scales) namely, tangibles (4 items), reliability (5 items), responsiveness (4 items), assurance (4 items) and empathy (5 items). These 5 dimensions (sub-scales) based on the distribution of the items above, were then subjected to reliability test to show their consistency in getting similar results even if replicated or used at different times (Green & Yang, 2015; Kennedy, 2009).

6.5.3.1   Reliability analysis: Servqual for academics

This section looks at the Cronbach's Alpha coefficients for the 5 dimensions (sub-scales) of the Servqual scale for the academics which indicate whether there was internal consistency and also if they met the requirements for being used to estimate the model. The following Table 6.33 shows these dimensions (sub-scales) and their items.

Table 6.33

Reliability statistics for Servqual

Variable	N	Alpha
Tangibles	4	0.819
Reliability	5	0.839
Responsiveness	4	0.877
Assurance	4	0.862
Empathy	5	0.872

The values of Cronbach's Alpha for all the five constructs in the Servqual scale were in the range between 0.8 and 0.9. According to Tavakol and Dennick (2011) the values between 0.8 and 0.9 indicate that internal consistency was good among the

items in each of the constructs. These were above the minimum acceptable level of 0.70 (Tredoux & Durrheim, 2002; Vaske et al., 2017).

6.5.3.2   Reliability analysis: Servqual for students

This section looks at the Cronbach's Alpha coefficients for the 5 dimensions (sub-scales) of the Servqual scale for the students which indicate whether there was internal consistency and also if they met the requirements for being used to estimate the model. Table 6.34 shows these dimensions (sub-scales) and their items.

Table 6.34

Reliability statistics for Servqual

Variable	N	Alpha
Tangibles	4	0.783
Reliability	5	0.811
Responsiveness	4	0.847
Assurance	4	0.849
Empathy	5	0.826

The value of Cronbach's Alpha for tangibles was 0.783, which signified acceptable internal consistency for the items that made up the construct. For the other four variables, which make up Servqual for the students the value of Cronbach's Alpha was between 0.8 and 0.9, which meant that the internal consistency among the items was good.

The reliable Cronbach's Alpha coefficients compared favourably with other studies with the five dimensions (reliability, assurance, tangibles, empathy and responsiveness) ranging from 0.785 to 0.917 (Markovic & Raspor, 2010) and from 0.72 to 0.86 (Yousapronpaiboon, 2014) for a related study on measuring service quality in higher education.

In summary, the sub-scales of all the three instruments (JD-R, UWES and Servqual) showed good internal consistency among the items and were all considered in this study to be ideal for the collection of data considering that their Cronbach's Alpha coefficients were in the acceptable range of at least 0.70 (Vaske et al., 2017; Tredoux & Durrheim, 2013).

6.6 DESCRIPTIVE ANALYSIS OF THE RESEARCH CONSTRUCTS

This section reports on the descriptive statistics for the subscales or dimensions of all the three measuring instruments namely the JD-R scale, the UWES and Servqual.

6.6.1 Descriptive statistics: JD-R scale

The mean, standard deviation, skewness and kurtosis of each of the subscales (dimensions) of the JD-R scale that measures work stress are presented in Table 6.35 below. These measures involve summarising and organising the data so that it can be easily understood (Cox, 2018; Hinton, 2014).

Table 6.35

Descriptive statistics of sub-scale scores: JD-R scale(n=83)

Subscale	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Organisational support	83	3.2831	.65318	-.262	.264	.685	.523
Overload	83	3.6916	.61172	1.273	.264	6.368	.523
Job insecurity	83	2.8675	.60757	-.400	.264	-.134	.523
Relationships	83	3.6145	.60271	-.289	.264	1.419	.523
Growth and Advancement	83	3.4699	.52327	-.248	.264	.897	.523
Valid N (listwise)	83						

From Table 6.35, the lowest mean score was 2.8675 for job insecurity that showed that academics were not very stressed with the security of their jobs, but probably more so with overload that had the highest mean score of 3.6916. The other three dimensions that belong to job resources were organisational support, which had

mean score of 3.2831, relationships had 3.6145 and growth and advancement had 3.4699. These were above moderate and being components of job resources, they should not cause stress among the academics in the ODL university.

The result on relatively high overload has been of concern among university academics with similar results using the JD-R scale obtained by other studies. A study of the Australian academic staff indicated that increased teaching loads and administrative duties led to academics experiencing high levels of work stress (Bakker et al., 2010). Also at an ODL university in South Africa, academic staff experience significantly higher stress due to mainly high workload (Poalses &Bezuidenhout, 2018).

The standard deviations for the sub-scales were in the range from 0.52327 to 0.65318, which showed that variation was moderate among the academics' work stress. The skewness for the sub-scales was in the range between -0.400 to 1.273. For four of the sub-scales, the skewness fell in the range -1 to 1, which is the range for confirming normality of the scores. For the other sub-scale, overload, the skewness of 1.273 indicates that it just fails to satisfy the condition for normality. The kurtosis for overload was 6.368, which is outside the range -3 to 3 that is required for normally distributed values. The variable's distribution has heavier tails than normally distributed data. This confirms the conclusion based on skewness that the variable is not normally distributed. The other four variables, had kurtosis ranging from -1.34 to 1.419 that put them in the range of kurtosis for normally distributed variables. The scree plot shown as Figure 6.18 also confirmed these four variables (factors). From the above results, the overload sub-scale had its skewness exceeding 1 which showed that it did not conform to the requirements of a normal distribution (Treaiman, 2014). Therefore, it was eliminated from the conceptual model for the study that was tested by the Structural Equation Modelling (SEM) discussed on 6.7.2

6.6.2   Descriptive statistics: UWES

The mean, standard deviation, skewness and kurtosis of each of the sub-scales (dimensions) of the UWES that measures work engagement are presented in the following Table 6.36.

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Table 6.36

Descriptive statistics for sub-scale score: UWES(n=83)

Sub-scale	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Vigour	83	4.4759	.84829	-.618	.264	.173	.523
Dedication	83	4.4916	.89405	-.810	.264	.853	.523
Absorption	83	4.2410	.78185	-.121	.264	.279	.523
Valid N(listwise)	83						

The mean values for the sub-scales ranged between 4.2410 and 4.4759.The highest value was on dedication. The mean values indicated a high level of work engagement. The standard deviations for the sub-scales in turn ranged from 0.78185 to 0.89405.

The skewness for the sub-scales ranged from -0.810 to -0.121 which means they all satisfied the condition for normality which states that they should fit in the range -1 to +1. The kurtosis had values, which ranged from 0.173 to 0.279. The values of kurtosis were within the -3 to 3 range required for normal variables and were all considered in the conceptual model for the study. The results are supported by a similar study conducted by Girtie (2005) which showed that the level of work engagement among academics in South Africa's institutions of higher education was encouraging. This showed that academics found their work to be stimulating, energising and psychologically connected to their work so that they have the desire for meaningful pursuit of goals (Bakker, Demerouti & Lieke, 2012; Bakker, Rodríguez-Munoz & Sanz Vergel, 2016; Salanova & Schaufeli, 2008).

6.6.3 Descriptive statistics: Servqual scale

The mean, standard deviation, skewness and kurtosis of each of the sub-scales (dimensions) of the Servqual scale that measures service deliveryare presented in Tables 6.37 and Table 6.38 for academics and students respectively.

Table 6.37

Descriptive statistics for sub-scale scores for academics: Servqual(n=83)

Sub-scale	N	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Tangibles	83	3.6355	.91756	-.325	.264	1.331	.523
Reliability	83	4.8464	.87114	.462	.264	-.137	.523
Responsiveness	83	4.8343	.94698	.485	.264	-.440	.523
Empathy	83	5.0313	1.28689	2.089	.264	7.617	.523
Assurance	83	5.2118	.91308	-.117	.264	-.496	.523
Valid N	83						

The means for the sub-scales were in the range from 3.6355 to 5.2118. The lowest score was on the tangibles indicating this was what the academics were the least satisfied with. Academics were therefore not really satisfied or impressed by the appearance and attractiveness of physical facilities such as offices, buildings, computer laboratories, equipment and communication materials. Assurance had the highest mean 5.2118 indicating that it was the area in which academics believed that they had the highest level of perceived service delivery. The results are supported by a similar study conducted by Manik and Sidharta (2017) at a university in Bandung, Indonesia, that tangibles were lowly scored and that they needed to be improved in order to improve service delivery since these had a significant influence on student satisfaction.

The skewness for the variable empathy was 2.089, which exceeded 1 which is the maximum for normally distributed variables, meaning that the scores are not normally distributed. For the other four variables the skewness ranged from -.325 to 0.485 which confirmed the variables as being normally distributed. The kurtosis for empathy was 7.617, which was outside the range -3 to 3 for normal distributions that indicate that it was not normally distributed as earlier suggested by its skewness and was therefore eliminated from the conceptual model for the study (Treaiman, 2014). The kurtosis for the rest of the sub-scales (tangibles, responsiveness, assurance and reliability) was in the range -0.496 to 1.331, which fall within the required range for normally distributed variables and were considered for the conceptual model of the

study. The scree plot shown as Figure 6.22 also confirmed these four variables (sub-scales).

Table 6.38

Descriptive statistics for sub-scales for students: Servqual(n=101)

Sub-scale	N	Mean	Std. Deviation	Skewness		Kurtosis	
					Std.		Std.
	Statistic	Statistic	Statistic	Statistic	Error	Statistic	Error
Tangibles	101	4.2351	1.27565	-.170	.240	-.569	.476
Responsiveness	101	4.6980	1.12545	.144	.240	-.617	.476
Assurance	101	4.9406	1.16090	-.751	.240	.588	.476
Empathy	101	4.5465	1.13662	-.499	.240	.273	.476
Reliability	101	4.3406	1.02315	-.088	.240	-.270	.476
Valid N (listwise)	101						

The means for the sub-scales range from 4.2351 to 4.9406 putting them in a very narrow range in which the values indicate moderately positive perceptions of the service quality received from ZOU academics on their responsiveness, empathy, reliability, assurance and even the tangibles. The students seemed to be satisfied with service delivery they got from the academics in the ODL University.

The skewness for the sub-scales ranged from -0.751 to 0.144 which all fall in the range -1 to 1 as required for normally distributed random variables. The kurtosis for the scores range from -0.617 to 0.588 to keep within the range that is expected of normally distributed variables. The scores for the sub-scales are therefore normally distributed.

A related study conducted in higher education institutions in Malaysia also confirmed that all the five sub-scales showed that students were satisfied (Abu-Hasan, Ilias, Rahman & Abd-Razak, 2009). Another study in South African institutions of higher learning by Green (2014) also showed satisfaction among students on the five dimensions although students felt there was room for improvement. The above empirical results provide support for the Servqual model by Parasuraman, Zeithaml and Berry (1985), which outlines the factors that contribute to students' satisfaction.

Interpretation

The results showed that job insecurity among the academics was not a worrisome threat to their jobs in the ODL university. This could have been as a result of those who had higher qualifications having left for greener pastures in the neighbouring countries, Botswana, Namibia and South Africa and even Britain, Canada and Australia, creating a deficiency of such highly qualified staff due to the brain drain (Banya & Zajda, 2015; Chetsanga & Muchenje, 2003). The other possibility could be the fact that the academics suffered from work overload, as the ODL University tried to reduce costs on remuneration and other benefits by not replacing those who would have left. As a result of not replacing those who would have left, the ones who remained would have a bit of job security since their services would be required. This move by the ODL university becomes a cost reduction strategy that augurs well with an underperforming economy (Lawless, Tyler & Overman, 2011) despite it creating additional work for those who remain behind. The work overload, which was rated highly as prevalent by the academics, supports the literature findings that the changing ODL environment manifested in increased workload for academics that increased work stress. (Bezuidenhout, 2015; Gregory & Lodge, 2015; John et al., 2014).

As reported in this study, the high mean scores for all three work engagement dimensions of vigour, dedication and absorption, reflect that academics were engaged in their work. The high mean score for absorption denotes that academics were highly engrossed in their work characterised by total concentration and time seen to be flying (Van Wingerden et al., 2017). In addition, their vigour denotes high levels of energy, investment on more effort and mental resilience even under difficult circumstances (Demerouti et al., 2015). This fully supports the notion that Zimbabwean workers are generally resilient which has seen them maintaining consistency and surviving under difficult times (Chiumbu & Musemwa, 2012; Gukurume, 2015). High levels of work engagement are connected to positive outcomes for any organisation (Bakker & Albretcht, 2018; Schaufeli & Bakker, 2010) and in this context, the ODL university on service delivery.

Service delivery in ODL has increasingly become critical in determining the reputation and image of institutions as well as competing for more students since the prevalence of online learning has taken centre stage (Bennet et al., 2014; Ruben, 2018; Sallis, 2014). The study confirmed that both students and academics rated tangibles the least, showing that they had similar perceptions between them. The appearance and effectiveness of the physical facilities such as infrastructure, equipment, as well as, offices and communication materials, are significant to both the academics and learners perception of service delivery (Gupta & Kaushik, 2018; Uppal, Ali & Gulliver, 2018; Wright & O'Neill, 2002). The distribution of scores between academics and students differed on empathy. The academics scores for the subscale of empathy did not conform to normal distribution unlike in the case of students.

6.7 INFERENTIAL STATISTICAL ANALYSIS

This section reports on inferential statistics as previously referred to in Figure 6.1 as phase 6 of the statistical analysis. The report begins with correlational analysis, followed by the structural equation modelling (SEM) and lastly, tests for significant mean differences.

6.7.1 Correlational analysis

The Pearson product moment correlation coefficients were used since the data were parametric. Pearson correlation measures statistically significant relationships between two variables of different dimensions but they should be normally distributed (Bobko, 2001; Chen & Popovich, 2002). Correlational analysis helped to establish inter-relationships between the variables pertaining to the three measuring instruments namely, the JD-R scale, UWES and Servqualscale whether they were significant or not. If significant, the nature of the relationship would be reflected, that is whether it is positive or negative (Cohen, West & Aiken, 2014).

6.7.1.1   Correlation analysis for work stress and service delivery (JDR and Servqualscales)

Correlation analysis was performed to explore the strength of the relationships between the sub-dimensions of Work stress and service delivery for academics. The results of the correlation analysis are presented in the following Table 6.39.

Table 6.39

Correlations for work stress and service delivery (JD-R and Servqualscales)

Sub-scale		Organisational support	Overload	Job Insecurity	Relationships	Growth and Advancement
Tangibles	Pearson Correlation	.072	-.207	-.105	.130	-.014
	Sig. (2-tailed)	.520	.061	.344	.241	.903
	N	83	83	83	83	83
Reliability	Pearson Correlation	.278	-.063	-.227	.305	.096
	Sig. (2-tailed)	.011	.571	.039	.005	.390
	N	83	83	83	83	83
Responsiveness	Pearson Correlation	.112	-.186	-.318	.259	.046
	Sig. (2-tailed)	.313	.092	.003	.018	.678
	N	83	83	83	83	83
Empathy	Pearson Correlation	.075	-.105	-.100	.177	.053
	Sig. (2-tailed)	.501	.346	.368	.110	.636
	N	83	83	83	83	83
Assurance	Pearson Correlation	.063	-.024	-.193	.340	.081
	Sig. (2-tailed)	.570	.828	.080	.002	.467
	N	83	83	83	83	83

The sub-scale of tangibles (a sub-scale of service delivery) did not have a significant correlation with any of the sub-dimensions of work stress. The lack of proper facilities seem not to be stressful to academics, although they could be concerned, but it might not be a priority to them. The correlation between reliability and organisational support was 0.278 with a *p*-value of 0.011. The p-value was lower than 0.05, which meant that the *p*-value was significant at a level of 5%. At a level of 5%, reliability had a significant positive correlation with organisational support. The correlation between reliability and job insecurity was –0.227 with a *p*-value of 0.039. The *p*-value

was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, reliability had a significant negative correlation with job insecurity.

The correlation between reliability and relationships was 0.305 with a *p*-value of 0.005. The *p*-value was lower than 0.05, which meant that the *p*-value was significant at a level of 5%. At a level of 5%, reliability had a significant positive correlation with relationships. Reliability did not have significant correlations with overload and growth and advancement. The correlation between responsiveness and job insecurity was -0.318 with a *p*-value of 0.003. The *p*-value was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, responsiveness had a significant negative correlation with job insecurity.

The correlation between responsiveness and relationships was 0.259 with a *p*-value of 0.018. The *p*-value was lower than 0.05, which meant that the *p*-value was significant at a level of 5%. At a level of 5%, responsiveness had a significant positive correlation with relationships.

Responsiveness did not have significant correlations with organisational support, overload, and growth and advancement. Empathy did not have any significant correlations with any of the dimensions of the work stress scale. The correlation between assurance and relationships was 0.340 with a *p*-value of 0.002. The *p*-value was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, assurance had a significant positive correlation with relationships. Assurance did not have significant correlations with organisational support, overload, job insecurity and growth and advancement.

In summary, work stress has an impact on service delivery. Job resources namely organisational support and relationships have strong positive relationships with service delivery dimensions of reliability, responsiveness and assurance indicating that if academics get enough support from the ODL university management and work as a team in their faculties and departments, their service delivery would be good and that should arouse student satisfaction.
The above section has achieved the following:

Research sub-aim 1.1

To determine the relationship between work stress and service delivery in ODL academics.

6.7.1.2   Correlation analysis for work engagement and service delivery (UWES and Servqualscales)

Correlation analysis was performed to explore the strength of the relationships between the sub-dimensions of work engagement and service delivery for academics. The relationships are presented in Table 6.40.

Table 6.40

Correlation analysis for work engagement and service delivery(UWES and Servqualscales)

Sub-scale		Vigour	Dedication	Absorption
Tangibles	Pearson Correlation	.350	.353	.287
	Sig. (2-tailed)	.001	.001	.009
	N	83	83	83
Reliability	Pearson Correlation	.416	.446	.435
	Sig. (2-tailed)	.000	.000	.000
	N	83	83	83
Responsiveness	Pearson Correlation	.342	.370	.462
	Sig. (2-tailed)	.002	.001	.000
	N	83	83	83
Empathy	Pearson Correlation	-.035	-.033	.054
	Sig. (2-tailed)	.756	.767	.629
	N	83	83	83
Assurance	Pearson Correlation	.309	.212	.347
	Sig. (2-tailed)	.004	.054	.001
	N	83	83	83

The correlation between tangibles (a sub-dimension of service delivery) and vigour (sub-dimension of work engagement) was 0.350, with a *p*-value of 0.001. The *p*-value was lower than 0.05 that meant that the *p*-value was significant at a level of 5%. At a level of 5%, tangibles had a significant positive correlation with vigour. The correlation between tangibles and dedication was 0.353 with a *p*-value of 0.001. The p-value was lower than 0.05 that meant that the p-value was significant at a level of 5%. At a level of 5%, tangibles had a significant positive correlation with dedication. The correlation between tangibles and absorption was 0.287 with a *p*-value of 0.009.

The *p*-value was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, tangibles had a significant positive correlation with absorption.

The correlation between reliability and vigour was 0.416 with a p-value of 0.000. The p-value was lower than 0.05 that meant that the p-value was significant at a level of 5%. At a level of 5%, reliability had a significant positive correlation with vigour. The correlation between reliability and dedication was 0.446 with a *p*-value of 0.000. The p-value was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, reliability had a significant positive correlation with dedication.

The correlation between reliability and absorption was 0.435 with a p-value of 0.000. The *p*-value was lower than 0.05 that meant that the p-value was significant at a level of 5%. At a level of 5%, reliability had a significant positive correlation with absorption. The correlation between responsiveness and vigour was 0.342 with a *p*-value of 0.002. The *p*-value was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, responsiveness had a significant positive correlation with vigour.

The correlation between responsiveness and dedication was 0.370 with a p-value of 0.001. The *p*-value was lower than 0.05 that meant that the p-value was significant at a level of 5%. At a level of 5%, responsiveness had a significant positive correlation with dedication. The correlation between responsiveness and absorption was 0.462 with a p-value of 0.000. The *p*-value was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, responsiveness had a significant positive correlation with absorption. Empathy did not have a significant correlation with any of the dimensions of the JD-R scale. The correlation between assurance and vigour was 0.309 with a p-value of 0.004. The *p*-value was lower than 0.05, which meant that the p-value was significant at a level of 5%. At a level of 5%, assurance had a significant positive correlation with vigour.

The correlation between assurance and absorption was 0.347 with a *p*-value of 0.000. The *p*-value was lower than 0.05, which meant that the *p*-value was significant at a level of 5%. At a level of 5%, assurance had a significant positive

correlation with absorption. Assurance did not have a significant correlation with dedication.

In summary, except for empathy, work engagement is strongly related to service delivery. The fact that work engagement is related to better performance by the individual (academic), as well as, the entire organisation (the ODL University) and other positive outcomes of the organisation, such as; staff retention, individual commitment and loyalty, would definitely improve service delivery.

The above section has achieved the following:

Research sub-aim 1.2
To determine the relationship between work engagement and service delivery in ODL academics.

6.7.1.3   Correlation analysis for work stress and work engagement (JD-R and UWES scales)

The following Table 6.41 shows the correlations between the dimensions of work stress and and work engagement.

Table 6.41

Correlations between work stress and work engagement (JD-R and UWES scales)

		Vigour	Dedication	Absorption	Organisational support	Overload	Job insecurity	Relationships	Growth and Advancement
Vigour	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	83							
Dedication	Pearson Correlation	.759**	1						
	Sig. (2-tailed)	.000							
	N	83	83						
Absorption	Pearson Correlation	.728**	.751**	1					
	Sig. (2-tailed)	.000	.000						
	N	83	83	83					
Organisational support	Pearson Correlation	.425**	.373**	.419**	1				
	Sig. (2-tailed)	.000	.001	.000					
	N	83	83	83	83				
Overload	Pearson Correlation	.128	.031	.101	.268*	1			
	Sig. (2-tailed)	.250	.779	.363	.014				
	N	83	83	83	83	83			
Job insecurity	Pearson Correlation	.106	.070	.183	.428**	.433**	1		
	Sig. (2-tailed)	.341	.528	.098	.000	.000			
	N	83	83	83	83	83	83		
Relationships	Pearson Correlation	.417**	.125	.374**	.367**	.295**	.206	1	
	Sig. (2-tailed)	.000	.260	.000	.001	.007	.061		
	N	83	83	83	83	83	83	83	
Growth and Advancement	Pearson Correlation	.247*	.119	.271*	.569**	.583**	.474**	.593**	1

	Sig. (2-tailed)	.024	.284	.013	.000	.000	.000	.000	
	N	83	83	83	83	83	83	83	83

At a level of 5%, Vigour had significant correlations with organisational support, relationships and growth and advancement of 0.425, 0.417 and 0.247 with *p*-values of 0.000, 0.000 and 0.024 respectively at a level of 5%. The correlations with the other sub-scales of JD-R were not significant at 5%.

At a level of 5%, dedication had significant correlation with organisational support of 0.373 with a *p*-value of 0.001 at a level of 5%. Its correlations with the other sub-scales of JD-R were not significant at 5%.

At a level of 5%, absorption had significant correlations with organisational support, relationships and growth and advancement of 0.419, 0.374 and 0.271 with *p*-values of 0.000, 0.000 and 0.013 respetively at a level of 5%. The correlations between absorption and the other sub-scales of JD-R were not significant at a level of 5%.

In summary, organisational support showed strong relationships with all the dimensions of work engagement (vigour, dedication and absorption) showing that academics are well engaged if they are having good relations with others. They would feel encouraged to put more effort if they feel esteemed at work by others as well as getting assistance if an unfavourable situation arises.

The above section has achieved the following:

Research sub-aim 1.3
To determine the relationship between work stress and work engagement in ODL academics.

Interpretation

The study explored the relationships between work stress, work engagement and service delivery due to emerging work roles for academics in an ever-changing ODL environment. These relationships hold significant implications for their well-being and their mental health (Bezuidenhout, 2015; Schaufeli et al., 2017). Job insecurity has a negative relationship with service delivery dimensions of reliability and

responsiveness, which shows that if academics feared for loss of their jobs, they would not be in the right mind set to fully execute their roles and hence their performance will be compromised (Demerouti et al., 2015; Kenny, 2018).

The positive relationship between relationships and the assurance dimension of service delivery, is also very important because if academics have strong bond (relationship) among themselves, they exhibit proactive behaviour like teamwork, collaboration and tolerance leading to job satisfaction, trust, loyalty and productivity (Dutton & Ragins, 2017; Weinsten, 2014). In addition, improved assurance and relationships should bring excitement and sense of belongingness to academics that should then enhance their motivation and reduce work stress (Weinstein, 2014).

The fact that all the three dimensions of work engagement (vigour, dedication and absorption) had significant correlations with service delivery, supports the literature findings that work engagement enhances individual (academic) performance and well-being (Demerouti et al., 2015; Shimazu, Schaufeli, Kamiyama & Kawakami, 2015), as well as, meaningful economic and social cultural indicators (Schaufeli, 2018).

The study established that work stress and work engagement have many correlations emanating from their dimensions. Vigour and absorption were significantly correlated with organisational support, relationships and growth, as well as, advancement. Dedication had significant relationship with organisational support. For one to be work engaged, he needs support from both the organisation and the other members, in order to share experiences, thereby learning, which enhances his growth and even his advancement (Garvey, 2018). Such synergy would help in the academics having better performance. Work engagement is a good predictor of organisational success and customer satisfaction, but with minimal work stress (Geralds et al., 2018).

A number of significant relationships were found to exist between a number of dimensions of the work stress, work engagement and service delivery. Reliability, a dimension of service delivery was observed to have a positive relationship with the work stress dimension of organisational support, and all the three dimensions of

work engagement namely: vigour, dedication and vigour. The ability to adhere and perform the promised service reliably and accurately (*reliability*), requires the support of the entire organisational members to exhibit mental resilience, perseverance, pride, inspiration and being happily engrossed in their work (Bakker et al., 2011; Chen, 2017).

Assurance had a positive correlation with relationships, a dimension of work stress and the two work engagement dimensions of vigour and absorption. The ability of management and workers to maintain their consistency and demonstrate confidence and trust (*assurance*), should be complimented by putting a lot of effort and being committed, so that service delivery by ODL academics is consistent with the ever changing distance learning environment (Morgan, 2017). A good looking environment epitomised by proper infrastructure and appealing office furniture and modern computers (*tangibles*), should be provided by the ODL university, so that academics become engaged (Bakker & Leiter, 2010; Wright et al., 2015). This is necessary in light of the study results that tangibles had a positive relationship with all the three dimensions of work engagement. Furthermore, an appealing environment creates a favourable image and reputation to customers and if complimented by engaged workers, can give a competitive advantage to the ODL university (Bakker & Albrecht, 2018).

Responsiveness had a positive relationship with the work stress dimension of relationships, as well as, the three dimensions of work engagement namely vigour, dedication and absorption. This call for the ODL university to ensure that all stakeholders including senior management should have good relationships with academics so that they are all engaged by showing eagerness to assist students and providing prompt service to enhance service delivery (Maslach et al., 2008; Moura et al., 2014).

Positive relationships were found between each of the work engagement dimensions namely, vigour, absorption, and the work stress dimensions of relationships, organisational support, growth and advancement. This shows that the job resources (relationships, organisational support and growth and advancement) are strongly related to work engagement since they reduce work stress and subsequent

exhaustion (Bakker & Demerouti, 2007; Mackey et al., 2017). There were negative relationships found between some dimensions such as; job insecurity and relationships (dimensions of work stress) and reliability (dimension of service delivery). This could stem from the fear of job insecurity, which causes work stress, and uncertainty that is likely to weaken relationships especially between management and workers, as well as, being reliable at all times. That could compromise the organisational performance (Mackey et al., 2017).

According to Chen (2017) and Bakker et al. (2012), there is need for an organisation such as the ODL university in our context, to promote positive behavioural aspects among academics by treating them as key assets who should be trusted and empowered by receiving frequent and constructive feedback. This should help in developing new skills. They then feel being respected and recognised for any achievement, which would then create a sense of pride and loyalty that arise from working for the organisation (Knight et al., 2017). Ultimately, this instils positive attitudes and behaviours among employees leading to improved service delivery.

The above sections that looked at the correlations between the constructs by covering the three sub-aims have culminated in the achievement of the following broader aim:

Research aim 1
To determine the interrelationships between work stress, work engagement and service delivery in ODL.

6.7.2   Structured Equation Modelling

Structural Equation Modelling was used to test the conceptual model for the study. The three constructs in the study were initially tested using confirmatory factor analysis in order to determine their validity. To estimate the model, the method of maximum likelihood estimation was used. Non-Normed Fit Index (NNFI), which is also known as TLI and Confirmatory Fit Index (CFI), had values of 0.838 and 0.863 respectively and Root Mean Square of Approximation (RMSEA) had a value of 0.071. While the values of TLI and CFI were below the threshold of 0.9, the model

had a good value of RMSEA since it is required to be less than 0.08. The adequacy of the model as indicated by the chi-square distribution (3225.706, 1472 degrees of freedom) which had a *p*-value of 0.000 shows that the results are significant. On another note, the sample size was small and that affects theot sufficient and that affects the *p*-value (Treaiman, 2014; Tredoux & Durrheim, 2013), which was the case with this study.

However, Barrett (2007) contends that chi-square is not a valid index for the model fit since it is affected by the size of the sample. The final structural equation model is presented in Figure 6.24.
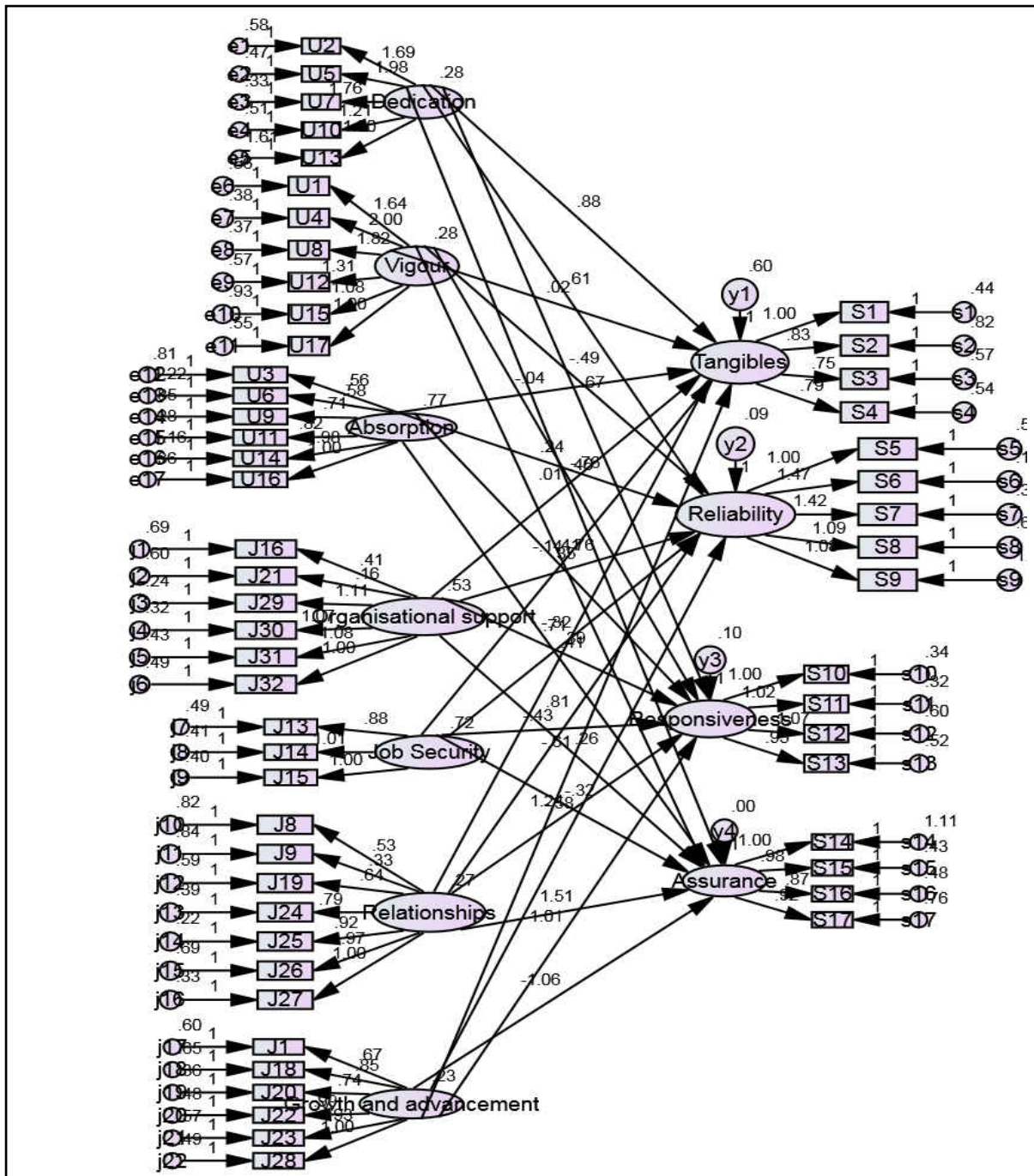
Figure 6.24   Final SEM

The variables empathy and work overload were eliminated from the SEM because their skewness and kurtosis showed that they were not normally distributed as previously presented on Table 6.35 and Table 6.37.

Since the non-centrality index RMSEA indicated that there was an adequate fit, the model was capable of providing insight into the relationships that exist between the constructs in the study. Table 6.42 presents the regression weights from the SEM.

Table 6.42

Unstandardised Regression weights

Sub-graphics			Estimate	S.E.	C.R.	P	Label
Tangibles	<---	Organisational support	.012	.152	.080	.936	
Responsiveness	<---	Absorption	.407	.101	4.044	***	
Reliability	<---	Absorption	.235	.074	3.182	.001	
Assurance	<---	Dedication	.459	.205	2.239	.025	
Responsiveness	<---	Dedication	.668	.244	2.733	.006	
Reliability	<---	Vigour	-.488	.143	-3.409	***	
Assurance	<---	Relationships	1.514	.288	5.264	***	
Reliability	<---	Growth and advancement	-.581	.181	-3.208	.001	
Assurance	<---	Job insecurity	-.325	.106	-3.056	.002	
Reliability	<---	Job insecurity	-.320	.083	-3.867	***	
Responsiveness	<---	Job in security	-.432	.107	-4.039	***	
Responsiveness	<---	Vigour	-.759	.198	-3.842	***	
Tangibles	<---	Absorption	-.040	.128	-.316	.752	
Assurance	<---	Growth and advancement	-1.055	.288	-3.668	***	
Responsiveness	<---	Relationships	1.237	.230	5.369	***	
Responsiveness	<---	Growth and advancement	-1.008	.267	-3.769	***	
Reliability	<---	Relationships	.806	.173	4.651	***	
Reliability	<---	Organisational support	.350	.096	3.649	***	
Responsiveness	<---	Organisational support	.386	.120	3.202	.001	
Assurance	<---	Organisational support	.261	.117	2.227	.026	
Assurance	<---	Absorption	.410	.106	3.866	***	
Assurance	<---	Vigour	-.756	.207	-3.658	***	
Reliability	<---	Dedication	.611	.213	2.864	.004	
Tangibles	<---	Growth and advancement	-.605	.279	-2.170	.030	
Tangibles	<---	Relationships	.708	.240	2.948	.003	
Tangibles	<---	Job insecurity	-.141	.134	-1.047	.295	
Tangibles	<---	Vigour	.023	.207	.110	.912	
Tangibles	<---	Dedication	.884	.330	2.676	.007	

The structural modelling identified some estimation parameters, which were highly significant, as well as, some that were just significant at 0.05 and others that were not significant. Unstandardised regression weights in SEM could be used for determining the linear relationship between the dependent variable and a predictor variable. The estimation parameters showed sub-constructs of JD-R and UWES to have significant structural paths with the sub-construct of service delivery. It would be possible for the purpose of future studies to consider a model that omits the

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variable, which do not have significant structural paths. When using unstandardized regression weights, it is not possible to make comparisons since they are calculated using the original units for each construct. By using standardised regression weights, it was possible to compare the coefficients as they are all calculated using the same standard deviation units. Table 6.43 presents the standardised regression weights.

Table 6.43

Standardised regression weights

Sub-scales			Estimate
Tangibles	<---	Organisational support	.009
Responsiveness	<---	Absorption	.304
Reliability	<---	Absorption	.248
Assurance	<---	Dedication	.208
Responsiveness	<---	Dedication	.299
Reliability	<---	Vigour	-.310
Assurance	<---	Relationships	.683
Reliability	<---	Growth and advancement	-.335
Assurance	<---	Job insecurity	-.239
Reliability	<---	Job in security	-.327
Responsiveness	<---	Job insecurity	-.313
Responsiveness	<---	Vigour	-.342
Tangibles	<---	Absorption	-.035
Assurance	<---	Growth and advancement	-.438
Responsiveness	<---	Relationships	.549
Responsiveness	<---	Growth and advancement	-.412
Reliability	<---	Relationships	.506
Reliability	<---	Organisational support	.305
Responsiveness	<---	Organisational support	.238
Assurance	<---	Organisational support	.164
Assurance	<---	Absorption	.312
Assurance	<---	Vigour	-.345
Reliability	<---	Dedication	.386
Tangibles	<---	Growth and advancement	-.283
Tangibles	<---	Relationships	.360
Tangibles	<---	Job insecurity	-.117
Tangibles	<-	Vigour	.012
Tangibles	<---	Dedication	.452

Interpretation of the SEM

The SEM gave 24 paths, which were significant, and 4, which were not significant. The significant paths can be used as a basis for conclusions on the hypotheses of the study. The major relationships between the sub-scales of the constructs of this study are given below.

6.7.2.1   Relationship between work stress and service delivery

The dimensions of work stress that have significant relationships with those of service delivery are described as follows:

Relationships

The structural path coefficient from relationships to assurance was significant and had a value of 0.683 at 0.05 significance level, which indicates that there was a positive relationship, and higher value of relationships led to greater assurance from the academics' service delivery. The structural path coefficient from relationships to responsiveness was significant with a value of 0.549 at 0.05 significance level, which showed that there was a positive relationship, and higher value of relationships led to greater responsiveness in academics' service delivery. The structural path coefficient from relationships to tangibles was significant and had a value of 0.360 at 0.05 significance level, which showed that there was a positive relationship, and a higher value of relationships resulted in better perception of tangibles. The findings suggest that relationships had a significant positive relationship with service delivery.

Growth and advancement

The structural path coefficient from growth and advancement to reliability was significant and had a value of -0.335 at 0.05 significance level, which indicated that there was a negative relationship. Greater growth and advancement led to a reduction in reliability. This might arise particularly in a situation whereby academic staff grow in the direction of taking more responsibilities that might then compete for their attention, compromising their reliability. The structural path coefficient from

growth and advancement to assurance was significant and had a value of -0.438 at 0.05 significance level indicating that there was a negative relationship between them. As growth and advancement increase, the level of assurance in the ZOU academics' service delivery is reduced. The structural path coefficient from growth and advancement to responsiveness was significant and had a value of -0.412 at 0.05 significance level, which meant that there was a negative relationship. Increased growth and advancement resulted in reduced responsiveness of ZOU academics.

The structural path coefficient from growth and advancement to tangibles was significant and had a value of -0.283 at 0.05 significance level, which meant that, there was a negative relationship. Increased growth and advancement led to lower perception of tangibles. The results suggest that growth and advancement, a dimension of work stress, has a significant negative relationship with service delivery.

Job insecurity

The structural path coefficient from job insecurity to assurance was significant and had a value of -0.239 at 0.05 significance level, which indicates there was a negative relationship. Increased job insecurity resulted in a lower level of assurance. The structural path coefficient from job insecurity to reliability was significant and had value of -0.327 at 0.05 significance level, which indicated that there was a negative relationship. Incresaed job insecurity led to reduced reliability of academic staff. The structural path coefficient from job insecurity to responsiveness was significant and had a value of -0.313 at 0.05 significance level, which indicated that there was a negative relationship. Increased job insecurity resulted in reduced levels of responsiveness among academics. The results suggest that job insecurity had a significant negative relationship with service delivery.

Organisational support

The structural path coefficient from organisational support to reliability was significant and had a value of 0.305 at 0.05 significance level, which indicated that there was a

positive relationship. Increased organisational support resulted in higher reliability of services from academics. The structural path from organisational support to responsiveness was significant and had a value of 0.238 at 0.05 significance level meaning that there was a positive relationship. Increased organisational support resulted in higher reliability of service delivery by academics. The structural path from organisational support to assurance was significant and had a value of 0.164 at 0.05 significance level meaning that there was a positive relationship and higher organisational support resulted in higher assurance from academics' service delivery. The findings suggest that organisational support had a significant positive relationship with service delivery.

6.7.2.2   Relationship between work engagement and service delivery

The dimensions of work engagement that have significant relationships with those of service delivery are described below.

Absorption

The structural path coefficient from absorption to responsiveness was significant and had a value of 0.304 at 0.05 significance level, which showed a positive relationship meaning that higher absorption led to greater responsiveness for academics. The structural path coefficient from absorption to reliability was significant and had a value of 0.248 at 0.05 significance level, which showed a positive relationship meaning that higher absorption leads to greater reliability of academics. The structural path coefficient from absorption to assurance was significant and had a value of 0.312 at 0.05 significance level, which showed a positive relationship meaning that higher absorption led to greater assurance in academics' service delivery. The findings suggest that absorption had a significant positive relationship with service delivery.

Dedication

The structural path coefficient from dedication to assurance was significant and had a value of 0.208 at 0.05 significance level, which showed that there was a positive

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relationship meaning that greater dedication resulted in greater assurance in academics' service delivery. The structural path coefficient from dedication to responsiveness was significant and had a value of 0.299 at 0.05 significance level, which showed that there was a positive relationship, meaning that greater dedication resulted in greater responsiveness in academics' service delivery. The structural path coefficient from dedication to reliability was significant and had a value of 0.386 at 0.05 significance level. There was a positive relationship meaning that greater dedication resulted in greater reliability in academics' service delivery. The structural path coefficient from dedication to tangibles was significant and had a value of 0.452 at 0.05 significance level, which showed that there was a positive relationship. Therefore, greater dedication resulted in greater tangibles in academics' service delivery. The results suggest that dedication had a significant positive relationship with service delivery.

Vigour

The structural path coefficient from vigour to reliability was significant and had a value of -0.310 at 0.05 significance level, which showed that there was a negative relationship meaning that when vigour increased, reliability of academics became lower. The structural path coefficient from vigour to responsiveness was significant and had a value of -0.342 at 0.05 significance level, which shows that there was a negative relationship, meaning that when vigour increased, responsiveness of academics decreased. The structural path coefficient from vigour to assurance was significant and had a value of -0.345 at 0.05 significance level, which showed that there was a negative relationship meaning that when vigour increased, assurance of academics' service delivery went down. The results suggest that vigour had a significant negative relationship with service delivery.

Interpretation

The study revealed a lot of significant correlations between the various dimensions of work stress (measured by job insecurity, relationships, organisational support and growth and advancement), work engagement (measured by vigour, dedication and absorption) and service delivery (measured by reliability, assurance, tangiblesand

responsiveness). The SEM gave 24 paths, which were significant that represented the relationships between these dimensions (sub-scales) of the three constructs.

The study of work stress and work engagement has been found to be very instrumental in contributing to an organization's success by improving the motivation, job satisfaction, performance, workplace safety and health, as well as, the overall well-being of the workers (Markos & Sridevi, 2010; Maturure, 2016). The ODL university should monitor and improve the conduct of its academics and their attitudes through effective hiring practices, training policies, job design, feedback and management systems, in order to achieve satisfactory service delivery to learners.

The Root Mean Square Error of Approximation (RMSEA) of the SEM had a value of 0.071, which is below the benchmark of 0.08. It revealed that the model had a good fit with the data and was capable of providing insight relationships, which existed between these three constructs of this study. Although literature findings in this study had shown that there is some form of relationships that exist between any of these two constructs or variables, there was no known study or existing literature that attempt to link all the three constructs (work engagement, work stress and service delivery) in ODL. Reputable research engines (database) such as; *Google Scholar*, *EBSCOhost, Emerald Insight*, *Science Direct, ResearchGate, Education Resources Information Centre and Microsoft Academic Search*, did not have related studies.

This section has addressed the following:

Research aim 4
To determine if academics' work stress, work engagement and service delivery have a good fit with data.

6.7.3   Test for significant mean differences

For establishing whether any significant differences between subgroups of academics as defined by their demographical variables (age, gender, marital status, educational qualifications, faculty, job title, administrative position, years of service

and employment status) exist or not, the *One-way Analysis of Variance* (ANOVA) was used with regard to work stress, work engagement and service delivery. For students, the ANOVA was used on their demographical variables (age, gender, marital status, educational qualifications, faculty, race and years of learning), but only for the construct service delivery, as guided by the research aims. For those demographic variables with significant relationships with the constructs, descriptive statistics (mean and standard deviation) were used to determine the differences among the groups of respondents (academics and students).

6.7.3.1   For Academics

The statistically significant differences between the demographical variables of the different groups of academics on work stress, work engagement and service delivery are presented in this section.

a)   ANOVA for age and each of the three constructs

The significant differences among academics of different age and work stress is presented by the followingTable 6.44.

Table 6.44

ANOVA for age and work stress for academics

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	1.624	5	.325	.750	.589
	Within Groups	33.361	77	.433		
	Total	34.985	82			
	Total	30.684	82			
Job insecurity	Between Groups	2.388	5	.478	.564	.727
	Within Groups	65.154	77	.846		
	Total	67.542	82			
Relationships	Between Groups	.627	5	.125	.331	.893
	Within Groups	29.161	77	.379		

		Sum of Squares	df	Mean Square	F	Sig.
	Total	29.788	82			
Growth and Advancement	Between Groups	.606	5	.121	.427	.828
	Within Groups	21.846	77	.284		
	Total	22.452	82			

According to Table 6.44, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which means that they were not significant at the 5% level. There were no significant differences in work stress for academics with different ages.

The following Table 6.45 presents the significant differences among academics of different age and work engagement.

Table 6.45

ANOVA for age and work engagement

		Sumof Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	5.335	5	1.067	1.531	.190
	Within Groups	53.672	77	.697		
	Total	59.007	82			
Dedication	Between Groups	6.619	5	1.324	1.730	.138
	Within Groups	58.925	77	.765		
	Total	65.544	82			
Absorption	Between Groups	7.754	5	1.551	2.818	.022
	Within Groups	42.371	77	.550		
	Total	50.125	82			

According to Table 6.45, the *p*-value for absorption was 0.022, which was lower than 0.05 meaning that the test statistic was significant at a level of 5%. There were significant differences in absorption among academics of different ages.

The following Table 6.46 shows the means of absorption for different age groups of acdemics.

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Table 6.46

Mean absorption for different age groups

Age of respondents	Mean	N	Std. Deviation
25-30years	4.3333	1	.
31-37 years	4.2308	13	1.03758
37-46 years	3.8636	22	.73757
46-56 years	4.6358	27	.66351
57-58 years	4.0000	6	.59628
59-70 years	4.1786	14	.60787
Total		83	

According to Table 6.46 the mean values for absorption, show that absorption was highest in the 46-56 years' age group (4.6358) followed by the 25-30 years age group then the 31-37 years age group. Absorption was lowest in the 37-46 years age group.

The p-values for the other sub-scales of work engagement were greater than 0.05, which means that they were not significant at a 5% level. There were no significant differences in the work engagement for academics of different age groups for the sub-scales dedication and vigour.

The following Table 6.47 presents the significant differences among academics of different age and perceived service delivery.

Table 6.47

ANOVA for age and perceived service delivery

		Sumof Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	2.256	5	.451	.520	.760
	Within Groups	66.781	77	.867		
	Total	69.038	82			
Reliability	Between Groups	2.237	5	.447	.574	.719
	Within Groups	59.992	77	.779		
	Total	62.229	82			

		Sum of Squares	df	Mean Square	F	Sig.
Responsiveness	Between Groups	5.630	5	1.126	1.277	.283
	Within Groups	67.905	77	.882		
	Total	73.535	82			
Assurance	Between Groups	3.291	5	.658	.779	.568
	Within Groups	65.074	77	.845		
	Total	68.365	82			

According to Table 6.47, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for academics of different age groups.

b)   ANOVA for gender and all the three constructs for academics

The following Table 6.48 presents the significant differences among academics of different gender and work stress.

Table 6.48

ANOVA for gender and work stress

		Sumof Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	.000	1	.000	.001	.977
	Within Groups	34.985	81	.432		
	Total	34.985	82			
Job insecurity	Between Groups	.155	1	.155	.187	.667
	Within Groups	67.387	81	.832		
	Total	67.542	82			
Relationships	Between Groups	.071	1	.071	.193	.662
	Within Groups	29.717	81	.367		
	Total	29.788	82			
Growth and Advancement	Between Groups	.032	1	.032	.117	.733
	Within Groups	22.420	81	.277		
	Total	22.452	82			

According to Table 6.48, all the *p*-values for the sub-scales of work stress were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in work stress for academics of different gender.

The following Table 6.49 presents the significant differences among academics of different gender and work engagement.

Table 6.49

ANOVA for gender and work engagement

		Sumof Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	.031	1	.031	.042	.838
	Within Groups	58.977	81	.728		
	Total	59.007	82			
Dedication	Between Groups	.168	1	.168	.208	.650
	Within Groups	65.377	81	.807		
	Total	65.544	82			
Absorption	Between Groups	.223	1	.223	.363	.549
	Within Groups	49.902	81	.616		
	Total	50.125	82			

According to Table 6.49, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics of different gender.

The following Table 6.50 presents the significant differences among academics of different gender and perceived service delivery.

Table 6.50

ANOVA for gender and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	.866	1	.866	1.028	.314
	Within Groups	68.172	81	.842		
	Total	69.038	82			
Reliability	Between Groups	.020	1	.020	.026	.872

		Sum of Squares	df	Mean Square	F	Sig.
	Within Groups	62.209	81	.768		
	Total	62.229	82			
Responsiveness	Between Groups	.001	1	.001	.001	.972
	Within Groups	73.533	81	.908		
	Total	73.535	82			
Assurance	Between Groups	.062	1	.062	.073	.788
	Within Groups	68.304	81	.843		
	Total	68.365	82			

According to Table 6.50, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for academics of different gender.

c)   ANOVA for marital status for all three constructs for academics

The following Table 6.51 presents the significant differences among academics of different marital status and work stress.

Table 6.51

ANOVA for marital status and work stress

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	3.936	5	.787	1.952	.095
	Within Groups	31.049	77	.403		
	Total	34.985	82			
Job insecurity	Between Groups	6.673	5	1.335	1.688	.147
	Within Groups	60.869	77	.791		
	Total	67.542	82			
Relationships	Between Groups	1.226	5	.245	.661	.654
	Within Groups	28.561	77	.371		
	Total	29.788	82			
Growth and Advancement	Between Groups	1.332	5	.266	.971	.441
	Within Groups	21.120	77	.274		
	Total	22.452	82			

According to Table 6.51, all the *p*-values for the sub-scales of work stress were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in work stress of academics with different marital status.

The following Table 6.52 presents the significant differences among academics of different marital status and work engagement.

Table 6.52

ANOVA for marital status and work engagement

		Sum of Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	3.777	5	.755	1.053	.393
	Within Groups	55.230	77	.717		
	Total	59.007	82			
Dedication	Between Groups	1.892	5	.378	.458	.806
	Within Groups	63.652	77	.827		
	Total	65.544	82			
Absorption	Between Groups	3.258	5	.652	1.071	.383
	Within Groups	46.867	77	.609		
	Total	50.125	82			

According to Table 6.52, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics with different marital status.

The following Table 6.53 presents the significant differences among academics of different marital status and perceived service delivery.

Table 6.53

ANOVA for marital status and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	1.642	5	.328	.375	.864
	Within Groups	67.396	77	.875		
	Total	69.038	82			
Reliability	Between Groups	1.151	5	.230	.290	.917
	Within Groups	61.077	77	.793		
	Total	62.229	82			
Responsiveness	Between Groups	3.766	5	.753	.831	.531
	Within Groups	69.768	77	.906		
	Total	73.535	82			
Assurance	Between Groups	3.376	5	.675	.800	.553

		Sum of Squares	df	Mean Square
	Within Groups	64.989	77	.844
	Total	68.365	82	

According to Table 6.53, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for academics of different marital status.

d)   ANOVA for educational qualifications for all three constructs for academics

The following Table 6.54 presents the significant differences among academics of different educational qualifications and work stress.

Table 6.54

ANOVA for highest level of qualifications and work stress

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	.205	2	.102	.236	.791
	Within Groups	34.780	80	.435		
	Total	34.985	82			
Job insecurity	Between Groups	2.858	2	1.429	1.768	.177
	Within Groups	64.684	80	.809		
	Total	67.542	82			
Relationships	Between Groups	1.866	2	.933	2.674	.075
	Within Groups	27.921	80	.349		
	Total	29.788	82			
Growth and Advancement	Between Groups	.984	2	.492	1.834	.166
	Within Groups	21.468	80	.268		
	Total	22.452	82			

According to Table 6.54, all the *p*-values for the sub-scales of work stress were greater than 0.05, which meant that they were not significant at 5% level. There were

no significant differences in work stress of academics with different levels of qualifications.

The following Table 6.55 presents the significant differences among academics of different educational qualifications and work engagement.

Table 6.55

ANOVA for highest level of qualifications and work engagement

		Sum of Squares	Df	Mean Square	F	Sig.
Vigour	Between Groups	.102	2	.051	.070	.933
	Within Groups	58.905	80	.736		
	Total	59.007	82			
Dedication	Between Groups	3.168	2	1.584	2.031	.138
	Within Groups	62.376	80	.780		
	Total	65.544	82			
Absorption	Between Groups	1.699	2	.849	1.403	.252
	Within Groups	48.426	80	.605		
	Total	50.125	82			

According to Table 6.55, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics with different levels of qualifications.

The following Table 6.56 presents the significant differences among academics of different educational qualifications and perceived service delivery.

Table 6.56

ANOVA for highest educational qualification and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	.478	2	.239	.279	.758
	Within Groups	68.560	80	.857		
	Total	69.038	82			
Reliability	Between Groups	1.704	2	.852	1.126	.329
	Within Groups	60.525	80	.757		
	Total	62.229	82			
Responsiveness	Between Groups	5.916	2	2.958	3.500	.035
	Within Groups	67.618	80	.845		
	Total	73.535	82			
Assurance	Between Groups	1.344	2	.672	.802	.452
	Within Groups	67.022	80	.838		
	Total	68.365	82			

According to Table 6.56, the *p*-value for responsiveness is 0.035, which is lower than 0.05 meaning that the test statistic is significant at a level of 5%. There was significant difference in perceptions on responsiveness of the ZOU academics' service among academics of different levels of education.

The following Table 6.57 shows the means of responsiveness for academics of different levels of education.

Table 6.57

Mean responsiveness for academics of different levels of education

Highest education level	Mean	N	Std. Deviation
First degree	6.7500	1	.
Master's degree	4.7465	71	.90287
Doctoral degree	5.2273	11	1.02746

First-degree holders had the highest mean responsiveness with a mean of 6.75 followed by doctoral degree holders with a mean of 5.2273 and then masters' degree holders with a mean of 4.7465.

All the *p*-values for the other sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for academics of different educational levels for the sub-scales tangibles, reliability, empathy and assurance.

e)   ANOVA for faculty and all the three constructs for academics

The following Table 6.58 presents the significant differences among academics of different faculties and work stress.

Table 6.58

ANOVA for faculty and work stress

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	3.085	5	.617	1.489	.203
	Within Groups	31.900	77	.414		
	Total	34.985	82			
Job insecurity	Between Groups	1.167	5	.233	.271	.928
	Within Groups	66.376	77	.862		
	Total	67.542	82			
Relationships	Between Groups	1.431	5	.286	.777	.569
	Within Groups	28.357	77	.368		
	Total	29.788	82			
Growth and Advancement	Between Groups	.732	5	.146	.519	.761
	Within Groups	21.720	77	.282		
	Total	22.452	82			

According to Table 6.58, all the *p*-values for the sub-scales of work stress were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in work stress of academics with from different faculties.

The following Table 6.59 presents the significant differences among academics of different faculties and work engagement.

Table 6.59

ANOVA for faculty and work engagement

		Sum of Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	3.218	5	.644	.888	.493
	Within Groups	55.790	77	.725		
	Total	59.007	82			
Dedication	Between Groups	3.346	5	.669	.829	.533
	Within Groups	62.198	77	.808		
	Total	65.544	82			
Absorption	Between Groups	4.651	5	.930	1.575	.177
	Within Groups	45.474	77	.591		
	Total	50.125	82			

According to table 6.59, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics from different faculties.

The following Table 6.60 presents the significant differences among academics of different faculties and service delivery.

Table 6.60

ANOVA for faculty and perceived service delivery

		Sum of Squares	of df	Mean Square	F	Sig.
Tangibles	Between Groups	5.575	5	1.115	1.353	.251
	Within Groups	63.462	77	.824		
	Total	69.038	82			
Reliability	Between Groups	2.148	5	.430	.550	.737
	Within Groups	60.081	77	.780		
	Total	62.229	82			
Responsiveness	Between Groups	3.915	5	.783	.866	.508
	Within Groups	69.620	77	.904		
	Total	73.535	82			
Assurance	Between Groups	2.605	5	.521	.610	.692

		Sum of Squares	df	Mean Square		
Within Groups		65.760	77	.854		
Total		68.365	82			

According to Table 6.60, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for academics from different faculties.

f)   ANOVA for job title and all the three constructs for academics

The following Table 6.61 presents the significant differences among academics of different job titles and work stress.

Table 6.61

ANOVA for job title and work stress

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	1.805	4	.451	1.061	.382
	Within Groups	33.181	78	.425		
	Total	34.985	82			
Job insecurity	Between Groups	11.548	4	2.887	4.021	.005
	Within Groups	55.994	78	.718		
	Total	67.542	82			
Relationships	Between Groups	.404	4	.101	.268	.898
	Within Groups	29.384	78	.377		
	Total	29.788	82			
Growth and Advancement	Between Groups	3.120	4	.780	3.147	.019
	Within Groups	19.333	78	.248		
	Total	22.452	82			

According to Table 6.61, the *p*-value for job insecurity was 0.005, which is less than 0.05 meaning that the test statistic was significant at a level of 5%. The empirical

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evidence shows a significant difference in job insecurity for academics with different job titles.

The following Table 6.62 shows the means of job insecurity for academics with different job titles.

Table 6.62

Mean job insecurity for different job titles

Job title	Mean	N	Std. Deviation
Assistant lecturer	3.0526	13	.96815
Lecturer	2.9630	38	.79611
Senior lecturer	2.4872	27	.83887
Associate professor	1.5000	4	1.00000
Full professor	1.6667	1	.
Total		83	

According to Table 6.62, job insecurity was highest for assistant lecturers followed by lecturers and senior lecturers while associate professors had the lowest mean on job insecurity.

The *p*-value for growth and advancement was 0.019, which was less than 0.05 meaning that the test statistics was significant at a level of 5%. There was a significant difference in growth and advancement for academics with different job titles. The following Table 6.63 shows the means of growth and advancement for academics with different job titles.

Table 6.63

Mean growth and advancement for different job titles

Job title	Mean	N	Std. Deviation
Assistant lecturer	3.3590	13	.46071
Lecturer	3.5526	38	.46998
Senior lecturer	3.5309	27	.51482
Associate professor	2.6667	4	.75768
Full professor	3.3333	1	
Total		83	

According to Table 6.63 growth and advancement was highest for lecturers followed by senior lecturers then assistant lecturers. The lowest growth and advancement was for associate professors.

All the p-values for the other sub-scales of work stress were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in relationships, organisational support and overload for academics with different job titles.

The following Table 6.64 presents the significant differences among academics of of different job titles and work engagement.

Table 6.64

ANOVA for job title and work engagement

		Sum of Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	.830	4	.208	.278	.891
	Within Groups	58.177	78	.746		
	Total	59.007	82			
Dedication	Between Groups	4.195	4	1.049	1.333	.265
	Within Groups	61.349	78	.787		
	Total	65.544	82			
Absorption	Between Groups	1.533	4	.383	.615	.653
	Within Groups	48.592	78	.623		
	Total	50.125	82			

According to Table 6.64, all the p-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics with different job titles.

The following Table 6.65 presents the significant differences among academics of different job titles and service delivery.

Table 6.65

ANOVA for job title and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	6.476	4	1.619	2.018	.100
	Within Groups	62.562	78	.802		
	Total	69.038	82			
Reliability	Between Groups	5.650	4	1.412	1.947	.111
	Within Groups	56.579	78	.725		
	Total	62.229	82			
Responsiveness	Between Groups	8.418	4	2.104	2.521	.048
	Within Groups	65.117	78	.835		
	Total	73.535	82			
Assurance	Between Groups	5.280	4	1.320	1.632	.175
	Within Groups	63.085	78	.809		
	Total	68.365	82			

According to Table 6.65, the *p*-value for responsiveness is 0.048, which is lower than 0.05 meaning that the test statistic is significant at a level of 5%. There was significant difference in perceptions on responsiveness of the ZOU academics' service delivery among academics of different job titles.

The following Table 6.66 shows the means of responsiveness for academics with different job titles.

Table 6.66

Mean responsiveness for different job titles

Job title	Mean	N	Std. Deviation
Assistant lecturer	4.9038	13	1.11120
Lecturer	4.5395	38	.90518
Senior lecturer	5.1204	27	.86982
Associate professor	5.6250	4	.32275
Full professor	4.2500	1	.
Total		83	

According to Table 6.66, associate professors had the most responsiveness followed by senior lecturers. Full professors had the lowest responsiveness of the academics

All the *p*-values for the other sub-scales of Servqual were greater than 0.05, which meant that they were not significant at a 5% level. There were no significant differences in the perceptions on service delivery for academics of different job titles for the subscales tangibles, reliability, empathy and assurance.

g)   ANOVA for administrative position and all the three constructs for academics

The following Table 6.67 presents the significant differences among academics of different administrative positions and work stress.

Table 6.67

ANOVA for administration position and work stress

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	1.154	4	.289	.665	.618
	Within Groups	33.831	78	.434		
	Total	34.985	82			
Job insecurity	Between Groups	3.628	4	.907	1.107	.359
	Within Groups	63.914	78	.819		
	Total	67.542	82			
Relationships	Between Groups	1.157	4	.289	.788	.536
	Within Groups	28.631	78	.367		
	Total	29.788	82			
Growth and Advancement	Between Groups	2.659	4	.665	2.619	.041
	Within Groups	19.794	78	.254		
	Total	22.452	82			

According to Table 6.67, the *p*-value for growth and advancement was 0.041, which is less than 0.05 meaning that the test statistic is significant at a level of 5%. There was significant difference in growth and advancement for academics with different administration positions.

The following Table 6.68 shows the means of growth and advancement for academics with different administration positions.

Table 6.68

Mean growth and advancement for different administration positions

Administration position	Mean	N	Std. Deviation
Regional programme coordinator	3.6579	19	.30668
Programme leader	3.2063	21	.66855
Chairperson	3.6458	8	.51515
Dean	4.0000	1	.
Other	3.4706	34	.47046
Total		83	

According to Table 6.68, deans had the highest level of growth and advancement followed by regional programme coordinators. Programme leaders had the lowest mean on growth and advancement.

All the *p*-values for the other sub-scales of job demands and resources were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in job security, relationships, organisational support and overload for academics with different job titles.

The following Table 6.63 presents the significant differences among academics of different administrative position and work engagement.

Table 6.69

ANOVA for administrative position and work engagement

		Sum of Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	4.988	4	1.247	1.800	.137
	Within Groups	54.020	78	.693		
	Total	59.007	82			

		Sum of Squares	Df	Mean Square	F	Sig.
Dedication	Between Groups	6.407	4	1.602	2.113	.087
	Within Groups	59.137	78	.758		
	Total	65.544	82			
Absorption	Between Groups	1.801	4	.450	.727	.576
	Within Groups	48.324	78	.620		
	Total	50.125	82			

According to Table 6.69, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics with different administration positions.

The following Table 6.70 below presents the significant differences among academics of different administrative positions and service delivery.

Table 6.70

ANOVA for administrative position and service delivery

		Sum of Squares	Df	Mean Square	F	Sig.
Tangibles	Between Groups	10.669	4	2.667	3.564	.010
	Within Groups	58.369	78	.748		
	Total	69.038	82			
Reliability	Between Groups	1.492	4	.373	.479	.751
	Within Groups	60.737	78	.779		
	Total	62.229	82			
Responsiveness	Between Groups	1.167	4	.292	.315	.867
	Within Groups	72.367	78	.928		
	Total	73.535	82			
Assurance	Between Groups	1.412	4	.353	.411	.800
	Within Groups	66.954	78	.858		
	Total	68.365	82			

According to Table 6.70, the *p*-value for tangibles is 0.010, which is lower than 0.05 meaning that the test statistic is significant at a level of 5%. There was significant

difference in perceptions on tangibles among academics of different administrative positions.

The following Table 6.71 shows the means of tangibles for academics of different administrative positions.

Table 6.71

Mean perception of tangibles for different administration position

Administration position	Mean	N	Std. Deviation
Regional programme coordinator	3.3289	19	.81672
Programme leader	3.6190	21	.71423
Chairperson	3.9375	8	.87372
Dean	1.0000	1	.
Other	3.8235	34	.96635

According to Table 6.71, the mean perception of tangibles was highest among chairpersons, followed by programme leaders. The lowest was for the dean.

All the *p*-values for the other sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for academics of different administrative positions for the subscales responsiveness, reliability, empathy and assurance.

h)   ANOVA for work experience of academics and all the three constructs for academics

The following Table 6.72 presents the significant differences among academics of different work experience of academicsand work stress.

Table 6.72

ANOVA for work experience of academicsand work stress

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	.123	3	.041	.093	.964
	Within Groups	34.862	79	.441		
	Total	34.985	82			
Job insecurity	Between Groups	2.075	3	.692	.835	.479
	Within Groups	65.467	79	.829		
	Total	67.542	82			
Relationships	Between Groups	.249	3	.083	.222	.881
	Within Groups	29.539	79	.374		
	Total	29.788	82			
Growth and Advancement	Between Groups	.215	3	.072	.254	.858
	Within Groups	22.238	79	.281		
	Total	22.452	82			

According to Table 6.72, all the *p*-values for the sub-scales of work stress of academics were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in work stress for academics with different work experience at the ZOU.

The following Table 6.73 presents the significant differences among academics of different work experience and work engagement.

Table 6.73

ANOVA for work experience of academicsand work engagement

		Sum of Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	1.444	3	.481	.661	.579
	Within Groups	57.563	79	.729		
	Total	59.007	82			
Dedication	Between Groups	1.506	3	.502	.619	.605
	Within Groups	64.038	79	.811		
	Total	65.544	82			
Absorption	Between Groups	.266	3	.089	.140	.936
	Within Groups	49.859	79	.631		
	Total	50.125	82			

According to Table 6.73, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics with different work experience at the ZOU.

The following Table 6.74 presents the significant differences among academics of different years of service and service delivery.

Table 6.74

ANOVA for work experience of academicsand perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	1.240	3	.413	.481	.696
	Within Groups	67.798	79	.858		
	Total	69.038	82			
Reliability	Between Groups	1.624	3	.541	.706	.551
	Within Groups	60.605	79	.767		
	Total	62.229	82			
Responsiveness	Between Groups	5.488	3	1.829	2.124	.104
	Within Groups	68.047	79	.861		
	Total	73.535	82			
Assurance	Between Groups	2.816	3	.939	1.131	.342
	Within Groups	65.549	79	.830		
	Total	68.365	82			

According to Table 6.74, all the *p*-values for the sub-scales of Serqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for academics with different work experience.

i)   ANOVA for employment status and all the three constructs for academics

The following Table 6.75 presents the significant differences among academics of different employment status and work stress.

Table 6.75

ANOVA for employment status and work stress

		Sum of Squares	df	Mean Square	F	Sig.
Organisational support	Between Groups	.097	1	.097	.226	.636
	Within Groups	34.888	81	.431		
	Total	34.985	82			
Job insecurity	Between Groups	.063	1	.063	.075	.785
	Within Groups	67.480	81	.833		
	Total	67.542	82			
Relationships	Between Groups	.690	1	.690	1.921	.170
	Within Groups	29.098	81	.359		
	Total	29.788	82			
Growth and Advancement	Between Groups	.002	1	.002	.006	.937
	Within Groups	22.451	81	.277		
	Total	22.452	82			

According to Table 6.75, all the *p*-values for the sub-scales of job demands and resources were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in work stress for academics with different employment status.

The following Table 6.76 below presents the significant differences among academics of different employment status and work engagement.

Table 6.76

ANOVA for employment status and work engagement

		Sum of Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	.557	1	.557	.771	.382
	Within Groups	58.451	81	.722		
	Total	59.007	82			
Dedication	Between Groups	.099	1	.099	.122	.727
	Within Groups	65.445	81	.808		
	Total	65.544	82			
Absorption	Between Groups	.005	1	.005	.008	.928
	Within Groups	50.120	81	.619		

		Sum of Squares	df	Mean Square	F	Sig.
Vigour	Between Groups	.557	1	.557	.771	.382
	Within Groups	58.451	81	.722		
	Total	59.007	82			
Dedication	Between Groups	.099	1	.099	.122	.727
	Within Groups	65.445	81	.808		
	Total	65.544	82			
Absorption	Between Groups	.005	1	.005	.008	.928
	Within Groups	50.120	81	.619		
	Total	50.125	82			

According to Table 6.76, all the *p*-values for the sub-scales of work engagement were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the work engagement for academics with different employment status.

The following Table 6.77 below presents the significant differences among academics of different employment status and perceived service delivery.

Table 6.77

ANOVA for employment status and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	3.074	1	3.074	3.774	.056
	Within Groups	65.964	81	.814		
	Total	69.038	82			
Reliability	Between Groups	.001	1	.001	.002	.966
	Within Groups	62.227	81	.768		
	Total	62.229	82			
Responsiveness	Between Groups	.002	1	.002	.003	.958
	Within Groups	73.532	81	.908		
	Total	73.535	82			
Assurance	Between Groups	.254	1	.254	.302	.584
	Within Groups	68.112	81	.841		
	Total	68.365	82			

According to Table 6.77, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no

significant differences in the perceptions on service delivery for academics with different employment status.

In summary, different groups of academics had differences on perception of service delivery owing to their different ages (*differed on absorption*), educational qualifications (*differed onresponsiveness*), job titles (*differed on job insecurity, responsiveness and growth and advancement*) and administrative positions (*differed on tangibles and growth and advancement*). They had similar perceptions of service delivery regardless of their differences based on gender, work experience and employment status.

6.7.3.2 Test for significant mean differences for students

This section reports on the ANOVA that was used to find significant differences between students of different groups on their demographical variables (age, gender, marital status, educational qualifications, faculty, race and years of learning) pertaining to service delivery.

The following Table 6.78 below presents the significant differences among students of different age and service delivery.

Table 6.78

ANOVA for age and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	5.889	5	1.178	.713	.615
	Within Groups	156.839	95	1.651		
	Total	162.728	100			
Responsiveness	Between Groups	6.730	5	1.346	1.066	.384
	Within Groups	119.934	95	1.262		
	Total	126.665	100			
Assurance	Between Groups	5.464	5	1.093	.803	.550
	Within Groups	129.305	95	1.361		
	Total	134.769	100			
Reliability	Between Groups	6.433	5	1.287	1.244	.295
	Within Groups	98.251	95	1.034		
	Total	104.684	100			

According to Table 6.78, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for students of different ages.

The following Table 6.79 presents the significant differences among students of different gender and service delivery.

Table 6.79

ANOVA for gender and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	.272	1	.272	.165	.685
	Within Groups	162.456	99	1.641		
	Total	162.728	100			
Responsiveness	Between Groups	.296	1	.296	.232	.631
	Within Groups	126.368	99	1.276		
	Total	126.665	100			
Assurance	Between Groups	.335	1	.335	.247	.620
	Within Groups	134.433	99	1.358		
	Total	134.769	100			
Reliability	Between Groups	.163	1	.163	.155	.695
	Within Groups	104.520	99	1.056		
	Total	104.684	100			

According to Table 6.79, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for students of different gender.

The following Table 6.80 presents the significant differences among students of different marital status and service delivery.

Table 6.80

ANOVA for marital status and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	17.777	6	2.963	1.921	.085
	Within Groups	144.951	94	1.542		
	Total	162.728	100			
Responsiveness	Between Groups	7.135	6	1.189	.935	.474
	Within Groups	119.530	94	1.272		
	Total	126.665	100			
Assurance	Between Groups	9.619	6	1.603	1.204	.311
	Within Groups	125.150	94	1.331		
	Total	134.769	100			
Reliability	Between Groups	6.874	6	1.146	1.101	.368
	Within Groups	97.809	94	1.041		
	Total	104.684	100			

According to Table 6.80, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for students of different marital status.

The following Table 6.81 below presents the significant differences among students of different educational qualification being studied and service delivery.

Table 6.81

ANOVA for educational qualification being studied and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	1.418	5	.284	.167	.974
	Within Groups	161.309	95	1.698		
	Total	162.728	100			
Responsiveness	Between Groups	3.534	5	.707	.545	.741
	Within Groups	123.130	95	1.296		
	Total	126.665	100			
Assurance	Between Groups	3.756	5	.751	.545	.742
	Within Groups	131.013	95	1.379		
	Total	134.769	100			

Reliability	Between Groups	4.270	5	.854	.808	.547
	Within Groups	100.413	95	1.057		
	Total	104.684	100			

According to Table 6.81, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for students of different educational levels.

The following Table 6.82 presents the significant differences among students of different faculties and service delivery.

Table 6.82

ANOVA for faculty and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	4.723	5	.945	.568	.724
	Within Groups	158.005	95	1.663		
	Total	162.728	100			
Responsiveness	Between Groups	12.034	5	2.407	1.995	.086
	Within Groups	114.631	95	1.207		
	Total	126.665	100			
Assurance	Between Groups	7.177	5	1.435	1.069	.383
	Within Groups	127.592	95	1.343		
	Total	134.769	100			
Reliability	Between Groups	4.362	5	.872	.826	.534
	Within Groups	100.321	95	1.056		
	Total	104.684	100			

According to Table 6.82, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for students of different faculties.

The following Table 6.83 presents the significant differences among students of different race and service delivery.

Table 6.83

ANOVA for race and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	4.723	5	.945	.568	.724
	Within Groups	158.005	95	1.663		
	Total	162.728	100			
Responsiveness	Between Groups	12.034	5	2.407	1.995	.086
	Within Groups	114.631	95	1.207		
	Total	126.665	100			
Assurance	Between Groups	7.177	5	1.435	1.069	.383
	Within Groups	127.592	95	1.343		
	Total	134.769	100			
Reliability	Between Groups	4.362	5	.872	.826	.534
	Within Groups	100.321	95	1.056		
	Total	104.684	100			

According to Table 6.83, all the *p*-values for the sub-scales of Servqual were greater than 0.05, which meant that they were not significant at 5% level. There were no significant differences in the perceptions on service delivery for students of different races.

The following Table 6.84 presents the significant differences among students of different years of learning and service delivery.

Table 6.84

ANOVA for years of learning and perceived service delivery

		Sum of Squares	df	Mean Square	F	Sig.
Tangibles	Between Groups	9.449	3	3.150	1.993	.120
	Within Groups	153.279	97	1.580		
	Total	162.728	100			
Responsiveness	Between Groups	17.102	3	5.701	5.047	.003
	Within Groups	109.562	97	1.130		
	Total	126.665	100			
Assurance	Between Groups	12.192	3	4.064	3.216	.026
	Within Groups	122.577	97	1.264		
	Total	134.769	100			
Reliability	Between Groups	8.994	3	2.998	3.039	.033
	Within Groups	95.689	97	.986		
	Total	104.684	100			

According to Table 6.84, the *p*-value for tangibles was 0.120, which is larger than 0.05, which indicated that the test statistic was not significant at a level of 5%. There was no significant difference in perceptions on tangibles among students with different numbers of years of learning at the ZOU.

The *p*-value of responsiveness was 0.003, which was less than 0.05 indicating that the test statistic was significant at a level of 5%. There was significant difference in perceptions of responsiveness among students with different number of years of learning at the ZOU.

The *p*-value of assurance was 0.026, which was less than 0.05 indicating that the test statistic was significant at a level of 5%. There was significant difference in perceptions of assurance among students with different number of years of learning at the ZOU.

The *p*-value of reliabilty was 0.033, which was less than 0.05 indicating that the test statistic was significant at a level of 5%. There was significant difference in perceptions of reliabilty among students with different number of years of learning at the ZOU.

The following Table 6.85 shows the means of responsiveness among students with different number of years of learning.

Table 6.85

Mean perception of responsiveness for students with different number of years of learning

Years of learning with ZOU	Mean	N	Std. Deviation
Below 2 years	4.2652	33	1.03821
2 < 3 years	4.2667	15	.82628
3 < 4 years	5.0887	31	1.00114

4 years and above	5.0909	22	1.29914

According to Table 6.85, the means show that students with greater number of years of learning at the institution had a higher perception of responsiveness of the academic staff towards service delivery, that is, four years and above.

The following Table 6.86 shows the means of assurance for students with different number of years of learning at the ZOU.

Table 6.86

Mean perception of assurance for students with different number of years of learning

Years of learning with ZOU	Mean	N	Std. Deviation
Below 2 years	4.8788	33	1.19589
2 < 3 years	4.1833	15	1.49244
3 < 4 years	5.1613	31	.83053
4 years and above	5.2386	22	1.08966
Total		101	

According to Table 6.86, the perception of assurance was highest among students who had been learning for more than four years at the ZOU (old students).

The following Table 6.87 shows the means of reliability for students with different years of learning at the ZOU.

Table 6.87

Mean perception of reliability for students with different number of years of learning

Years of learning with ZOU	Mean	N	Std Deviation
Below 2 years	4.1091	33	.91254
2 < 3 years	3.9067	15	1.10807
3 < 4 years	4.5161	31	.96991
4 years and above	4.7364	22	1.06079
Total		101	

According to Table 6.87, the highest perception of reliability was among the longest serving students who had been at ZOU for four years and above.

The following Table 6.88 shows means of empathy among students with different number of years learning at ZOU.

In summary, the different groups of students had similar perceptions of service delivery regardless of their different ages and genders on all the five service delivery dimensions of responsiveness, assurance, tangibles, empathy and reliability. However, their perception of service delivery had some differences because of the different number of years of learning they had with the distance learning university on responsiveness, assurance, reliability and empathy, but all agreed on tangibles.

Interpretation

Demographic variables are instrumental in shaping the conduct and perceptions of individuals in the society or workplace among different groups (Manika, Wells, Gregory-Smith & Gentry, 2015). At times, the demographical variables are ignored when organisations consider the psychological variables such as work stress and work engagement. However, these are very critical in understanding individual and group characteristics, which impact on service delivery and the general organisational performance (Argyris, 2017).

In this study, the behavioural dynamics of the different groups of academics suggest that demographical variables had varying significant differences with the constructs namely work stress, work engagement and service delivery. Age did not have any significant differences among academics with different ages on their work stress, but had significant differences in absorption among academics of different ages. Academics in the age group 46-56 years had the highest levelof absorption. The literature findings seem to support the empirical results that older workers (academics) are meticulous in their work and tend to devote more effort and energy than young workers do (Thome, 2013).

The study revealed that there are no significant differences in all the three constructs for academics based on gender. This proved wrong gender stereotyping that generally considers females as less energetic, not able to handle work demands and not as competent as their male counterparts (Ellemers, 2018; Heilman, 2001). The issue of job title was found to have significant difference among academics on job insecurity, growth and advancement, as well as, on their responsiveness to assist students. Senior lecturers and professors have better job security since they are tenured unlike assistant lecturers who are not tenured and threatened with job insecurity. They have better job grades than junior lecturers and are usually accorded the opportunity to grow and advance themselves. Owing to their experience they tend to be more responsive to students since they are aware of the importance of providing prompt service and being attentive. This is supported by the literature findings that professionals in higher grades become more work engaged (Delange et al., 2008; Subbaye & Vithal, 2017) and that tenured academics feel more secured in terms of their employment status and are motivated to perform (Grollman, 2015; Kenny, 2018). There were no significant differences among the different groups of academics on their work stress, work engagement and service delivery based on their marital status, faculty and years of service (experience).

In higher education, older academics perceive themselves as more conscientious than younger academics (Goldberg, Sweeney, Merenda & Hughes, 1998; Okonkwo, 2017). This could be supported by the results of this study that based on absorption; the ages of academics influenced their perception of service delivery. In terms of

educational qualifications, the academics differed on their perception of responsiveness to service delivery. The highest level of responsiveness was found among academics with first degree, followed by those with doctorate degress and lastly, those with masters' degree. The results seem to refute literature findings that academics with higher levels of education consider themselves as being more intellectual than those with lower qualifications (Ngalomba, 2018), and hence being quicker to attend to students' issues and concerns. The study revealed that the job title of different academics had different perceptions regarding job insecurity, responsiveness, as well as, growth and advancement. In universities those who are tenured and are either senior lecturers or professors, they feel that their jobs are secured and hence they are not stressed as non-tenured academics (Grollman, 2015; Santiago & Carvalho, 2008). Gender, work experience and employment status of academics did not show any significant differences on their perceptions of service delivery.

Apart from the above results based on the mean differences of academics based on age, there is another area of concern pertaining to gender balance in higfher education. According to this study, the fact that gender distribution among academics was heavily skewed in favour of males is consolidated by literature findings that in Zimbabwe, gender stereotyping and patriarchy were major causes of under-representation of women becoming professionals like academics (Chabaya, Rembe & Wadesango, 2009; Probert, 2005). The low number of academics holding doctorate degrees could be attributable to a lack of institutional support to do doctoral studies due to a lack of funding and a national problem of foreign currency shortage. Such financial constraints affect those who may intend to pursue studies with foreign universities like in South Africa, which are perceived to be better (Kavila & LeRoux, 2017; Nyenya & Bukaliya, 2015). It is most likely that those holding doctorate degrees may have been enticed by the brain drain bandwagon for greener pastures in neighbouring countries like; Botswana, Namibia and South Africa (Chimanikire, Mut, Gadzirayi, Muzondo & Mut, 2007; Mapolisa, 2015).

The results contradict with a study done at the largest ODL University in South Africa, where the majority of the participants were doctorate degree holders and a sizeable number being professors (Diedericks, 2016). This shows the difference in

the skills inventory and quality among academics at these ODL universities and that has a bearing on service delivery and rating of universities (Times Higher Education, 2009).

For students, age and gender variables did not bring any significant different perception on all the four service delivery dimensions of responsiveness, assurance, tangibles and reliability. Students differed according to their different number of years of learning they had been learning with the distance learning university. Students who had experienced more years of learning at the ODL university (old students) recorded higher perception of academics service delivery in terms of the acdemics' responsiveness, assurance and reliability than those who had only been with the university for a few years. The different perception based on the number of learning years among students is explained by the literature findings. Students about to complete their studies, tend to be more focused and try to put more effort, so that they graduate, unlike those in their earlier years of study who could be more fascinated with tangibles (Clewes, 2003; Sadeh & Garkaz, 2015; Vicente-Molina, Fernández-Sáinz & Izagirre-Olaizola, 2013). The differences could also be possibly as a result of different expectations since for those with more years in the ODL university, change in the delivery mode came when they had been accustomed to the previous mode of delivery, which combined the use of modules (hardcopies of course materials) and face to face interaction with the tutor. Furthermore, relatively new students have come on board when the ODL university has already made a lot of progress on e-learning and have not been exposed to the previous delivery mode, largely made up of printed modules and more time of face to face tutor-student contact. Literature findings that support such different perceptions hinge on the *customer adoption process* (Bhatnagar & Kumar-Gopalaswamy, 2017; Kotler & Armstrong, 2016; Kotler & Keller, 2012), which outlines the various stages that a consumer experiences before finally using the product or service, as well as, the change models that describe the circumstances surrounding transformation and how different groups react differently (Burke, 2017; Kotter, 1995; Wagner, 2016).

In conclusion, the above results are helpful in helping human practitioners and senior management in the ODL University understand that demographical variables result

in different reactions or behaviour among different groups of academics who should not be treated the same as well as for students.

This section has achieved the following:

Research aim 2:

To determine if work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based on age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

6.7.4 T-test for perceptions on service delivery between students and academics

The t-test was used to test whether there was any significant difference in the perceptions of service quality between academics and students.

Table 6.88

Independent samples t-test for academics and students: SERVQUAL scale

		T-Test for Equality of Variances		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
Tangibles	Equal variances assumed	13.554	.000	-3.586	182	.000	-.59961	.16719	-.92948	-.26974
	Equal variances not assumed			-3.700	179.019	.000	-.59961	.16203	-.91935	-.27986
Responsiveness	Equal variances assumed	2.869	.092	.877	182	.381	.13632	.15538	-.17027	.44290
	Equal variances not assumed			.892	181.890	.373	.13632	.15279	-.16516	.43779
Assurance	Equal variances assumed	4.483	.036	1.733	182	.085	.27125	.15652	-.03757	.58008
	Equal variances not assumed			1.774	181.674	.078	.27125	.15293	-.03050	.57301
Reliability	Equal variances assumed	1.938	.166	3.565	182	.000	.50579	.14188	.22585	.78573
	Equal variances not assumed			3.621	181.758	.000	.50579	.13967	.23021	.78138
SERVQUAL	Equal variances assumed	8.207	.005	1.235	182	.218	.15971	.12931	-.09543	.41485
	Equal variances not assumed			1.265	181.600	.208	.15971	.12629	-.08948	.40890

The t-test was used in this study to assess the equality of variances for each of the five service delivery variables for the two groups namely; academics and students. For this test, the null hypothesis assumes that the population variances are not equal. If the test value is below 0.05 (5%), the null hypothesis is rejected and it is concluded that there is a significant difference between the population variances but if greater, it will be accepted.

The results of the t-tests for the different variables are summarised as follows:

Tangibles:p-value 0.000 means that the respondents' perception of tangibles differs significantly between academics and students. The mean response for the academics was 3.6355 while for the students it was 4.2351. The perception of tangibles among students was higher than for the academics.

Responsiveness:p-value 0.381 means that perceptions on responsiveness do not differ significantly between academics and students.

Assurance:p-value 0.078 means that perceptions on assurance do not differ significantly between academics and students

Reliability:p-value 0.00 means that perceptions on reliability differ significantly between academics and students. The mean response for the academics 4.8464 while for students it was 4.3406. The perception of reliability was higher among academics than students.

Servqual:p-value 0.208 is greater than 0.05, means that the perceptions on overall service delivery do not differ significantly between academics and students.

Interpretation

Apart from responsiveness and assurance, the other three dimensions of tangibles, reliability and empathy showed that perceptions on service delivery differ significantly between academics and students. The similarities on responsiveness and assurance

demonstrate the academics' ability to promptly perform as expected by being courteous, knowledgeable and accommodative which creates a conducive learning environment ideal for student satisfaction (Croxton, 2014; Diep, Zhu, Struyven & Blieck, 2017). Although students had higher perception of tangibles than academics, both their mean values showed that they were not satisfied with tangibles. The differences between students and academics on tangibles could be emanating from their expectations. Academics have the exposure of being attached to other universities when they are on *contact or sabbatical leave* for a period ranging between one month to eight months (ZOU, 2014). The academics could be comparing the outlook of their own buildings, office space, machinery (equipment) and general ambience with those universities. The ODL university tangibles could be worse off, since it does not own most of these properties (infrastructure) as it relies on renting (Chabaya et al., 2011; Moyo & Hadebe, 2018; Musingafi et al., 2015). This could make it difficult to maintain or improve those premises since some of the lease agreements are relatively of short term and periodically renewed. Academics depend on the facilities and equipment on a daily basis and could therefore feel being let down by their university and become emotionalin their perception of tangibles, which could culminate in them developing feelings of intense dislike and agitation towards their work environment (Greene, 2017; Neff, 2017). Distance learning students could also compare with other universities, most of which are conventional and own the premises and infrastructure. They could feel that the ODL university lags behind especially considering that the university hires other facilities of other institutions for sporting activities, conducting tutorials and examinations.

The differences between academics and students on the service delivery dimensions of reliability and empathy could be on the differing expectations. The variables that really describe the behaviour of academics could have influenced their own rating. Academics rated themselves higher than students. Maybe they assumed that they were giving their best performance on service delivery reliably and accurately, as well as, providing hospitality, caring, individualised attention to students who thought otherwise. Simply it could be that academics were biased as they felt they could not rate themselves lowly, indicating that they provided poor service and needed to safeguard or preserve their self-ego and pride as supported by literature findings (Jeon & Newman, 2016; Pronin, 2007; Schmeichel & Vohs, 2018). Another factor

could be the generational differences in attitude and perceptions towards learning (Hussain & Anwar, 2017; Matherly et al., 2017), where students by virtue of being slightly younger, are digital natives and have different expectations than what lecturers are used to and what they received when they were still students, many years ago. The difference in perception of empathy could be the failure by academics to entertain students on those operating hours that are convenient to students. The students especially those who are employed, may want to meet the academics after working hours or weekends, yet the academics may want to utilise such times for other activities. Such differences, call for the need to conduct *student service satisfaction surveys* by the ODL university to know and understand the students perceptions and needs since they may change from time to time (Alves & Raposo, 2010, Entwistle & Ramsden, 2015; Richardson, Maeda, Lv & Caskurlu, 2017). This would help the academics to get feedback from students on their service delivery so that they can adjust accordingly. It is important for both the students and academics to understand the values, procedures, processes and ethos of the distance learning institution, in order, to create tailor made service to benefit students as suggested by Kolb's experiential learning theory (Kolb, 1984).

This section has achieved the following:

Research aim 3
To determine if academics and students have different perceptions on service delivery in ODL.

6.8   INTEGRATION OF RESULTS

This section focuses on the empirical results and hypotheses. The empirical results have been used as the basis of either accepting or rejecting each of the hypothesis that was derived from the empirical aims of the study. Both the empirical research aims and hypotheses were outlined in chapter 1 and chapter 5. The followingTable 6.89 shows an overview of all the research aims, hypotheses, and statistical measures, used to either reject or not to reject the null hypotheses.

Table 6.89

Overview of research aims, hypotheses, statistical measures and decisions on hypotheses

Empirical research aim	Research hypothesis	Statistical measure(s) used to make decision	Null Hypothesis (rejected or failed to reject)
Research aim 1 To determine the interrelationships between work stress, work engagement and quality of service delivery in ODL			
Sub-aim 1.1 To determine the relationship between work stress and service delivery in ODL academics.	$H_{o1.1}$ There is no statistically significant relationship between work stress and service delivery in ODL academics. $H_{a1.1}$ There is a statistically significant relationship between work stress and service delivery in ODL academics.	Correlation analysis	Rejected
Sub-aim 1.2 To determine the relationship between work engagement and service delivery in ODL academics.	$H_{o1.2}$ There is no statistically significant relationship between work engagement and service delivery in ODL academics. $H_{a1.2}$ There is a statistically significant relationship between work engagement and service delivery in ODL academics.	Correlation analysis	Rejected
Sub-aim 1.3 To determine the relationship between work stress and work engagement in ODL academics.	$H_{o1.3}$ There is no statistically significant relationship between work stress and work engagement in ODL academics. $H_{a1.3}$ There is a statistical significant relationship between work stress and work engagement in ODL academics.	Correlation analysis	Rejected
Research aim 2	$H_{o2.1}$ There is no statistically significant difference on the	ANOVA	Rejected

To determine if work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based on age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

relationship between different ages of academics and work stress, work engagement and service delivery in an ODL system.

$H_{a2.1}$ There is statistically significant difference on the relationship between different ages of academics and work stress, work engagement and service delivery in an ODL system.

$H_{o2.2}$ There is no statistically significant difference on the relationship between different gender of academics and work stress, work engagement and service delivery in an ODL system. $H_{a2.2}$ There is statistically significant difference on the relationship between different gender of academics and work stress, work engagement and service delivery in an ODL system.	ANOVA	Failed to reject.
$H_{o2.3}$ There is no statistically significant difference on the relationship between different educational qualifications of academics and work stress, work engagement and service delivery in an ODL system. $H_{a2.3}$ There is statistically significant difference on the relationship between different educational qualifications of academics and work stress, work engagement and service delivery in an ODL system.	ANOVA	Rejected
$H_{o2.4}$ There is no statistically significant difference on the relationship between different job titles of academics and work stress, work engagement and service delivery in an ODL system. $H_{a2.4}$ There is statistically significant difference on the relationship between different job titles of academics and work stress, work engagement and service delivery in an ODL system	ANOVA	Rejected

$H_{o2.5}$ There is no statistically significant difference on the relationship between different administrative positions of academics and work stress, work engagement and service delivery in an ODL system. $H_{a2.5}$ There is statistically significant difference on the relationship between different administrative positions of academics and work stress, work engagement and service delivery in an ODL system.	ANOVA	Rejected
$H_{o2.6}$ There is no statistically significant difference on the relationship between different work experiences of academics and work stress, work engagement and service delivery in an ODL system. $H_{a2.6}$ There is statistically significant difference on the relationship between different work experiences of academics and work stress, work engagement and service delivery in an ODL system.	ANOVA	Failed to reject
$H_{o2.7}$ There is no statistically significant difference on the relationship between difference in employment status of academics and work stress, work engagement and service delivery in an ODL system. $H_{a2.7}$ There is statistically significant difference on the relationship between difference in employment status of academics and work stress, work engagement and service delivery in an ODL system.	ANOVA	Failed to reject
$H_{o2.8}$ There is no statistically significant difference on the relationship between different ages of students and service delivery in an ODL system. $H_{a2.8}$ There is statistically significant difference on the relationship between different ages of students and service delivery in an ODL system.	ANOVA	Failed to reject

	H$_{o2.9}$ There is no statistically significant difference on the relationship between different gender of students and service delivery in an ODL system. **H**$_{a2.9}$There is statistically significant difference on the relationship between different gender of students and service delivery in an ODL system.	ANOVA	Failed to reject
	H$_{o2.10}$ There is no statistically significant difference on the relationship between different number of years of learning of students and service delivery in an ODL system. **H**$_{a2.10}$There is statistically significant difference on the relationship between different number of years of learning of students and service delivery in an ODL system.	ANOVA	Rejected
Research aim 3 To determine if academics and students have different perceptions on service delivery in ODL	**H**$_{o3}$ There is no statistically significant differences on service delivery perceptions between academics and students in an ODL system. **H**$_{a3}$ There is statistically significant differences on service delivery perceptions between academics and students in an ODL system.	T-test	Accepted
Research aim 4 To determine if academics' work stress, work engagement and service delivery have a good fit with the data.	**H**$_{o4}$ The empirical relationship dynamics among the variables do not have a good fit with the theoretical model. **H**$_{a4}$ The empirical relationship dynamics among the variables have a good fit with the theoretical model.	Structural equation modelling	Failed to reject.

Table 6.89 is discussed as follows:

6.8.1   Research aim 1

To determine the interrelationships between work stress, work engagement and service delivery in ODL.

This was achieved through the following three sub-aims:

6.8.1.1 Sub-aim 1.1

To determine the relationship between work stress and service delivery in ODL academics.

According to the empirical results shown on Table 6.39, the following dimensions (sub-scales) had significant correlations since the p-values were lower than 0.05:

Organisational support and reliability had a positive correlation of 0.278 and a *p*-value of 0.011 at a significant level of 5%.

Job insecurity and reliability had a negative correlation of -0.227 and a *p*-value of 0.039 at a significant level of 5%.

Relationships and reliability had a positive correlation of 0.305 and a *p*-value of 0.005 at a significant level of 5%.

Job insecurity and responsiveness had a negative correlation of -0.318 and a *p*-value of 0.03 at a significant level of 5%.

Relationships and responsiveness had a positive correlation of 0.259 and a *p*-value of 0.018 at a significant level of 5%.

Relationships and assurance had a positive correlation of 0.340 and a *p*-value of 0.002 at a significant level of 5%.

The hypotheses for this sub-aim 1.1 were formulated as follows:

H$_{o1.1}$:   There is no statistically significant relationship between work stress and service delivery in ODL academics.

H$_{a1.1}$:   There is statistically significant relationship between work stress and service delivery in ODL academics.

Given the empirical results given above, the null hypothesis is rejected.

6.8.1.2 Sub-aim 1.2

To determine the relationship between work engagement and service delivery in ODL academics.

According to the empirical results shown on Table 6.40, the following dimensions (sub-scales) had significant correlations since the *p*-values were lower than 0.05:

Vigour and tangibles had a positive correlation of 0.350 and a *p*-value of 0.001 at a significant level of 5%.

Dedication and tangibles had a positive correlation of 0.353 and a *p*-value of 0.001 at a significant level of 5%.

Absorption and tangibles had a positive correlation of 0.287 and a *p*-value of 0.009 at a significant level of 5%.

Vigour and reliability had a positive correlation of 0.416 and a *p*-value of 0.000 at a significant level of 5%.

Dedication and reliability had a positive correlation of 0.446 and a *p*-value of 0.000 at a significant level of 5%.

Absorption and reliability had a positive correlation of 0.435 and a *p*-value of 0.000 at a significant level of 5%.

Vigour and responsiveness had a positive correlation of 0.342 and a *p*-value of 0.002 at a significant level of 5%.

Dedication and responsiveness had a positive correlation of 0.370 and a *p*-value of 0.001 at a significant level of 5%.

Absorption and responsiveness had a positive correlation of 0.462 and a *p*-value of 0.000 at a significant level of 5%.

Vigour and assurance had a positive correlation of 0.309 and a *p*-value of 0.004 at a significant level of 5%.

Absorption and assurance had a positive correlation of 0.347 and a *p*-value of 0.001 at a significant level of 5%.

The hypotheses for this sub-aim 1.2 were formulated as follows:

H$_{o1.2}$:   There is no statistically significant relationship between work engagement and service delivery in ODL academics.

H$_{a1.2}$:   There is a statistically significant relationship between work engagement and service delivery in ODL academics.

Given the empirical results shown above, the null hypothesis is rejected.

6.8.1.3 Sub-aim 1.3

To determine the relationship between work stress and work engagement in ODL academics.

According to the empirical results shown on Table 6.41, the following dimensions (sub-scales) had significant correlations since the p-values were lower than 0.05:

Organisational support and vigour had a positive correlation of 0.425 and a *p*-value of 0.000 at a significant level of 5%.

Organisational support and dedication had a positive correlation of 0.373 and a *p*-value of 0.001 at a significant level of 5%.

Organisational support and absorption had a positive correlation of 0.419 and a *p*-value of 0.000 at a significant level of 5%.

Relationships and vigour had a positive correlation of 0.417 and a *p*-value of 0.000 at a significant level of 5%.

Relationships and absorption had a positive correlation of 0.374 and a *p*-value of 0.000 at a significant level of 5%.

Growth and advancement and vigour had a positive correlation of 0.247 and a *p*-value of 0.024 at a significant level of 5%.

Growth and advancement and absorption had a positive correlation of 0.271 and a *p*-value of 0.013 at a significant level of 5%.

The hypotheses for this sub-aim 1.3 were formulated as follows:

H$_{o1.3}$ There is no statistically significant relationship between work stress and work engagement in ODL academics.

H$_{a1.3}$ There is a statistical significant relationship between work stress and work engagement in ODL academics.

Given the empirical results shown above, the null hypothesis is rejected.

6.8.2   Research aim 2
To determine if work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based on age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

This was achieved through the following sub-aims:

Sub aim 2.1

To determine if different ages of academics have an impact on work stress, work engagement and service delivery in ODL context.

According to the empirical results shown on Table 6.44, Table 6.45, Table 6.46 and Table 6.47, there was only one significant difference pertaining to absorption among academics of different ages since the *p*-value for absorption (work engagement dimension) was 0.022 which is lower than 0.05. The rest had no significant differences.

The hypotheses for this sub-aim 1.3 were formulated as follows:

Ho2.1   There is no statistically significant difference on the relationship between different ages of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.1   There is statistically significant difference on the relationship between different ages of academics and work stress, work engagement and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is rejected

Sub aim 2.2

To determine if differences in gender among academics have an impact on work stress, work engagement and service delivery in ODL context.

According to the empirical results shown on Table 6.48, Table 6.49 and Table 6.50, there were no any significant difference in work stress, work engagement and service delivery for academics of different gender.

The hypotheses for this sub-aim 2.2 were formulated as follows:

Ho2.2   There is no statistically significant difference on the relationship between different gender of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.2   There is statistically significant difference on the relationship between different gender of academics and work stress, work engagement and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is not rejected.

Sub aim 2.3

To determine if differences in educational qualifications among academics have an impact on work stress, work engagement and service delivery in ODL context.

According to the empirical results shown on Table 6.54, Table 6.55, Table 6.56 and Table 6.57, there was only one significant difference pertaining to responsiveness among academics with different educational qualifications since the *p*-value for responsiveness (dimension of service delivery) was 0.035 which is lower than 0.05. The others had no significant differences.

The hypotheses for this sub-aim 2.3 were formulated as follows:

Ho2.3   There is no statistically significant difference on the relationship between different educational qualifications of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.3   There is statistically significant difference on the relationship between different educational qualifications of academics and work stress, work engagement and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is rejected.

Sub aim 2.4

To determine if differences in job titles among academics have an impact on work stress, work engagement and service delivery in ODL context.

According to the empirical results shown on Table 6.61, Table 6.62, Table 6.63, Table 6.64, Table 6.65 and Table 6.6, there were three significant differences pertaining to job insecurity, responsiveness and growth and advancement among

academics with different job titles. The *p*-value for job insecurity (dimension of work stress) was 0.005, for growth and advancement (dimension of work stress) was 0.019 and that of responsiveness (dimension of service delivery) was 0.048. These were all lower than 0.05. The others had no significant differences.

The hypotheses for this sub-aim 2.4 were formulated as follows:

H$_{o2.4}$ There is no statistically significant difference on the relationship between different job titles of academics and work stress, work engagement and service delivery in an ODL system.

H$_{a2.4}$ There is statistically significant difference on the relationship between different job titles of academics and work stress, work engagement and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is rejected.

Sub aim 2.5

To determine if differences in administrative positions among academics have an impact on work stress, work engagement and service delivery in ODL context.

According to the empirical results shown on Table 6.67, Table 6.68, Table 6.69, Table 6.70 and Table 6.71, there were two significant differences pertaining to growth and advancement and tangibles among academics with different administrative positions. The *p*-value for growth and advancement (dimension of work stress) was 0.041 and that of tangibles (dimension of service delivery) was 0.010. Both were lower than 0.05. The others had no significant differences.

The hypotheses for this sub-aim 2.5 were formulated as follows:

H$_{o2.5}$ There is no statistically significant difference on the relationship between different administrative positions of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.5   There is statistically significant difference on the relationship between different administrative positions of academics and work stress, work engagement and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is rejected.

Sub aim 2.6

To determine if differences in work experiences among academics have an impact on work stress, work engagement and service delivery in ODL context.

According to the empirical results shown on Table 6.72, Table 6.73 and Table 6.74 there were no any significant differences in work stress, work engagement and service delivery for academics of different work experiences.

The hypotheses for this sub-aim 2.6 were formulated as follows:

Ho2.6   There is no statistically significant difference on the relationship between different work experiences of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.6   There is statistically significant difference on the relationship between different work experience of academics and work stress, work engagement and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is not rejected.

Sub aim 2.7

To determine if differences in employment status among academics have an impact on work stress, work engagement and service delivery in ODL context.

According to the empirical results shown on Table 6.75, Table 6.76 and Table 6.77, there were no any significant differences in work stress, work engagement and service delivery for academics of different employment status.

The hypotheses for this sub-aim 2.7 were formulated as follows:

Ho2.7   There is no statistically significant difference on the relationship between difference in employment status of academics and work stress, work engagement and service delivery in an ODL system.

Ha2.7   There is statistically significant difference on the relationship between difference in employment status of academics and work stress, work engagement and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is not rejected.

Sub aim 2.8

To determine if differences in age among students have an impact on service delivery in ODL context.

According to the empirical results shown on Table 6.78, there were no any significant differences in perceived service delivery for students of different ages.

The hypotheses for this sub-aim 2.8 were formulated as follows:

Ho2.8   There is no statistically significant difference on the relationship between different ages of students and service delivery in an ODL system.

Ha2.8   There is statistically significant difference on the relationship between different ages of students and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is not rejected.

Sub aim 2.9

To determine if differences in gender among students have an impact on perceived service delivery in ODL context.

According to the empirical results shown on Table 6.79, there were no any significant differences in perceived service delivery for students of different gender.

The hypotheses for this sub-aim 2.9 were formulated as follows:

Ho2.9   There is no statistically significant difference on the relationship between different gender of students and service delivery in an ODL system.

Ha2.9   There is statistically significant difference on the relationship between different gender of students and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is not rejected.

Sub aim 2.10

To determine if differences in the number of learning years among students have an impact on their perceived service delivery in ODL context.

According to the empirical results shown on Table 6.84, Table 6.85, Table 6.86, Table 6.87, there were three significant differences pertaining to service delivery dimensions of responsiveness, assurance and reliability among students with different number of years of learning with the ODL university. The *p*-value of responsiveness was 0.003, assurance was 0.026 and reliability was 0.033, which were all less than 0.05 indicating that the test statistic was significant at a level of 5%.

The hypotheses for this sub-aim 2.10 were formulated as follows:

Ho2.10   There is no statistically significant difference on the relationship between different number of years of learning of students and service delivery in an ODL system.

Ha2.10   There is statistically significant difference on the relationship between different number of years of learning of students and service delivery in an ODL system.

Given the empirical results shown above, the null hypothesis is rejected

6.8.3   Research aim 3

To determine if academics and students have different perceptions on service delivery in ODL.

According to the empirical results shown on Table 6.88, the Servqual scale had a *p*-value of 0.208, which was more than the acceptable threshold of 0.05. The result shows that the population variances for the students and academics on service delivery perceptions do not differ significantly between the two groups.

The hypotheses for this research aim were formulated as follows:

H_{o3} There is no statistically significant differences on service delivery perceptions between academics and students in an ODL system.

H_{a3} There is statistically significant differences on service delivery perceptions between academics and students in an ODL system.

Given the empirical results shown above, the null hypothesis is accepted.

6.8.4   Research aim 4

To determine if academics' work stress, work engagement and service delivery have a good fit with the data.

According to the empirical results shown on Fig 6.24 (final SEM), the Root Mean Square of Approximation (RMSEA) had a value of 0.071 which was below the maximum value required of 0.08. The model has a good fit with the data and therefore capable of providing insight relationships between work stress, work engagement and service delivery as evidenced also in Table 6.43.

The hypotheses for this research aim were formulated as follows:

H_{o4} :   The empirical relationship dynamics among the variables do not have a good fit with the theoretical model.

H_{a4} :   The empirical relationship dynamics among the variables have a good fit with the theoretical model.

Given the empirical results shown above, the null hypothesis is rejected.

6.9   CHAPTER SUMMARY

This chapter gave an overview of the statistical analysis results that were relevant to this research and were interpreted to enable the researcher to integrate the results of the empirical research with the literature study based on the research aims and hypotheses.

The following empirical research aims were achieved in this chapter:

Research aim 1
To determine the interrelationships between work stress, work engagement and quality of service delivery in ODL.

Research aim 2
To determine if work stress, work engagement and service delivery in the ODL context differ for respective socio-demographic groups (*based on age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*).

Research aim 3
To determine if academics and students have different perceptions on service delivery in ODL.

Research aim 4
To determine if academics' work stress, work engagement and service delivery have a good fit with the data.

The next Chapter 7 addressed the final stage of the empirical study, namely the drawing of conclusions, discussion of the limitations and making of recommendations for the discipline of human resources management, as well as, implications for future study based on the results that have been presented in this Chapter 6.

CHAPTER 7: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

The final phase of the methodology, as described in the research process (Step 8 on section 1.8.2 in Chapter 1 and Figure 5.3 in Chapter 5) concludes this thesis. This research investigated the interrelationships between work stress, work engagement and service delivery of academics in a changing distance-learning environment in Zimbabwe. The study which was a descriptive, cross-sectional survey design was conducted on a sample of academics at the largest open distance-learning university in Zimbabwe against a background of their ever-changing roles. In this chapter, the conclusions drawn from the literature review, empirical results and the central hypothesis, as well as, the limitations are presented. The chapter concludes by discussing the recommendations that should be used for the practical application of the results and for further research studies. Figure 7.1 below shows how the entire study that pertained to the work stress, work engagement and service delivery within a changing ODL environment was integrated, and this final chapter concludes the report.
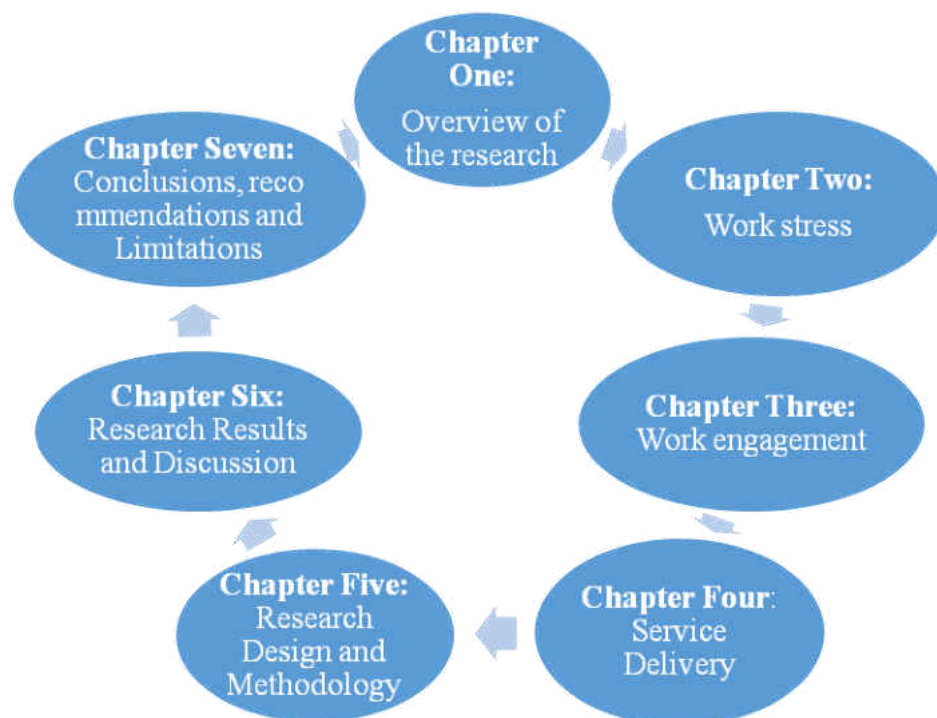
Figure 7.1   The synopsis of the sequence of presentation of all the chapters in the report

7.2   CONCLUSIONS

In line with Step 8 of the research process (Figure 5.3 on section 5.2.3 in Chapter 5), this section focuses on the conclusions emanating from the literature and empirical study based on the aims of this research, as outlined in Chapter 1. Fig 7.2 below illustrates the sequence of the steps that have been followed to present this section.

Conclusions
- Literature review
  (4 Research aims)
- Empirical study
  (4 Research aims and hypotheses)
- Central hypothesis

Limitations
- Literature review
- Empirical study

Recommendations
- ODL academics and university
- Field of human resource management
- Future research

Evaluation of the research
- Contribution   on   a theoretical level
- Contribution   on   an empirical level
- Contribution on a practical level

Reflection on doctorateness and conclusion

Figure 7.2   Sequence of steps followed to present Chapter 7 (own compilation)

7.2.1 Conclusion relating to the literature review

The general aim of this study was to determine how work stress (*represented byoverload, job insecurity, organisational support, relationships, growth and*

advancement) and work engagement (*represented by vigour, dedication and absorption*) are affecting ODL service delivery (*represented by reliability, assurance, tangibles, empathy and responsiveness*), as experienced by academics in the changing distance learning environment in an ODL university in Zimbabwe.

Conclusions were drawn on each of the following specific aims:

Research aim 1
This broader aim, namely *to conceptualise and explain theoretical models of the constructs; work stress, work engagement and service delivery in ODL academics as explained by literature* was addressed in Chapters 2, 3 and 4.

The following are the conclusions that were drawn from each of the three constructs:

- Work stress

The ODL work environment has undergone a lot of transformation, especially since the turn of the new millennium. Academics are experiencing a number of challenges and unprecedented changes, which have made their work stressful (Barkhuizen et al., 2014; Paloff & Pratt, 2011; Zabrodska et al., 2017). The challenges include the metamorphosis in the delivery mode from the traditional use of conventional teaching methods to online teaching, which requires adjustment to the contemporary communication, digital and information technological development in order to bridge the distance between the academic and the learner (Bates, 2015; Heydenrych & Prinsloo, 2010). These changes, especially in the ODL University in Zimbabwe face many constraints, which include the shortage of computers, lack of internet connectivity due to low internet bandwidth and skills shortages. Support from the government of Zimbabwe has decreased and provision of university grants and students loans is almost non-existent. Government has been for some time proposing to wean state universities from funding and this has created fear of job insecurity (Uzhenyu, 2017; Zulu, 2015). As highlighted in Chapter 2, the ODL academic roles have increased by assuming the roles of process facilitator, advisor (counsellor), instructional designer, materials developer, administrator, assessor, researcher, content facilitator, communicator and supervisor (Ansari, Coch & De

Smedt, 2017; Kallio et al., 2016; Wiegel et al., 2016). Such increased workload, exacerbated by a shortage of resources and high expectations, point to the conclusion that the ODL academics perceive their jobs as stressful. ODL institutions should rationalise the work roles of academics so that they become more effective. Application of a theory like Lazarus Theory of Stress (Lazarus, 1966) can be very helpful in assisting academics to manage work stress.

- Work engagement

Chapter 3 discussed the dimensions of work engagement, which are vigour, dedication and absorption (Alarcon & Edwards, 2011; Schaufeli & Bakker, 2004; Tuckey et al., 2018). Vigour is denoted by one's ability to exhibit a lot of energy, mental resilience and effort even under difficult working conditions. Dedication is denoted by one's strong involvement in work with enthusiasm, inspiration, pride and a feeling of significance. Absorption is denoted by one's ability to identify with work by being happily engrossed and experiences time as '*flying'*. These lead to positive outcomes such as; improved work performance, personal creativity, better health and job satisfaction (Bakker & Albrecht, 2018; Xanthopoulou et al., 2012).

The major drivers of work engagement include job resources and personal resources (Schaufeli, 2017; Taris & Schaufeli, 2015; Victor & Hoole, 2017). Job resources reduce the effect of job strain because of support from supervisor and work mates, as well as, having job control (Bakker & Demerouti, 2017). Personal resources provide inner drive to perform or function well because of motivation, confidence and perseverance (Stanford, 2001; Thornton 2017). High work engagement is a change from negative to positive affect according to the Affective shift model (Kahn, 1990). The work itself can energise someone if he experiences psychological states, which comprise; meaningfulness of work, responsibility and knowledge of outcomes (feedback) (Hackman & Oldman, 1980, Ramos et al., 2016).

In ODL, academics despite facing some cultural and technical barriers to work engagement that emanate from the emergence of online teaching, they should know that the change process would eventually come to an end. They would then find their work to be stimulating, energising and inspiring so that they have the desire to

meaningfully pursue the organisational goals (Bakker & Schaufeli, 2015; Salanova & Schaufeli, 2008). Work engagement is linked to health outcomes and if academics are psychologically connected to their work, they are less likely to experience negative effects that adversely affect their health (Xanthopoulou et al., 2012).

- Service delivery

Service delivery is a topical issue in higher education, where competition has intensified due to phenomenal growth in technology, as well as, the effect of globalisation (Noaman et al., 2017; Perera & Abeysekera, 2015). Services have five unique characteristics, which are perishability, intangibility, variability, inseparability and non-ownership (Mupamawonde, 2014; Tharangani & Patabedige, 2017). Service delivery in ODL has undergone many phases and such transformation is largely attributable to the transactional distance theory by Moore (1993). The quality of service hinges on five major factors namely: reliability, assurance, tangibles, empathy and responsiveness (Zeithaml et al., 1990). If each of these factors are not paid enough attention to, there is bound to be poor service delivery (Uppal, 2017). There is usually a gap between the consumer's expectation that is before the utilisation of the service, and the consumer's perception, which comes during or after the actual service provision. If the gaps are not in the affirmative, it means that the higher education institution should attempt to arouse student satisfaction by addressing those gaps so that there is some semblance of equilibrium for better service delivery (Yousapronpaiboon, 2014).

Service delivery in ODL in Zimbabwe is affected by a plethora of challenges. The economic hardships have largely affected the availability of resources, which are inadequate. Funding is the major problem which is affecting the maintenance and expansion of existing infrastructure, acquisition of enough computers and staff retention, due to brain drain of highly qualified academics to neighbouring countries like Botswana and South Africa, where conditions of service are much better (Masuku & Muchemwa, 2016; Moyo & Hadebe, 2018, Vutete & Uzhenyu, 2016).

From the literature, service delivery in ODL in the Zimbabwe environment has a fair share of teething problems, which should be addressed so that the ODL university studied could become globally competitive.

The following sub-aims were meant to find existing literature on the relationships between any two of the three constructs'

Sub-aim 1.1

To conceptualise the theoretical relationship between work stress and service delivery in ODL academics was addressed in Chapter 4.

Work stress has a bearing on service delivery and has an impact on the quality of outputs or results (Hou et al., 2018; Neff, 2017). Although some studies conducted showed that an inverse relationship between work stress and service delivery existed (Kinyita, 2015; Ogbogu, 2017), the opposite can be true depending on the work stress model used as explained at the end of this section. Employees who increasingly exhibit high levels of stress at the workplace perform badly because of fatigue or burnout, which can cause health impairment (ill health), which culminates in erosion of meaningful work and low service delivery (Bailey, Madden, Alfes, Shantz & Soane, 2017; Hakanen et al., 2006; Ntsoane, 2017). As a result, service delivery is adversely affected. Work stress of academics usually come from their changing work roles due to transformation of ODL which has seen them being overwhelmed with heavy workload and inadequate resources, rendering them less effective and negatively influencing their commitment and loyalty, translating to poor service delivery (Ogbogu, 2017).

The JD-R model (Schaufeli & Bakker, 2004) identifies two major dimensions of work stress, namely: job demands (*overload and job insecurity*) and job resources *(organisational support, relationships, growth and advancement*). The job demands tend to increase work stress, which in turn adversely affects service delivery, yet job resources reduce work stress and proactively enhance service delivery (Bakker & Demerouti, 2007; Rothmann & Jordaan, 2006).

The literature findings also testify how work stress is a complex phenomenon in the study of human behaviour in human resource management (Hobfoll, 2004; Jung, 2015) and should therefore not be generalised. It can be concluded that while most work stress models treat it as a barrier to effective service delivery, a few models also suggest that depending on the availability of certain provisions and careful management within the workplace, it could also enhance service delivery.

Sub-aim 1.2

To conceptualise the theoretical relationship between work engagement and service delivery in ODL academics was addressed in Chapter 4.

There is a direct relationship between work engagement and service delivery and organisations should foster the development of work engagement among its workers as a key driver of improved service delivery (Gruman & Saks, 2011; Morgan, 2017). Engaged employees perform better by investing extra effort and energy to their work because they become highly committed and motivated as they endeavour to provide quality service (Moura et al., 2014; Tuckey et al., 2018).

Research studies have confirmed that organisations with highly engaged workers outperform those without. They achieve greater satisfaction from their clients or customers due to high employee productivity and increased profitability (Lisbona et al., 2018). Organisations that do not focus or pay attention to increasing their workers' engagement levels tend to suffer a decline in service delivery (Attridge, 2009; Barkhuizen, Mogwere & Schutte, 2014). A decline in service delivery can be attributed to low worker engagement. Poor service delivery contributes to lower customer satisfaction, staff turnover and ultimately undesired low revenues(Afridi, Khattak & Khan, 2016; Zvavahera, 2013). It is important to note that work engagement varies from individual to individual, even in the same department and the magnitude can change on a daily basis, or even hour-to-hour (Bakker & Leiter; 2010; Gagne, 2014; Tuckey et al., 2018). All these factors have a bearing on the level of service delivery. It could be concluded that if workers are engaged, their service delivery is better and vice versa.

Sub-aim 1.3

To conceptualise the theoretical relationship between work stress and work engagement in ODL academics was addressed in Chapter 4.

Most literature suggest that there is a strong inverse relationship between work stress and work engagement (Conway et al., 2016; Padula et al., 2012). Work stress reduces work engagement (Padula et al., 2012; Tuckey et al., 2018). Padula

et al. (2012) suggest that attempts should be made to lessen the impact of both psychological and somatic stress, which would improve work engagement by creating personal and professional satisfaction.

In support of the JD-R model, Moura et al. (2014) found that the motivational process and the job resources could strongly predict positive outcomes at work, such as, job satisfaction. Recently, there has been a great deal of interest in work engagement as a good predictor of organisational success, financial performance and customer satisfaction, albeit with only minimal work stress (Geralds et al., 2018). Work stress is a moderating factor of work engagement which is needed because bot all work stress should be viewed as negative, and hence the importance of eustress (Fleige, 2017) which was raised in Chapter 2.

A variable that is closely associated with both work stress and work engagement is job satisfaction (Li et al., 2017; Skaalvik & Skaalvik, 2017). As such, work engagement and work stress are antecedents of job satisfaction (Alarcon & Lyons, 2011; Zhu, 2013). As suggested by the JD-R model (Conway et al., 2016;Demerouti & Bakker, 2011;Schaufeli & Bakker, 2004), job demands and job resources have different effects on work stress and work engagement. Job demands lead to high stress and low work engagement, but on the other hand, job resources reduce work stress and improve work engagement (Grover et al., 2017; Maslach et al., 2008; Moura et al., 2014).

Research aim 2
To conceptualise how work stress, work engagement and service delivery of groups in the ODL context differ for respective socio-demographic variables (*age, gender, educational qualification, job title, administrative position, work experience, employment status and years of learning*) was addressed in Chapters 2, 3 and 4.

The literature revealed that some socio-demographic variables have an influence on the three constructs of the study:

- In Chapter 2, in terms of work stress, females generally report experiencing more work stress than their male counterparts (McKeand, 2016; Sifferlin, 2013) do, but

in higher education, there is no significant difference between the two. In terms of age, the elderly are less stressed (Aldwin, 1990; Paykel, 1983). The incumbents of senior positions, for example faculty' deans and department' chairpersons in higher education generally experience more stress than those holding lower positions (Ellis & McNicholl, 2015; Kahn, 1993). In terms of the level of profession (academic job title), professors experience higher levels of stress than junior lecturers (Barkhuizen & Rothmann, 2008). Holders of lower educational qualifications experience a greater amount of stressful work than those with higher qualifications (Lunau et al., 2015). Non-tenured academics experience more stress since they are largely concerned with their job security (Grollman, 2015). Tenured academics are motivated and demonstrate better allegiance, as they feel they are 'bonafide' members of the organisation (Craft et al., 2017; John et al., 2014).

- In Chapter 3, in terms of work engagement, males were found to be more engaged than females (Thome, 2013). Those with higher job positions (Lee et al, 2017), as well as, better educational qualifications (Zawacki-Richter, 2017) had better work engagement than those with lower positions and inferior qualifications. In terms of age, the difference is on job characteristics preference. Young employees' prefer task variety, but older employees prefer skill variety (Thome, 2013). Older employees are generally more committed and find meaning in their work, unlike younger employees (Anthun & Innstrand, 2016). In terms of race, there is no significant difference known (Jones et al., 2009; Jordan & Weller, 2018).

- In Chapter 4, in terms of service delivery, gender had an influence on service delivery on the taught courses. For science related courses, males deliver better than females (Chudgar & Sankar, 2008). However, females perform better than males if the environment provides opportunities for deriving intrinsic motivation (Vecchione et al., 2014). In terms of age, there is not much significant differences on service delivery between academics of different age groups. However, if experience and the job title or position are considered, then those who would have served an organisation for longer periods and in a supervisory position, tend

to offer better service than those who with less experience or subordinates (John et al., 2014, Todd, Hills & Robbins, 2012). In terms of qualifications, there were no significant differences as long as one held the required minimal qualification for that job. The differences are attributable to personal characteristics that affect one's conduct, such as attitude and commitment (Aina & Olanipekun, 2015). In addition, if the qualification is specialised to a particular programme, the holders tend to produce better service delivery than the one with a generalised qualification (Pucciarelli & Kaplan, 2016). Not much is known about ethnicity influence on service delivery.

From the above, one can conclude that the literature findings suggest that some demographical variables of different groups have significant influence on work stress, work engagement and service delivery, while others have minimal or no known influence at all.

Research aim 3

The third research aim, namely *to conceptualise if academics and students have different perceptions on service delivery in ODLas explained by literature*was addressed in Chapter 4.

Literature, particularly on studies on the differences in perception among stakeholders of higher education institutions regarding service delivery, has shown that academics and students usually differ. Abidin (2015), using four dimensions of education services, namely, curriculum, teaching and learning, administrative services, facilities and library, found that academics scored higher on curriculum, teaching and learning but scored lower on administrative services, facilities and library relative to students. Musingafi et al. (2015) found different perceptions regarding challenges affecting service delivery in an ODL university. Students' concerns were largely those that affected them directly, such as lack of sufficient time for study, difficulties in accessing and using ICT hardware and software, delayed feedback on marking of assignments, lack of study materials and lack of support services. Academics seemed more concerned about their welfare and career development and cited unfavourable conditions of service and lack of research grants and staff development. Students' satisfaction hinged mostly on the

quality of teaching and learning, including their expectations of having committed and experienced faculty tutors (Workie et al., 2017). In terms of online teaching in ODL, both academics and students agreed that student loyalty and service delivery satisfaction were compromised due to the notable lack of physical interaction, as opposed to a contact-learning situation (Martínez-Argüelles &Busquets, 2016). Both students and academics agree that resources are inadequate and that tends to affect e-learning in distance education in Zimbabwe (Chabaya et al., 2011; Nyenya & Bukaliya, 2015; Pride & Tatenda, 2017; Zulu, 2015).

Based on the literature findings, it is deduced that students and academics tend to have different perceptions on service delivery in an ODL context.

Research aim 4

The fourth research aim, namely *to conceptualise if academics' work stress, work engagement and service delivery have good relationships as explained by literature* was addressed in chapter 4.

Although literature shows that there are relationships that exist between any two of the three constructs (work stress, work engagement and service delivery), there seems to no existing literature that attempt to link work stress and work engagement to service delivery, more so in ODL. Reputable research engines (database) such as; *Google Scholar*, *EBSCOhost, Emerald Insight*, S*cience Direct, ResearchGate, Education Resources Information Centre and Microsoft Academic Search* did not have existing literature linking the three constructs together.

Therefore, the conclusion is such that there is no literature combining or linking the three constructs of work stress, work engagement and service delivery in the area of human resource management, particularly within an ODL university context.

7.2.2 Conclusions relating to the empirical results

In terms of the empirical study, conclusions were drawn on the following research aims:

Research aim 1

The first research aim, namely *to determine the interrelationships between work stress (represented by overload, job insecurity, organisational support, relationships, growth and advancement), work engagement (represented by vigour, dedication and absorption) and service delivery(represented by reliability, assurance, tangibles, empathy and responsiveness) in ODL* was addressed through the following sub-aims;

Sub-aim 1.1
To determine the relationship between work stress and service delivery in ODL academics.

The empirical results were able to reject the null hypothesis and provided supportive evidence for the alternative hypothesis:

$H_{a1.1}$ There is a statistically significant relationship between work stress (and its sub-dimensions) and service delivery (and its sub-dimensions) in ODL academics

Therefore, the study arrived at a conclusion that:
- Relationships (sub-dimension of work stress) had significant positive relationships with reliability, responsiveness and assurance (sub-dimensions of service delivery).
- Organisational support (sub-dimension of work stress) had significant positive relationship with reliability(sub-dimension of service delivery).
- Job insecurity (sub-dimension of work stress) had significant negative relationships with reliability and responsiveness (sub-dimensions of service delivery).

Sub-aim 1.2

To determine the relationship between work engagement and service delivery in ODL academics.

The empirical results were able to reject the null hypothesis and provided supportive evidence for the alternative hypothesis:

Ha1.2 There is a statistically significant relationship between work engagement (and its sub-dimensions) and service delivery (and its sub-dimensions) in ODL academics

Therefore, the study arrived at a conclusion that:

- Absorption (sub-dimension of work engagement) had significant positive relationships with responsiveness, reliability, assurance and tangibles (sub-dimensions of service delivery).
- Dedication (sub-dimension of work engagement) had significant positive relationships with responsiveness, reliability and tangibles (sub-dimensions of service delivery).
- Vigour (sub-dimension of work engagement) had significant positive relationships with reliability, responsiveness, tangibles and assurance (sub-dimensions of service delivery).

Sub-aim 1.3

To determine the relationship between work stress and work engagement in ODL academics.

The empirical results were able to reject the null hypothesis and provided supportive evidence for the alternative hypothesis:

Ha1.3 There is a statistical significant relationship between work stress (and its sub-dimensions) and work engagement (and its sub-dimensions) in ODL academics.

Therefore, the study arrived at a conclusion that:

- Relationships (sub-dimension of work stress) had significant positive relationships with vigour and absorption (sub-dimensions of work engagement).

- Organisational support (sub-dimension of work stress) had significant positive relationships with vigour, dedication and absorption (sub-dimensions of work engagement).

- Growth and advancement (sub-dimension of work stress) had significant positive relationships with vigour and absorption (sub-dimensions of work engagement).

Research aim 2

The empirical results were able to conclude on the hypotheses of socio-demographic variables drawn from **academics** as shown below:

(a) Age

The empirical results rejected the null hypothesis and provided supportive evidence for the alternative hypothesis:

$H_{a2.1}$ There is statistically significant difference on the relationship between different ages of academics and work stress, work engagement and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:
There was statistically significant difference on absorption among academics of different age groups.

(b) Gender

The empirical results failed to reject the null hypothesis:

$H_{o2.2}$ There is no statistically significant difference on the relationship between different gender of academics and work stress, work engagement and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:

There was no statistically significant difference on the relationship between different gender of academics and any dimension of work stress, work engagement and service delivery in an ODL system.

(c) *Education qualification*

The empirical results rejected the null hypothesis and provided supportive evidence for the alternative hypothesis:

$H_{a2.3}$ There is statistically significant difference on the relationship between different educational qualifications of academics and work stress, work engagement and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:

There was only one significant difference pertaining to responsiveness among academics with different educational qualifications.

(d) Job title

The empirical results rejected the null hypothesis and provided supportive evidence for the alternative hypothesis:

$H_{a2.4}$ There is statistically significant difference on the relationship between different job titles of academics and work stress, work engagement and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:

There were three significant differences pertaining to job insecurity, responsiveness and growth and advancement among academics with different job titles.

(e) Administrative position

The empirical results rejected the null hypothesis and provided supportive evidence for the alternative hypothesis:

H$_{a2.5}$ There is statistically significant difference on the relationship between different administrative positions of academics and work stress, work engagement and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:
There were two significant differences pertaining to growth and advancement, and tangibles among academics with different administrative positions.

(f) Work experience

The empirical results failed to reject the null hypothesis:

H$_{o2.6}$ There is no statistically significant difference on the relationship between different work experiences of academics and work stress, work engagement and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:
There was no statistically significant difference on the relationship between different work experiences of academics and any dimension of work stress, work engagement and service delivery in an ODL system.

(g) Employment status

The empirical results failed to reject the null hypothesis:

H$_{o2.7}$ There is no statistically significant difference on the relationship between difference in employment status of academics and work stress, work engagement and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:
There was no statistically significant difference on the relationship between different employment status of academics and any dimension of work stress, work engagement and service delivery in an ODL system.

The following conclusions on socio-demographic variables were drawn from **the students**.

(a) Age

The empirical results failed to reject the null hypothesis:

$H_{o2.8}$ There is no statistically significant difference on the relationship between different ages of students and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:
There were no any significant differences in perceived service delivery for students of different ages.

(b) Gender

The empirical results failed to reject the null hypothesis:

$H_{o2.9}$ There is no statistically significant difference on the relationship between different gender of students and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:
There were no any significant differences in perceived service delivery for students of different gender.

(c) Years of learning

The empirical results rejected the null hypothesis and provided supportive evidence for the alternative hypothesis:

$H_{a2.10}$ There is statistically significant difference on the relationship between different number of years of learning of students and service delivery in an ODL system.

Therefore, the study arrived at a conclusion that:

There were three significant differences pertaining to service delivery dimensions of responsiveness, assurance and reliability among students with different number of years of learning with the ODL university.

Research aim 3

To determine if academics and students have different perceptions on service delivery in ODL.

The empirical results failed to reject the null hypothesis:

H_{03} There is no statistically significant difference on service delivery perceptions between academics and students in an ODL system.

Therefore, the study arrived at a conclusion that:

There were not major differences on service delivery perceptions between the academics and students.

Research aim 4

To determine if academics' work stress, work engagement and service delivery have a good fit with the data.

The empirical results rejected the null hypothesis and provided supportive evidence for the research hypothesis:

H_{a4} The empirical relationship dynamics among the variables have a good fit with the theoretical model.

Therefore, the study arrived at a conclusion that:

The structural equation modelling had 24 paths out of 28, which had significant relationships showing that a framework could be constructed.

7.2.3   CONCLUSION TO THE CENTRAL HYPOTHESIS

The central hypothesis outlined in Chapter 1 states that the interrelationships between the academic's work stress (*represented by overload, job insecurity,*

organisational support, relationships, growth and advancement) and work engagement (*represented by vigour, dedication and absorption*) have an influence on service delivery (*represented by reliability, assurance, tangibles, empathy and responsiveness*) in a changing distance learning environment in Zimbabwe. Both work stress and work engagement have an impact on service delivery. Academics' work stress can have a negative impact on service delivery, particularly if job demands (*overload and job insecurity)* prevail without being addressed. However, if job resources (*organisational support, relationships, growth and advancement*) are adequate and well taken care of, there is a positive impact. If workers are engaged, there is a positive impact on service delivery. Furthermore, some significant differences exist between the different groups of academics as defined by the socio-demographical varibles (age, gender, marital status, race, educational level, faculty, job level and years of service) with regard to work stress, work engagement and service delivery. This shows that a 'blanket approach' or holistic approach needs careful consideration when deciding on work related behavioural aspects of ODL academics due to some of the differences found from results of this reseach. Therefore, the understanding of human behaviour as manifested by work stress and work engagement of academics, is pivotal to service delivery in ODL and policy makers and human resources practitioners should strongly consider that.

There is thus sufficient empirical evidence in support of the central hypothesis.

7.3   LIMITATIONS

The limitations for both the literature review and the empirical study have been noted as indicated below:

7.3.1 Limitations pertaining to the literature review

The following limitations were noted in the literature review:

- Research on how work stress and work engagement can influence service delivery in a distance-learning environment is very limited.

- No research that indicated any known interrelationships between work stress, work engagement and service delivery in an ODL environment, could be found.

- Some sources treated work engagement and employee engagement as synonymous and that they can be used interchangeably, yet they are different. Similarly, some sources suggested burnout as a form of stress but these concepts are different in the theory of organisational behaviour.

- Most sources discussed work stress and work engagement from a general perspective under the umbrella term of higher education from mostly a global perspective and there is not much literature pertaining to the ODL environment especially in a less developed country such as Zimbabwe.

- Not much literature covers service delivery in universities, but the available literature focuses more on competition and problems affecting quality of teaching.

- Many studies conducted particularly in Zimbabwe on ODL are qualitative and this researcher did not benefit much from these studies, especially on the research design and methodology, since this research was quantitative.

7.3.2 Limitations pertaining to the empirical study

A number of limitations were encountered during the empirical study of this research:

- The use of the survey monkey tool to get online responses did not materialise due to failure to secure foreign currency to pay the service provider because of serious economic challenges in the country of conducting this research. This led to the use of an alternative method, which involved the distribution of hard copies of the questionnaires to academics who had reported for the end of semester examinations marking session.

- The collection of data took long (2 months) because the exercise could not be done at once, since faculties have examinations spread over different weeks. Although marking is centralised and the same venue used, most faculties started marking at the end of November 2017 and finished mid-December 2017, yet the largest faculty only commenced marking in the first week of January 2018 and completed three weeks later.

- The use of only one measuring instrument for each construct, namely the JD-R scale for work stress, the Ultrecht work engagement scale for work engagement and the Servqual scale for service delivery. It is acknowledged that the study could have produced different results if more than one instrument had been used instead.

- The sample used was relatively small, because the ODL university investigated in this research is relatively small and the results cannot be generalised to all other academics in other ODL universities who are by far larger or function in contexts different to this study. This was evident when confirmatory analysis was used to test whether the data fitted a hypothesised measurement model.

7.4   RECOMMENDATIONS

To achieve the purpose of the research based on the empirical aims outlined in section 1.3.2.2 and the results, conclusions and limitations arising there from, this section formulates recommendations for ODL academics, the ODL university and human resource management, as well as, for future research.

7.4.1 Recommendations for ODL academics and the ODL university

The results of this research provided the rationale for determining specific interventions that should improve the ODL university through efficient and effective service delivery by creating a conducive environment where academics are energised, committed and psychologically connected to their work.

In light of the ever-changing ODL environment due to globalisation and technological innovations, academics are expected to perform additional and even more complex roles. ODL academics, in their expected role of being responsible for online course delivery, face many challenges in terms of integrating applicable teaching practice, digital literacy, availability of equipment and effective student support. The changes being brought about by online courses in the ZOU are adding more roles and duties for academics and as a result, tend to affect service delivery.

These new drivers of change should not be seen as sources of problems or challenges by academics and management, but as new opportunities that should largely involve the active involvement of academics in this process of change. It is recommended that the input of academics on how to implement such change is vital and should be taken on board. This holistic and integrated approach to such transformation, rather than to have such decisions being a preserve of senior management, should bring better results due to synergy and teamwork. This will also instil a sense of ownership among academics, thereby reducing chances of resistance to such change.

The transition phase, from a classroom tutor-student contact approach, using correspondence, to an e-learning mode in ODL, require acquisition of new skills and technical ability of academics, as well as, the learners (students). It is recommended that proactive training and development be done in phases. The first phase should be for all academics both full time and part time, so that they fully acquaint themselves with online teaching, before doing the same to students. During this phase, the academics should also be provided with technical support since they will be mastering the new skills. This should make learning more efficient thereby improving service delivery in the ODL university.

In order to make training more user friendly and effective, the ODL institution should overcome the constraint of lack of access to online facilities. The institution should procure more speedy and efficient computers in all regional campuses beginning with those with satellites that are located in remote areas. This can be feasible if resources are mobilised by vigorously embarking on income generating projects, networking with the corporate organisations, particularly in the private sector and forming strategic alliances or partnerships. The networking can be extended to the international community, for example by collaborating with foreign universities, which may include staff exchange programmes so that academics are exposed to even modern online learning facilities. The partnerships could also include conducting joint research projects in the partners' countries in order to obtain the much-needed foreign currency. Another avenue, would be to come up with a vibrant Alumni association to incorporate those former students gainfully employed in foreign countries and could assist with the remittance of foreign currency or donating the

necessary equipment. A memorandum of understanding with the private sector can be modelled along a win-win situation whereby the ODL university provides training to their staff members, while in return, those companies may assist financially or technically in the procurement of computers or setting up computer laboratories. As a state ODL institution, government should continue to fund and do away with its plan to wean state universities from funding, given that the prevailing economic state of affairs is not possible to enable the ODL university and others to break even. Government has the social justice responsibility to support ODL as it provides a cheaper option for working adults to gain access to higher education.Continued provision of government grants should augment whatever income generated by the ODL university, mostly from tuition fees, to acquire learning resources like computer software and hardware in order to improve the efficiency of the e-learning delivery mode. This is likely to reduce academics' work stress and improve their work engagement and service delivery.

Work role overload in ODL academics comprises a large number of tasks and commitments within a limited period, resulting in unrealistic deadlines and multiple competing priorities for academics. The multiple role expectations involved in online learning is stressful and leads to decreased work engagement. It is recommended that there is a need to streamline the roles of academics by reducing their workload, which comprises a lot of administrative work. This would create and allow more time for them to reflect and pay attention to students. In addition, this could improve student support by having more time for research, prompt feedback on assignments marking and developing of quality learning materials. Largely support staff or non-academics should do the administrative work.

The tangibles in service quality are employed by organisations to improve customer satisfaction. The appearance of physical facilities, equipment, staff and communication materials has become key in creating an ambience that reflects an upmarket brand image, as well as, providing a competitive edge over competitors. Based on the empirical results of the study, the ODL institution should improve its tangibles, which were rated lowly by both students and academics. They indicated that academics do not have modern looking equipment and that their offices including their secretaries and buildings were not visually appealing. The ODL

institution rents many buildings for its operations and this might make it difficult for it to make any refurbishments or improvements, since some of the structures need attention in order to give them a 'facelift'. The challenge is that the property owner (lessor) might not want to incur additional costs to do such refurbishments. It is recommended that the ODL institution develop a number of building sites it has acquired for a long time which have not yet been developed. The new buildings should be able to provide enough office space so that each academic occupies one office alone, unlike the prevailing scenario where even three academics share one office. This has a negative impact on service delivery, as well as, student satisfaction since one may not feel free to discuss an issue or concern with a particular academic due to lack of privacy in those offices. This also calls for the mobilisation of resources to have better infrastructure and well-equipped staff offices comprising of modern computers, laptops and iPads. There is also need for the ODL university to subscribe to antiplagiarism software providers of Turnitin to improve service delivery.

7.4.2 Recommendations for human resource management

The literature review contributed a valuable foundation for the study of the conceptualisation of work stress, work engagement and service delivery in ODL academics. The empirical study then confirmed the interrelationships between the three constructs on ODL academics in light of the changing world of work. The results should be taken on board to assist with the formulation of policies and addressing pertinent issues that should improve human resource management, particularly in higher education as discussed below.

If the ODL work environment fails to cope with changes in technology and increasing globalisation, the academics will continue to face serious challenges such as stress, burnout, insecurity, low levels of energy, low motivation, poor health, low resilience, low optimism, low self-esteem, low self-efficacy, low enthusiasm, low involvement in their work, and lack of job satisfaction. It is recommended that human resource practitioners, together with the support of senior management could develop policy intervention measures that improve the working conditions of academics so that their health, well-being and welfare, enable them to perform to their maximum potential. There is therefore need to rationalise and streamline their roles, so that they are not

stressed or disengaged. This requires reorientation of job redesign, availability of resources to improve utilisation of technology, granting tenure for job security and promoting teamwork to make the working environment conducive.

The results of the study suggest that human resources practitioners may also need to consider that different demographical variables (age, gender, marital status, educational level, job level, administrative position, employment status, race, years of service and the faculty/department) have different influence on work stress, work engagement and service delivery of different groups of academics. This is true despite these different groups of academics being in the same profession. As this has a bearing on the behaviour or conduct of academics at work, there is need to create an environment that accommodates these different academics based on their demographical variables to improve organisational behaviour.

7.4.3 Recommendations for future research

- Future research needs to continue to explore the interrelationships between work stress, work engagement and service delivery since a lot of developments continue to take place in the changing world of work.

- Future research could also attempt to accommodate both the ODL and conventional universities in order to come up with comparisons that would help policy makers to come up with specific needs and roles of academics in each of the two types of universities rather than using an all-inclusive treatment or approach.

- This research used the Servqual scale (instrument) to measure service delivery without doing a gap analysis. Future studies would require a Servqual scale that has two sections for each item with both the customer expectation and the customer perception scores. This would bring better measurement of service delivery.

- Future research should also include qualitative aspects in the measuring instrument by possibly adopting the mixed methodology approach. Semi-structured questionnaires can be designed to accommodate personal opinions, explanations, justification or reasons for selecting particular option(s) and even suggestions by respondents, so that, there would be more data for analysis rather than confining to the use of structured questionnaires like in this research. In the same context, future research can also use *triangulation* in data collection. Two instruments, for example, a structured questionnaire and an unstructured interview guide can be used. Academics because of their large numbers can be given questionnaires and senior management members who are few like the deans, the registrar, the finance director and the human resources director, can be interviewed. Some senior government officials preferably from the parent Ministry of Higher Education, Science and Technology development can also be interviewed. This would allow all key stakeholders to be involved in matters or issues that affect ODL academics in order to get balanced views.

7.5   EVALUATION OF THE RESEARCH

The research investigated the interrelationships between academics' work stress (represented by overload, job insecurity, organisational support, relationships, growth and advancement) and work engagement (represented by vigour, dedication and absorption) and their influence on the quality of service delivery (represented by reliability, assurance, tangibles, empathy and responsiveness) in a changing distance learning environment in Zimbabwe.

The research should make a significant contribution to the field of human resources management notably on three levels, which are, theoretical, empirical and practical.

7.5.1 Contribution on a theoretical level

On a theoretical level, those readers privy to the study will develop in-depth knowledge and understanding of work stress (represented by overload, job insecurity, organisational support, relationships, growth and advancement) and work

engagement (represented by vigour, dedication and absorption) have an influence on the quality of service delivery (represented by reliability, assurance, tangibles, empathy and responsiveness). The psychological constructs of work stress and work engagement have a strong bearing on service delivery. Service delivery in higher education has become so instrumental that it may determine the level of success of institutions of higher learning, particularly universities, where competition has become intense due to globalisation and the use of advanced technology, which has become more convenient to learners.

The literature review suggested that increasing workload of academics, has given impetus to the study of organisational behaviour, which is the study of human behaviour in prevailing organisational settings and how the interface between such human behaviour and the organisation can create an equilibrium that creates a win-win scenario. Problems of academics emanating from the changing world of work particularly work overload, job insecurity and shortage of resources and suggestions made as intervening strategies by the literature, are very useful. The critical review of literature in Chapters 2, 3 and 4, has brought new salient issues in ODL especially in developing countries like Zimbabwe where resources are scarce.

In terms of the empirical study, the literature provided some relationships that have been found between the variables by other previous studies and should be useful to future researchers who may want to explore possible interventions that enhance work engagement and reduce work stress in order to improve service delivery by ODL academics.

7.5.2 Contribution on an empirical level

On an empirical level, the study provided interesting and useful results (findings) between interrelationships between the constructs. Firstly, the interrelationships found between work stress and service delivery and secondly the interrelationships found between work engagement and service delivery. The other interrelationships found were between work stress and work engagement and significant differences between groups of academics defined by their demographical variables (age, gender, race, marital status, educational level, administrative position, faculty, job

title, employment status and years of service). The results are useful to policy makers and human resources practitioners in a distance-learning environment to improve the academics' psychological functioning and well-being. The empirical findings also provided significant statistical support for the central hypothesis by confirming that work stress and work engagement impacted on service delivery. Some of the methods used to statistically analyse data in order to come up with the results of this study, should help future researchers who intend to conduct related studies, to also apply such methods.

7.5.3 Contribution on a practical level

On a practical level, the interrelationship dynamics between work stress (represented by overload, job insecurity, organisational support, relationships, growth and advancement) and work engagement (represented by vigour, dedication and absorption) have an influence on the quality of service delivery (represented by reliability, assurance, tangibles, empathy and responsiveness), have been confirmed as being experienced by academics in an ODL university in Zimbabwe undergoing a changing learning environment.

Furthermore, the influence of biological variables differ according to the different groups of ODL academics and that has a bearing on their attitude and commitment to service delivery. The rating of service delivery of the ODL institution by students served to confirm that whatever the psychological constructs' (work stress and work engagement) effect on academics, service delivery would still be judged by the important stakeholders who are students. This would give a balanced assessment of the ODL university's service delivery instead of using a one-sided perspective that only includes one sample of academics. The ODL university should benefit from this approach as students perceptions would be considered too and that should provide a clearer understanding of what needs to be addressed.

This research, taking cognisance of the importance of the academic (human resource) in the performance of the ODL university, should help to bring better insights on what should be done to make the academic working environment supportive, despite changing trends. The creation of a conducive work environment,

which is less stressful and engaging as an intervention strategy, should inculcate positive and pro-active behaviour among academics who will have the energy, self-efficacy and become happily engrossed in their work.

In conclusion, issues of human resource management emanating from work stress and work engagement, should bring new insights on their effect on an employee's health, welfare, motivation and job satisfaction. Such knowledge is vital to policy makers like senior management and human resource practitioners as they have a bearing on the realisation of organisational goals and competitiveness in the dynamic and rapidly changing world of work of the 21st century. Recommendations made by this study should also assist future research, in order to improve the field of human resource management in the Zimbabwean ODL context.

7.6 REFLECTION ON DOCTORATENESS AND CONCLUSION

The researcher is confident and optimistic that the results of this study have provided emerging insights into the contemporary literature on the work stress and work engagement, emanating from the changing roles of academics, which have an influence on service delivery in a changing ODL environment. The effected changes should take cognisance of the challenges faced particularly in developing countries. Governments should take full ownership of state institutions providing education services as its prerogative rather than trying to wean these institutions from funding them even if there are economic challenges. There is need to improve working conditions of academics so that those highly qualified or with specialised skills can be retained and avert brain drain which adversely affects service delivery. This would help the country to avoid losing a significant number of high-level educated academics. Brain drain creates skills inventory gap yet the country would have spent many resources in training those highly skilled academics. Ironically, the academics who seek 'greener pastures' abroad, would contribute a lot in those foreign countries. Brain drain is also indicative of the social injustice prevailing in an economy as qualified academics feel that they are being underpaid or unfairly treated in terms of their worthiness. The relationships between the constructs of work stress, work engagement and service delivery should be considered when designing strategies, budgets and human resource decisions and policies. Through this study,

it is anticipated that human resource managers and practitioners, as well as senior management would be able to create an equilibrium position by effectively managing job demands and job resources. This will create an environment that ensures that employees remain engaged and focused towards attainment of organisational goals including satisfying external stakeholders through total quality management and sound human resource management skills. The findings, conclusions, and recommendations including for future studies should be treated as positive contributions to the field of human resource management in the Zimbabwean context.

Throughout this study, the researcher gained deeper insights into the concepts of the work stress, work engagement and service delivery. The researcher was able to conceptualise these constructs, tracing their historical background to contemporary developments, which enabled him to provide a synthesis of these variables in the context of ODL and the field of human resource management. The researcher benefitted immensely on how to conduct an empirical study, which is quantitative by acquiring a tremendous amount of knowledge on research design, statistical data analysis and reporting. From the results of the study, the researcher learnt that decisions should not be made on assumptions, but on established facts (findings) which may differ with results established elsewhere owing to different environment settings and even demographical variables. Having completed this study, the researcher has learnt valuable lessons on the need to be patient, impartial, accommodative, persevering, as well as, managing pressure by not comprising family, church, work, social and other commitments.

The issues raised by this study pertaining to work stress, work engagement and service delivery, showed how human resource management was integrated with economical, financial, marketing and business environment issues at domestic and international level. All these dynamics and problems arising, should be addressed and managed, so that students, who pay for learning services rendered by institutions of higher learning are satisfied. The integration of these various disciplines, jusitifies that this study fits into the Doctorate of Commerce in Business Management programme.

To conclude, the researcher is optimistic that the results of this study would provide a better understanding of how online teaching should be implemented in a manner that manages work stress and enhancing work engagement so that service delivery in ODL universities can culminate in student satisfaction and competitiveness.

7.7   CHAPTER SUMMARY

Chapter 7 being the last chapter, made conclusions on the aims and hypotheses based on the research results of chapter 6 and literature reviewed in chapters 2, 3 and 4. This research aimed to determine whether there were interrelationships between work stress, work engagement and service delivery among academics at an ODL university in Zimbabwe. It was concluded that there are significant relationships between work stress and service delivery, work engagement and service delivery as well as work stress and work engagement. Work stress and work engagement are key to determine the level of service delivery in a distance-learning environment. Conclusions for all research aims and hypothesis have been made. The limitations of this research, as well as, the recommendations to improve the discipline of human resource management, the ODL university and its academics and those for future research have also been presented.

This concludes this thesis report.

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APPENDIX A: LETTER OF INVITATION AND QUESTIONNAIRE (for the Academic)

Dear colleague

My name is Dominic Uzhenyu. I am currently doing a Doctor of Commerce in Business Management in the area of Human Resource Management with the University of South Africa (Unisa). I am kindly requesting your special assistance to participate in this study entitled "**Work stress, work engagement and service delivery within Zimbabwe's changing distance-learning environment** ''

I am conducting this research in order to come up with a framework that should guide policy makers and senior management in distance learning institutions to come up with academic roles that should minimise work stress or work engagement problems, in light of the ever changing trends in the ODL delivery methods. You have been selected because of your expertise in the field of open distance learning. The research has the blessing of the Zimbabwe Open University (ZOU), since the permission to conduct it, has already been granted in writing. The research has also received written approval from the Research Ethics Committee of the College of Economic and Management Sciences, Unisa.

The study will entail conducting a survey, consisting of three (3) combined questionnaires. The completion of the combined questionnaire should take about 20 to 25 minutes of your time. After completing, you should return to this researcher through your department or faculty. Participation is voluntary and there is no penalty or loss of benefit for non-participation.

Anonymity will be observed and all the information obtained, will be kept confidential by the researcher. It is hoped that the information collected from this survey will help to improve service delivery at your workplace, the ZOU.

Thank you for taking your precious time and for cooperating by participating in this study.

Thank you

Dominic Uzhenyu
Researcher and UNISA DCom Bus Mgt student

WORK STRESS, WORK ENGAGEMENT AND SERVICE DELIVERY BY ACADEMICS IN A CHANGING OPEN DISTANCE LEARNING INSTITUTION (The case of the Zimbabwe Open University)

NB. Tick appropriate box/option

SECTION A- Demographic profile Questionnaire

1. Age

	25 – 30
	31 – 37
	37- 46
	46- 56
	57– 58
	59– 70

2. Gender

	Female
	Male

3. Marital Status

	Divorced
	Living with partner

	Married
	Separated
	Single
	Widowed
	Would rather not say

4. Highest education level

	Diploma
	Bachelor's degree
	Honours' degree
	Master's degree
	Doctoral degree

5. Faculty

	Applied Social Sciences
	Arts and Education

	Commerce and Law
	Agriculture
	Sciences and Technology

6. Race:

	Black
	Coloured
	White
	Other

7. Primary position/job level at the institution:

	Assistant Lecturer
	Lecturer
	Senior Lecturer
	Associate Professor
	Full Professor

8. Administrative Position

	Regional programme

	coordinator
	Programme leader
	Chairperson
	Dean
	Other

9. Years of service at this institution:

	Less than 2years
	2 – 5 years
	6 – 10 years
	11 – 20 years

SECTION B- The Job Demand Resources (JD-R) questionnaire

Instruction
Suppose, someone else ("employee X") has the same job in the organization as you have. The tasks, clients, colleagues, supervisors and everything else is identical to your job. Employee X has the same qualifications (schooling, training, skills, experience, and so on) as you for this job.
Estimate what the work would be like for employee X, one year into his/her new job. Please estimate how things are, rather than on how things may be in the future.
Indicate the response category that reflects best the situation of employee X.

After having had one year of experience in a job similar to mine...

Never or Very Rarely	Rarely	Occasionally	Often	Very Often or Always

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1	2	3	4	5

1. employee X will have to make complex decisions at work.   1 2 3 4 5

2. employee X will need to display high levels of concentration and precision at work.   1 2 3 4 5

3. employee X will have to solve work-related problems within a limited time frame.   1 2 3 4 5

4. employee X will have to remember many things simultaneously.   1 2 3 4 5

5. employee X will have to do a lot of mentally taxing work.   1 2 3 4 5

6. employee X will have to deal with people (e.g. clients, colleagues or supervisors) who have unrealistic expectations.   1 2 3 4 5

7. employee X will have to control his/her emotions to complete tasks within a limited time frame.   1 2 3 4 5

8. employee X will have to deal with people (e.g. clients, colleagues or supervisors) whose problems touch him/her emotionally.   1 2 3 4 5

9. employee X will have to deal with people (e.g. clients, colleagues or supervisors) who get easily angered towards him/her.   1 2 3 4 5

10. employee X will have to do a lot of emotionally draining work.	1	2	3	4	5

11. employee X will have to display emotions (e.g. towards clients, colleagues or supervisors) that are inconsistent with his/her 1 2 3 4 5
current feelings.

12. employee X will have to perform a lot of physically strenuous tasks to carry out his/her job. 1 2 3 4 5

13. employee X will have to bend and/or to stretch a lot at work. 1 2 3 4 5

14. employee X will have to work in uncomfortable or impractical postures to do his/her work. 1 2 3 4 5

15. employee X will have to lift or move heavy persons or objects (more than 10 kg). 1 2 3 4 5

16. employee X will have to perform physical activity in a quick and continuous fashion. 1 2 3 4 5

17. employee X will have the opportunity to take a mental break when tasks require a lot of concentration. 1 2 3 4 5

18. employee X will have the opportunity to vary complex tasks with simple tasks. 1 2 3 4 5

19. employee X will receive information from others (e.g. colleagues or supervisors) in solving complex tasks. 1 2 3 4 5

20. employee X will be able to use his/her knowledge and intellectual skills to solve complex tasks. 1 2 3 4 5

21. employee X will have access to useful information (from computers, books, records, colleagues and operating instructions) to help solve complex tasks.   1   2   3   4   5

22. employee X will have the opportunity to determine his/her own work method.   1   2   3   4   5

23. employee X will be able to stop emotionally-laden interactions with others for a while whenever he/she wants to.   1   2   3   4   5

24. employee X will feel esteemed at work by others (e.g. clients, colleagues or supervisors).   1   2   3   4   5

25. employee X will get emotional support from others (e.g. clients, colleagues or supervisors) when a threatening situation at work occurs.   1   2   3   4   5

26. employee X will have the opportunity to express his/her emotions after a threatening situation occurs, without experiencing negative consequences (e.g. from supervisors, colleagues or clients).   1   2   3   4   5

27. other people (e.g. clients, colleagues or supervisors) will be a listening ear for employee X when he/she has faced a threatening situation.   1   2   3   4   5

28. employee X will be able to plan his/her work so that physical tasks require no more physical exertion than he/she can manage.   1   2   3   4   5

29. employee X will be able to use adequate technical equipment to accomplish physically strenuous tasks.   1   2   3   4   5

30. employee X will be able to decide what posture he/she uses to perform physically strenuous tasks.   1   2   3   4   5

31. employee X will be able to take a physical break when things get physically strenuous.   1   2   3   4   5

32. employee X will receive physical help from others (e.g. clients, colleagues or supervisors) in lifting or moving heavy persons or objects.   1   2   3   4   5

SECTION C- Utrecht Work Engagement Scale (UWES)

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Instructions

- The following 17statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling then cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

Never	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6

	Statement	Never	Almost never	Rarely	Sometimes	Often	Very often	Always
		0	1	2	3	4	5	6
1	At my work, I feel bursting with energy	0	1	2	3	4	5	6
2	I find the work that I do full of meaning and purpose	0	1	2	3	4	5	6
3	Time flies when I am working	0	1	2	3	4	5	6
4	At my job I feel strong and vigorous	0	1	2	3	4	5	6
5	I am enthusiastic about my job	0	1	2	3	4	5	6
6	When I am working, I forget everything else around me	0	1	2	3	4	5	6
7	My job inspires me	0	1	2	3	4	5	6
8	When I get up in the morning I feel like going to work	0	1	2	3	4	5	6
9	I feel happy when I am working intensely	0	1	2	3	4	5	6

10	I am proud of the work that I do	0	1	2	3	4	5	6
11	I am immersed in my work	0	1	2	3	4	5	6
12	I can continue working for very long periods at a time	0	1	2	3	4	5	6
13	To me, my job is challenging	0	1	2	3	4	5	6
14	I get carried away when I am working	0	1	2	3	4	5	6
15	At my job, I am very resilient, mentally	0	1	2	3	4	5	6
16	It is difficult to detach myself from my job	0	1	2	3	4	5	6
17	At my work I always persevere, even when things do not go well	0	1	2	3	4	5	6

SECTION D : The Servqual questionnaire

Instruction
Perceptions   The following statements relate to your feelings about the Zimbabwe Open University (ZOU). Please show the extent to which you believe ZOU has the features described in the statements. Here, rank each statement showing a number from 1 to 7 that best describes ZOU's service delivery using the following guideline.

Never	Strongly disagree	Disagree	Sometimes	Often	Agree	Strongly agree
1	2	3	4	5	6	7

Statement	Score

Statement	Score
1. ZOU academics have modern looking equipment.	
2. ZOU's academics offices and buildings physical features are visually appealing.	
3. ZOU's academic secretaries or records clerks' offices are neat appearing.	
4. Materials associated with the service (such as pamphlets or timetables) are visually appealing in Academics offices or in their secretaries or admin office.	
5. When ZOU academics promise to do something for students by a certain time, they do so.	
6. When students have problems, ZOU academics show a sincere interest in solving them if they are in their domain or scope.	
7. ZOU academics perform the service right at the first time.	
8. ZOU academics provide service at the time they promise to do so.	
9. ZOU academics insist on error free records.	
10. ZOU academics tell students exactly when the service(s) will be performed.	
11. ZOU academics will give students prompt service.	
12. ZOU academics are always willing to help students.	
13. ZOU academics are never too busy to respond to students requests.	
14. The conduct or behaviour of ZOU academics instil confidence in students.	
15. Students feel safe when being in ZOU Academics' offices.	

Statement	Score
16. ZOU academics are consistently courteous with students.	
17. ZOU academics have the knowledge to answer students' questions.	
18. ZOU academics give students individual attention.	
19. ZOU academics operating hours are convenient to all their students.	
20. ZOU academics prefer personal attention if student requests so.	
21. ZOU academics have students' best interests at heart.	
22. ZOU academics understand students' specific needs.	

Thank you very much for your participation in this research initiative. It is highly appreciated.

Kind regards:

APPENDIX B: LETTER OF INVITATION AND QUESTIONNAIRE (for the Student)

Dear student

My name is Dominic Uzhenyu. I am currently doing a Doctor of Commerce in Business Management in the area of Human Resource Management with the University of South Africa (Unisa). I am kindly requesting for your special assistance to participate in this study entitled "**Work stress, work engagement and service delivery within Zimbabwe's changing distance-learning environment** ''

You have been identified as one of the students to participate in this research owing to your experience with open distance learning (ODL). You are kindly requested to complete the attached questionnaire, which may take you less than 10 minutes of your precious time. After completing the questionnaire, you should return to this researcher through your programme information records clerk or the regional administration office. Be assured that if you participate in this study, you will remain anonymous and all information obtained will be kept confidential by the researcher. The research has the blessing of the Zimbabwe Open University (ZOU), since the permission to conduct it has already been granted in writing.

It is hoped that the information collected from this survey will help to improve service delivery in your institution, the ZOU. You also benefit immensely once service delivery and quality of tuition improve. It is very important to note that for any successful transformation process, there is need to consider its likely impact on key stakeholders like you by getting their concerns and input.

Thank you for taking your precious time to read this information sheet and for cooperating by participating in this study.

Thank you

Dominic Uzhenyu
Researcher and UNISA DCom Bus Mgt student

QUESTIONNAIRE FOR STUDENTS

SECTION A- Demographic profile Questionnaire

1. Age

18-23	
24 – 30	
31 – 36	
37- 43	
44- 51	
52– 60	
61 – 70	

2. Gender

Female	
Male	

3. Marital status

Divorced	
Living with partner	
Married	
Separated	
Single	
Widowed	
Would rather not say	

4. Highest education level

Certificate	
Diploma	
Bachelor's degree	
Honours' degree	
Master's degree	
Other	

5. Faculty

Applied Social Sciences	
Arts and Education	
Commerce and Law	
Agriculture	
Sciences and Technology	

6. Race

Black	
Coloured	
White	
Other	

7. Years of learning at ZOU

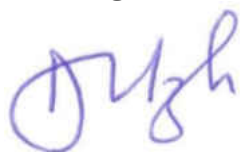|	
Below 2 years	
2 < 3 years	
3 < 4years	
4 years and above	

SECTION B : The Servqual questionnaire

Instruction

Perceptions The following statements relate to your feelings about the Zimbabwe Open University ZOU). Please show the extent to which you believe ZOU has the features described in the statements. Here, rank each statement showing a number from 1 to 7 that best describes ZOU's service delivery using the following guideline.

Never	Strongly disagree	Disagree	Sometimes	Often	Agree	Strongly agree
1	**2**	**3**	**4**	**5**	**6**	**7**

Statement	Score
1. ZOU academics have modern looking equipment.	
2. ZOU's academics offices and buildings physical features are visually appealing.	
3. ZOU's academic secretaries or records clerks' offices are neat appearing.	
4. Materials associated with the service (such as pamphlets or timetables) are visually appealing in Academics offices or in their secretaries or admin office.	
5. When ZOU academics promise to do something for students by a certain time, they do so.	
6. When students have problems, ZOU academics show a sincere interest in solving them if they are in their domain or scope.	
7. ZOU academics perform the service right at the first time.	
8. ZOU academics provide service at the time they promise to do so.	
9. ZOU academics insist on error free records.	
10. ZOU academics tell students exactly when the service(s) will be performed.	
11. ZOU academics will give students prompt service.	
12. ZOU academics are always willing to help students.	
13. ZOU academics are never too busy to respond to students requests.	
14. The conduct or behaviour of ZOU academics instil confidence in students.	
15. Students feel safe when being in ZOU Academics' offices.	
16. ZOU academics are consistently courteous with students.	
17. ZOU academics have the knowledge to answer students questions.	
18. ZOU academics give students individual attention.	
19. ZOU academics operating hours are convenient to all their students.	
20. ZOU academics prefer personal attention if student requests so.	
21. ZOU academics have students' best interests at heart.	
22. ZOU academics understand students' specific needs.	

Thank you very much for your participation in this research initiative. It is highly appreciated.

Kind regards:

UNISA HRM ETHICS REVIEW COMMITTEE

Date 12 June 2017

Dear Mr Dominic Uzhenyu

NHREC Registration # : (if applicable)
ERC Reference # : 2017_HRM_009
Name : Dominic Uzhenyu Student: #55788084

Decision: Ethics Approval from July 2017 to December 2019

Researcher(s): Name Mr Dominic Uzhenyu

E-mail address, telephone #dominicuzhenyu@gmail.com, +263 772385053

Supervisor (s): Name Prof Adele Bezuidenhout

E-mail address, telephone # bezuia@unisa.ac.za, 0124293941

Working title of research:

A framework to address work stress, work engagement and service delivery within a changing distance-learning environment in Zimbabwe

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Qualification: DCom

Thank you for the application for research ethics clearance by the Unisa HRM Ethics Review Committee for the above mentioned research. Ethics approval is granted for Mr Dominic Uzhenyu for 5 years.

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*The **low risk application** was **reviewed** by the HRM Ethics Review Committee on 17 May 2017 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

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2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the HRM Committee.

3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.

7. No field work activities may continue after the expiry date December 2019 Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number 2017_HRM_009 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Yours sincerely,

Signature
Chair of DREC : Prof IL Potgieter
E-mail: visseil@unisa.ac.za
Tel: (012) 429-3723

Signature
Executive Dean : Prof MT Mogale
E-mail: mogalmt@unisa.ac.za
Tel: (012) 429-4805