EXAMINING THE EFFECTIVENESS OF E-LEARNING IN SOUTH AFRICAN SCHOOLS OF HIGHER EDUCATION

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Research proposal for the degree of
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DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

This dissertation is a dedication to my family, especially my husband James Moseni and my awesome kids- the boys Munyanta and Muma and my wonderful princess Kunda Moseni. This, I say, for their constant words of encouragement, push for tenacity ring in my ears and the patience of my being their throughout my entire academic struggle to achieve my Master's program (MBA), a special feeling of gratitude to them. You guys are truly my cheerleaders.

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Abstract

This study was aimed at investigating the effectiveness of E-learning in South African Institutions of Higher learning in compliance to the direction of lecturers' knowledge and skills of e-pedagogy, constructivism theoretical perspectives and improving quality of teaching and learning. This was an attempt to solve challenges experienced by Higher Education institutions in South African universities during the implementation of e learning programmes. In past few years, most South African institutes of higher education private and public have since adopted e learning as an approach to teaching and learning. However, there are implementation challenges faced by these higher learning institutions, which have negative impact on its effectiveness.

The study applied an explanatory sequential mixed method design to address the research questions. By means of a simple randomised sampling method during the quantitative phase, o 50 participants out of 80 responded to the survey from conveniently selected South African private institutions of Higher learning in Gauteng. The qualitative phase comprised of two interview sessions each consisting of 10 purposefully selected lecturers in the same institutions.

The results indicated that E-learning in South African Institutions of Higher Education is only effective resting on improving the quality of teaching if lectures knowledge and skill in implementation of e-pedagogy, constructivism theory of learning in a blended form is high. If the altitude of knowledge and skills are low, the impact is negative. In the South African perspective, the lectures level of knowledge and skills in the aspects of e-learning components were low. This is the reason why e learning is having a negative impact on quality learning and teaching during e learning implementation in South African institutions of higher learning. Therefore, it is recommended, lecturers get involved in e-learning innovation programmes in terms of policy making process and implementation in order to acquire more e- pedagogical skills.

Table of Contents

LIST OF TABLES

List of figures

CHAPTER ONE - INTRODUCTION

1.1 Introduction

The rationale of this study was to find out the effectiveness of E-learning among South African Institutions of Higher learning in compliance to the lectures direction of knowledge and skills of e-pedagogy, constructivism theoretical perspectives and quality of training and knowledge. In this context of this study, the teacher, lecturer, educator and instructor are terms that were interchangeably used to mean one and the same, as all are involved in facilitating/guiding/supporting the entire learning process. On the other hand, the student or learner is taken to mean the same considering that they are the all-direct beneficiaries of the learning processes. The study started by giving a brief background of the research, that which highlighted the outline of the problem under investigation. From the research, background emanated research problem, which stated the exact problems faced with the implementation of E-Learning in the South Africa context. The aim and objectives is stated before highlighting the importance of the study. In order to understand literature in existence thus, related to this study and identify gaps, a brief review of literature was done. Finally, a discussion of the structure of the methodology including the research design, philosophy, and sample strategies and data analysis was articulated.

1.2 RESEARCH BACKGROUND

1.2.1 Theoretical context

These segments provide an overview of the constructivist theoretical framework beingthe main theory that that forms the basis to understand this study. However, Siemens (2008) believes that even though the current study focuses on the constructivist theoretical perspective, it is difficult to ignore reviewing the previous ones when considering innovations and developments during the teaching and learning process including E-learning (Siemens (2008). The nature and characteristics of these theories give us the basis of understanding the key variables of this research that links the teacher's impact on knowledge and skills of e-learning pedagogy, constructivist learning theory and quality of learner performance. This is the reason why Driscoll (2000) stipulates three categories of learning (objectivism, pragmatism, and interpretivists) as the most important epistemologies, which form the basis of most of the learning theories. Objectivism is whereby the lecturer has a deep knowledge of managing observable external behaviours of learners and analyses to find much of its existence and to what extent they meet certain behavioural objectives (Driscoll, 2000). The teachers; knowledge of the cognitive paradigm (pragmatism) unlike the behaviourists makes him/her understand that the learners are viewed as an information processor like a computer where the learner involves the use intellectual processes such memorisation, motivation and

thinking (McCaughtry & Dillon, 2008). The constructivism theoretical approach broadly covers a wide spectrum of current research that overlaps with cognitivists (intepretivists). According to this theory, each individual learner independently constructs knowledge according to his/her own context and builds new ideas and concept as the main essence of e learning. Theories of learning generally give guidance and direction towards the effectiveness of e learning between the teachers' knowledge and skills of e-pedagogy, application of the constructivists' theory and the quality of learners' performance.

1.2.2 Definitional Overview

E learning refer to guided and supported way of teaching and learning in educational institutions with ICT- electronic technologies hence obtaining access to the educational curriculum and far beyond the traditional classroom way (Jenkins and Hanson, 2003; Kearney & Maher, 2013). This study identifies two important key words "facilitate" and "support" which Todorova, Nikolova, and Valcheva (2006) signify as some of the important roles that a teacher/lecturer should play towards the growth and management of the teaching process using ICT. This is probably the reason why the same authors value the teacher/lecturers' maximum contribution during the e-learning process. According to research, E learning does not only offer enormous projection for inventive traditions of supporting educational goals, but in addition creates interest among students, whilst promoting students centred self-learning (Jenkins and Hanson, 2003; Kearney & Maher, 2013). It accords flexibility amongst students to enable them make choices of where to study and time they wish to commit towards trainings, that which will be in alignment with their personal and professional plans alongside guidance from lectures.

Linked to the above definitions of e learning, Watkins and Mortimore (1999:3) define pedagogy as 'any conscious movement of one person designed to enhance learning.' In other words, pedagogy comprises of ideas from teachers, their beliefs, attitudes, knowledge and understanding in relation to the curriculum, their students ,teaching and learning process, and that impacts on their 'teaching practices', being, what teachers actually think, do and say in the classroom (Alexander 2001:540). Based on this definition, e-pedagogy therefore broadly refers to all the highlighted attributes of pedagogy as applied though the use of technology (McLoughlin & Northcote, 2017; Baldiņš, 2016). In other words, e-pedagogy from a broad perspective covers such aspects as the 'learning programmes that consider quality of education, teaching effectiveness including its values as well as technological supported activities of learning and assessment (McLaughlin& Northcote, 2017; Baldiņš ,2016).

The context of this study, besides the E-learning ideas, offers independent learning to learners characterized by autonomy. However, the implication of e learning as a pedagogic

practice, still demands the expertise of the lecturers' e-pedagogies for effective facilitation and guidance (Johnson, Becker, Estrada & Freeman, 2014; Kilfoil, 2015). While many South African researchers (Johnson, Becker, Estrada & Freeman, 2014; Kilfoil, 2015) seem to be associating challenges of e-learning implementation with lack of pedagogic content knowledge, they seem to be neglecting specifically the importance of the lecturer/educators level of understanding and skills of e-pedagogy. These are among one of the important aspects of both-learning and pedagogic content knowledge (McLaughlin& Northcote, 2017; Baldiņš, 2016).

Many studies agree that any form of teaching or learning's' aimed at producing quality performance among learners for quality educational output (Van der Waldt, 2004:68; Kruger& Ramphal, 2009:114). From an educational point of view, quality education is indomitable through the altitude of communication thus connecting what society's expectations in terms of their educational desires and developmental change taking place within though not only the learners but also the entire education system and the general public at large (Grisay & Mahlck 1991:13, Musundire, 2015). The authors, in addition indicate quality is the scope to which the effect of education institutions in terms of acquired knowledge, skills and values on one hand meet outlined standards within the educational system, while on the other hand, are pertinent to society thus, to include cultural, environmental conditions and expectations. With direct pertinence to the classroom situation, quality teaching and learning is also determined by the educators' expertise in curriculum planning, curriculum designing, curriculum implementation, curriculum evaluation, Curriculum assessment, curriculum material designing. In the e learning perceptions, it is then assumed, quality teaching and learning can be assured if the is an effective link between the aspects of e-pedagogy which is associated to teaching effectiveness by means of technological supported activities in curriculum planning, curriculum designing, curriculum implementation, curriculum evaluation, curriculum assessment and curriculum material designing (McLoughlin & Northcote, 2017; Baldiņš ,2016).

1.2.3 Research context

Research findings indicate that South Africa has followed international trends whereby technology has become part of current human development that has also drastically changed transformed the roles and responsibilities of both educators and students (Ng'ambi, Bozalek & Gachago 2013, Barden, 2014; Coeckelbergh, 2011; Kilfoil, 2015, Musundire, 2015). Current studies in South Africa specify that there is a tremendous absorption of students in the use and active manipulation of technological devices both formally and

informally (Kornberger, 2009; Bennett & Folley, 2014, Musundire, 2015). This is due to accessibility of smart phones, mobile technologies and instant messaging (Kornberger, 2009; Bennett & Folley, 2014, Musundire, 2015; Kilfoil, 2015). This, among others is also one of the reasons why High Institutions of learning in many countries including South Africa are gradually incorporating E-learning by means of technological devices and software for social networks such as blogs, and LinkedIn, Skype, social bookmarking, Ning, Twitter, wikis, Whatsapp, Facebook, YouTube and Viber, (Wheeler, 2015; Ng'ambi etal, 2013, Musundire, 2016; Kilfoil, 2015). Conversely, can be regarded as a positive notion, yet still, what matters most is whether these institutions are proportionally and developmentally maintaining a balance between the lecturer/educators' knowledge and skills and perceptive of e-pedagogy in compliance to the constructivists theoretical approach in order to effectively implement e-learning so as to ensure the quality of learners' performance (Wheeler, 2015; Ng'ambi etal, 2013, Musundire, 2017; Barden, 2014; Coeckelbergh, 2011). It is recorded that South Africa from a historical perspective that elements of apartheid resulted in exclusion of black students from top quality education (DHE, 2013). The Post-independence era since 1994 saw educational reforms as a priority in promoting egalitarianism in the midst of all races and the new National Curriculum emphasising on a learner-centred, outcome-based education approach (DHE, 2013; Kilfoil, 2015). Emphasis was on promoting social justice with by opening various modes of learning one of which was access to technological resources on an equitable basis (DHET 2013). Distance education has been seen flourishing in many universities including the University of South Africa (UNISA) making use of e-learning facilities (CHE, 2014; Kilfoil, 2015).

These developmental changes in current education also calls for lecturers/educators and learners reaction towards new knowledge, new ideas and changing circumstances in order to improve directly or indirectly, the eminence of students' learning (Kilfoil, 2015; DHE, 2013; CHE, 2014). This is the reason why Nadler (1970) associates development with employee preparation that allows them to move with the organisation as changes eminence and grow to consolidate their knowledge base. Although, e learning provided opportunities for collaborative and participative learning, teamwork established because of sharing ideas and knowledge creation. This can be utilised for improving the context of mediated study and learning through student centred approaches (Johnson, Becker, Estrada & Freeman, 2014; Kilfoil, 2015), research findings still claim that quality of instructional knowledge provided by the lecturer/teacher is still poor in many Institutions of Higher Learning in South Africa (Stewart, 2011, Musundire, 2017). It is also widely agreed that the teachers' level of instructional knowledge determines students' level of performance (Stewart, 2011, Musundire, 2017). Despite having numerous researches on the concept of e learning that

reflected some of its benefits regarding improving quality of education, implementation challenges remain a challenge

In order to ensure compliance to global changes characterized by ever developing Information Communication Technology, various private and public institutions of higher learning in South have also changed their modes of instruction by adopting online teaching and e-Learning (Kilfoil, 2015). Despite the efforts of the South Africa National, Plan for Higher Education (Department of Education 2001) the White Paper for Post-School Education and Training (DHET, 2013). The Teaching and Learning Strategy Group (TLSG, 2014), focuses learning with technology. This study feels the execution of E-learning in Higher institutions of learning gradually formed a gap between the lecturer's skills and knowledge of e-pedagogy, the application of teaching and learning theories with the quality of teaching and learning with special reference to private institutions of Higher learning (Musundire, 2017). In the South African context, the private institutions of Higher learning in are registered by and under the Department of Higher Education Act, 1997 (Act No. 101 of 1997) to offer accredited qualifications ranging from certificates, Diploma and Degree programmes. The same private institutions of learning seem to form greater part of all the Institutions of Higher learning in accordance to Higher Education Act, 1997 (Act No. 101 of 1997. It is also important to note that once it involves Government funding and promotion of e-learning facilities, these private institutions do not get much attention as compared to public Universities in terms of funding Higher Education Act, 1997 (Act No. 101 of 1997). This already indicates some form of disparities in resource allocation despite the call for quality education. When it comes to implementation of quality education and learner performance including implementation of e-learning strategies and resources, all institutions should be involved. This study also realises that much of research on e learning has been done in public universities with minimal focus on these private institutions.

1.3Research problem/ Research statement

Basing on the above highlighted view, some researchers associate lectures' option of resorting back to traditional ways of teaching with lack of manipulation of technological devices (Loveless, 2011; Mupinga, Burnett & Redmann, 2005; Bukaliya & Mubika, 2011; Siemens, 2008, Musundire, 2016). Other researchers blame lack of knowledge on the theoretical and pedagogical approaches with poor teaching and learning processes (Karsenti, 2009, Musundire, 2016). However, with the introduction of e-learning in HEI in South Africa, most the researchers however, seem to forget that effective implementation of educational programmes in such high advanced technological developments, there is need to link the

teachers' knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of learners' performance instead of focusing these aspects as separate entities.

To cover this gap, this research consequently scrutinizes the effectiveness of E-learning on learners' performance in relation to teachers' knowledge and skills of e-pedagogy in compliance to the constructivism theoretical framework. In view of this, the main investigative question is:

What is the efficiency of eLearning is as linked to the instructor's knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of learners' performance?

1.3 Purpose of the study and rational

As highlighted in the preamble, the rationale of this study is to scrutinize discernment of lecturers concerning effectiveness of E-learning in South African Private Institutions of Higher learning in compliance to teachers' knowledge and skills of e-pedagogy, constructivism theoretical perspectives and quality of learners' performance. This is an attempt to solve challenges associated with poor teaching and learning as a result of lack of initiation of effective professional developmental intervention strategies among researchers that initiates a blending approach to the execution of e-learning in compliance with the lecturers' familiarity and skills of e-pedagogies, implementation of the constructivism theory for eminence training and knowledge. This expectations of this study is to play an imperative role in theoretical building and enhancement of the constructivism theoretical perspective by way of integrating technological approaches in teaching and learning. The five elementary aspects of e-learning regarding quality teaching and learning in the perspective of e-pedagogy in respect to this study include technological perspectives, curriculum planning, curriculum designing, curriculum implementation and curriculum evaluation, course delivery (delivery system) and instructional design in constructivism context. The aspiration of the statement is to identify obligatory basic yet specific skills and competencies of the teachers by using e-learning technologies and usage in ensuring quality teaching and learners' performance.

1.4 Research Aim and Objectives

The overarching endeavour of this research is to develop a holistic structure that can enhance the process of e-learning implementation in the South African perspective. To achieve this aim, the following objectives will be needed:

- To probe the perceptions of lecturers as regards to their understanding of E-learning, e-pedagogics, constructivism and quality of teaching and learning from a global and South African perspective.
- To investigate the perceptions of lectures concerning the effectiveness of implementing E-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics in South African Private institutions of higher learning.
- To establish the perceptions of lectures regarding the efficiency of the implementation of E-learning as related toward the constructivist's theoretical framework in South African private institutions of Higher learning.
- To investigate perceptions of lectures regarding effectiveness of e-learning by synthesising/blending/ integrating competencies of the lecturers of implementing e-learning comprising of pedagogy, constructivism for quality on teaching and learning improvement?
- To explore developmental intervention strategies that can be recommended to solve e-learning implementation challenges aimed at linking and blending teachers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning.

Research Questions

To unearth disputes arising from eLearning, a number of research questions need be asked as follows:

- What are the lecturer's perception regarding their understanding of E-learning, e-pedagogics, constructivism and quality of teaching and learning from a global and South African perspective?
- What is the effectiveness of implementing E-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics in South African Private institutions of higher learning?
- What are the perceptions of lecturers concerning the effectiveness of e-learning by way of synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning?

- What are the perceptions of lectures regarding the effectiveness of the implementation of E-learning as related to the constructivist's theoretical framework in South African private institutions of Higher learning.
- Which developmental intervention strategies can be recommended to solve e-learning implementation challenges aimed at linking and blending teachers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning.

1.6 RESEARCH METHODS AND DESIGN

Investigating effectiveness of eLearning as linked to the instructor's knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of teaching and learning are affected by many factors. This study therefore finds it difficult to explore these complex concepts through one method (McMillan & Schumacher, 2010:397). The study will adopt the mixed methodology in particular the Quantitative-qualitative method and/ or Quant-qual methodology (Tashakkori & Creswell, 2007:4). This will be explained in chapter 3.

1.6.1 Rational for choosing the mixed method research design

This justification to choose the mixed method research design detailed in chapter Three as well supported in principle of complementarily and triangulation as projected by Greene, Caracelli, and Graham (1989) and Greene (2007). From a academic point of view, this study is going to combine both positivism and post-positivism research. Positivist researchers according to Gall, Borg and Gall, (1996) collect numerical data and then convert this data to numerical representation for analysis. On the other hand, Gall, Borg and Gall, (1996) claim that post positivists develops knowledge by means of collecting verbal data by way of intensive study of cases, which are subjected to analytic induction. This study has combined both the positivists and post positivists so that justice is done to the question understudy. Creswell and Plano Clark (2007:5) supports this view by stating that amalgamation of quantitative and qualitative approaches to research offer a deep perceptive of the research problem unlike applying one approach alone.

In view of the above, this study is going to use questionnaires to accumulate quantitative results. A summary was conducted using focus group interviews for the qualitative phase to explore the quantitative results deeply as advocated Greene (2007). In this study, the combined quantitative and qualitative methodologies selected, are complementary. This project also follows McMillan, and Schumacher (1993:251's view that speculate that

quantitative methods allow collection of a large amount of information from many participants. This according to the same authors apart from enabling easy scoring and analysis of data also ensures the researcher to accumulate factual data that is less personal and less debatable. The qualitative method is going to accolade the quantitative information by questioning the participants into bringing about crucial information of personal nature whilst expressing their opinions and feelings on those matters, which cannot be addressed by the questionnaire (McMillan & Schumacher, 1993:251).

1.7 Delimitations of the study

The project on effectiveness of eLearning as linked to the lecturer's knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of teaching and learning is focussing on private South African institutions. Although the literature review will provide perspectives from a global perspective, the hub of this research is implementation of e learning in the South African institutions of Higher learning, with special reference to South African private institutions of higher learning. Because of limited time and finance, the research be completed in Private institutions of higher learning in Johannesburg. The location also makes it easy for the researcher to distribute questionnaires and conduct focus group interviews.

1.8 Outline of the mini dissertation

In order to establish the main attributes of the scope of this research geared towards developing a holistic structure that can improve the process of e-learning execution in the South African context, the following research outline followed through means of six chapters as indicated below:

Chapter 1

This chapter gives a brief background including an overview of the problem under investigation. The exact problems of the implementation of E-Learning in the South Africa context are unpacked. This also includes stating of aims and purpose of the study as well as highlighting importance. Finally, a discussion of the structure of the methodology including sampling strategies and data analysis articulated in this chapter.

Chapter 2:

Chapter 2 provides literature Review that presents considerate aspects of E-learning comprising of e-pedagogics, constructivism and quality of learners' performance in the context of this study. This is followed by exploring literature on the effectiveness of

implementing E-learning in relation to the level of the lecturers' level knowledge and skill in e-pedagogics. The chapter further exposes the characteristics of constructivism regarding E-learning implementation as well as establishing the relationship between lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance. Finally, the possible professional developmental intervention strategies that can be recommended during the execution of e learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance are explored.

Chapter 3: Research Design and Methodology

This section provides the symposium of the style structure starting with the research design and followed by research philosophy. In trying to respond to the research question, this study is focussing on the mixed methods study, that which combines qualitative and quantitative methods. The rational for using the proposed research design explored. The target population and sampling strategies to be used in the study are going to be highlighted including the framework in constructing the questionnaires for the quantitative phase, administration of the questionnaires as well as collecting them. The same is going to be done for the qualitative phase by means of focus group interviews. Dependability and validity data analysis as well as managing ethical issues articulated in bid to answer the research question.

Chapter 4: Presentation of the Results and Findings

This chapter present results and findings obtained from the quantitative phase and qualitative phase, which are finalised by triangulation and synthesis.

Chapter 5: Discussion, Interpretation and Analysis of the Results

This chapter discuss, interprets and analyses results in order to find out how these answer the research question.

Chapter 6:

The chapter presents conclusions and recommendations. While limitations are highlighted before proposing areas, that which need further research.

1.9 CONCLUSION

This chapter gave a brief setting of the research, which highlighted a synopsis of the problem under investigation. The research background and problem faced during the E-learning implementation in the South Africa situation explored. The aims and objectives of the study have been stated highlighting as well as the significance of the study. An epigrammatic review of literature conducted. Finally, a discussion of the structure of the methodology including the research design and the rational for choosing the design, the philosophy, target population and sampling strategies done. The following chapter provides an intensive analysis of literature review related to the problem under study.

2. CHAPTER TWO: Literature Review

2.1 Introduction

This chapter provides literature to ensure understanding aspects of E-learning comprising of e-pedagogics, constructivism and quality of learners' performance in the context of this study. Literature on the efficiency of implementing E-learning in relation to the level of the lecturers' level of knowledge and skill in e-pedagogics explored. The chapter further exposes the characteristics of constructivism regarding E-learning implementation as well as establishing the relationship between lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance. Finally, the possible professional developmental intervention strategies that can be recommended during the e-learning implementation in compliance with the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance are to be discussed.

2.2 E-learning

2.2.1 Knowledge and understanding of E-learning from a Global perspective

From a global perspective, there is evidence according to research that E-learning has developed into a dominant method of teaching and learning in educational institutions (Romansky, 2016; Al-Qahtani & Higgins, 2013). "E-learning" is defined as learning that takes place when interfering with internet facilities including application of network in learning (Romansky, 2016; Al-Qahtani & Higgins, 2013; Clark and Mayer, 2016, Al-Yahya, George & Alfaries, 2015). Although initially the term appeared to be applied within the specialized training domain, it later on spread to the primary, secondary, and higher education communities (Romansky, 2016; Al-Qahtani & Higgins, 2013; Clark and Mayer, 2016, Al-Yahya, George & Alfaries, 2015). In other words, the term definitions seem to relate eLearning as having the same meaning with use of both the internet and web-related technology in the framework of education and/or training (Al-Yahya, George & Alfaries, 2015). A current definition of E-Learning by the American Society for Training and Development (ASTD) states "an application of electronic technologies to deliver information while facilitating skills and knowledge development (Al-Yahya, George & Alfaries, 2015). Clark and Mayer (2016) views e-learning as an instructional aspect of education that makes use of digital devices with the intention of supporting learning computers in form of desktops, laptops smart phones or tablets have been identified as some of the e-learning hardware used to support instructional goals(Clark and Mayer, 2016).

Besides the vast contextual definitions given above, one frequently understood view is that e learning encompasses several types of learning content delivered electronically (Arkorful& Abaidoo, 2015). Therefore, eLearning is perceived as any learning, training or education that is facilitated by the use of well-known and proven computer technologies, specifically networks based on Internet technology (Al-Qahtani & Higgins, 2013). In addition, following research by Piccoli, et al. (2001), Ruipérez (2003), Taylor and Osorio (2005), and Sangrà, et al. (2012), e learning is associated with distance training style based on the use of information and communication technologies that consent to interaction and asynchronous communication amid participants as well as the admission to a broad set of teaching resources. Thus, students develop into the centre of the training process, overseeing his/her own learning with the help of external tutors (Batalla-Busquets & Pacheco-Bernal, 2013).

Functionally, e learning takes into account an extensive variety of learning approaches and ICT applications towards the exchange information and gain of knowledge (Lakbala, 2016).

In view of the above views, many countries including South African universities are using-learning either as supportive teaching of face-to-face study programmes, blended learning, or fully online learning including distance education (Romansky, 2016). Maltz et al (2005) supports the same view by highlighting that the term e learning is a term applied in approaches that includes dispersed learning, online learning or generally distance learning, as well as hybrid learning. Holsapple & Lee-Post (2006: 68) analytically finds out that eLearning has developed over years initially, as the medium used for the technical broadcast of information such as: “the progression of extended learning or delivering instructional materials to remote sites via the Internet, intranet/extranet, audio, video, satellite broadcast, interactive TV, and CD-ROM”). Secondly as a consideration of the contradictory processes involved in authoring and delivery, “e-learning is the continuous assimilation of knowledge and skills motivated via real-time and interactive learning events. While, sometimes knowledge management outputs that which are authored, delivered, betrothed with, sustained and managed by use of Internet technologies” (Dark & Perrett, 2007 :90).Thirdly, it is considered as a increasingly more constructivist, student centred analysis of e-learning as UK digital communications networks have continuously improved. “Technology enhanced learning are activities mediated, supported and / or facilitated by information and communications technologies (ICTs)”(Plesch, Kaendler, Rummel, Wiedmann, & Spada 2013: 92). Lastly, taking into account the increasing utilization of mobile technologies: “E-learning is an approach that facilitates and enhances learning through use of computer and

communication technology, such as personal computers (PC) digital televisions, mobile phones, internet, email, and 24 collaborative software. E learning can be instructor-led or computer-based or a combination of a synchronous and/or asynchronous. “Facilitation of learning in such surroundings is improved and made achievable through making use of computer and communication technology that can take into account learning management systems and practical and realistic classrooms” (Keengwe, Onchwari, & Agamba 2014:887).

Understanding e learning in the South African context

The legal frame of e-learning is stipulated Department of Higher Education and Training (DHET, 2013, 2014) which among other issues together with the Council of Higher education (CHE, 2014) has launched e-learning focusing on quality of teaching with online technology including distance education and its impact on students’ experiences and success. As linked to international perspectives, some researchers in the South African context seem to understand e-learning as a pedagogical practices supported by broadened emergent of technologies including (Veletsianos, 2010:20; Gachago, Ivala, Backhouse, Bosman & Bozalek, 2013).

Despite the various perceptions, critical analysis of literature indicates that E-learning is a term that has been defined in many different ways to such an extent that deep understanding and profound knowledge of this innovation is an advantage to the implementers to effectively apply it effectively during the training and development process. The assumption is that, a deep understanding of the knowledge and meanings of e learning from the definitions above gives a better position for the readers to understand the variables under study as well as the impact they have on the study.

2.3 E- pedagogics

2.3.1Knowledge and understanding of e-pedagogics

This study finds it difficult to make one understand e-pedagogics without relating it to the art of pedagogy in general. Baldiņš (2016) defines pedagogy as a scientific field of study of the process of education in terms of teaching and learning. Within this understanding of pedagogy, methods and learning resources are considered as vital pedagogical technologies in a consecutive and systematic manner applied in order to attain pedagogical tasks. Pedagogical technology is associated with formulation an issue or issues taken into consideration the interconnection perceptions whereby appropriate resources are well chosen and their consecutive application in practice following a developed pattern (Baldiņš, 2016). Although digital technologies already play an imperative responsibility in the

educational processes, research indicates that e-pedagogy is still not clearly conceptually defined. Empirically, in line with pedagogical practice, e-pedagogy is perceived to be a branch of pedagogy, which puts more emphasis on studying, developing, and enhancing learning technologies in order to improve didactic approaches for the purpose of attaining success the application of technology McLoughlin & Northcote, 2017). In other words, e-pedagogy has resulted in new approaches to learning teaching and learning theories that have been developed to suite the modern pedagogical practice and e-didactics (McLoughlin & Northcote, 2017).

In line with pedagogical practices, suggestions as to the various definitions of e-pedagogy made. This seen as approaches to the process of teaching and learning that makes use of the digital information including communication technologies in order to make it available for the digital learning inclination of the digital generation (Wee Hin, & Subramaniam, 2009). This way of teaching by via internet facilities, or online guided instruction (Swartz, Cole, & Shelley, 2009); Teaching and learning approaches formulated specifically for online and/or blended environments,(Salmons, Wilson, 2009) and E-pedagogy as an e-learning pedagogy (Mehanna, 2004).

Pedagogy is alarmed with facilitating the best ways to accomplish learning (Teo, 2011); should pedagogy not be considered, then the desired learning outcome will not be achieved. It is argued that for success, pedagogy needs the teacher to understand how students learn before designing course materials that suits the and mentoring strategies of the lecturer to the learner. Pedagogy be considered as the foundation to any form of e-learning (Islam, Beer &Slack, 2015).

In the South African context, research indicates there is higher usage of online learning materials in South African Institutions of Higher learning, yet levels of blended learning including application of blended learning among individual is superficial (Ojiako, Chipulu, Marshall, Ashleigh, & Williams, 2015; Strydom & Barnard,2017). In the context of this research a deep knowledge and understanding of the principles of e-pedagogics is assumed to contribute to the effective implementation of e-learning in any institute of learning including South African universities. Analysis of consulted literature (Kilfoil, W.R. (Ed.). (2015); (DHET 2013); Ng'ambi, D., Bozalek, V., & Gachago, D. (2013); Amory, A. (2014); Wheeler, S. (2012) indicates that lecturers' level of understanding and skills of e-pedagogics as related to e-learning are unwavering by their expertise in the implementation of the following principles of e-pedagogics:

- Demonstrating effective skills of blending of learning with technology
- Provides effective use of digital literacies

- Enabling Links with Web 2.0 and social media
- Giving effective representations that support learning and teaching with technology
- Utilizing ICT as essential tools for contemporary teaching and learning
- Effectively utilizing personal mobile devices and laptops as teaching and learning tools.
- Effective gasification practices
- Making use of E-portfolios
- Effective implementation of open educational resources
- Managing massive open online courses
- Managing distance education and supporting technologies for open and distance learning
- Promoting professional development for teaching with technology

In other words, lack of knowledge and understanding of the same principles indicated above seem to be a hindrance to effective implementation of the same aspect of e learning. This is the reason why this study also needs to start by establishing the level of expertise of the South African Higher institutions of learning in e-pedagogies with special reference to the registered private universities. It is also the assumption of this study that expertise does not make any meaning without linking to the parameters of teaching and learning theories. This is the reason why the following section critically discusses the constructivism theoretical perspective to learning.

2.4Constructivism

2.4.1 Knowledge and understanding of the constructivism theoretical perspective

The characteristics including the origin and founders of the constructivism theoretical has been highlighted in chapter one. Even the traditional link of the same theory with the behavioural and cognitive theories of learning's' critically reviewed as one gradually builds on the previous one. Constructivism as a learning philosophy based on the concept that which, during the learning process, individuals do not aggressively acquire or understand a new perceptive. As a replacement, new information is enthusiastically incorporated into existing cognitive formation while simultaneously altering the structure. For this reason, what is learned by individuals is always outlined within the context of what they previously know; each of us generates our own individual understanding of the world" (Piaget, 1977:78; Mokgadi, 2015). ''Nieman and Monyai (2007:7) states, the following as the most basic assumptions, that underlie constructivism; experience provides basis from which knowledge

development is constructed. A learner is able to constructs knowledge actively by means of personal interpretation to visualise the world and make sense of it; it is discovery of knowledge that initiates conceptual growth; negotiation and conciliation of meaning, the analysis and sharing of a number of perspectives including the changing of representations from ones; perceptions by means of collaborative learning. (Mokgadi, 2015). In other words, constructivism is associated with personal construction of knowledge coupled with interpretations including active learning characterised by multiple of perspectives in view of issues (Beetham& Sharpe, 2013). Constructivist mechanisms comprise problem or project-based forms of learning, unrestricted types of learning environments, flexible learning which is found in ill-structured domains, and tasks which are authentic and not aligned to any simplifying of complexities (Beetham& Sharpe, 2013). Constructivism is characterised by approaches that are not provide prescriptive and directive instructionsbut, focus on learner-cantered activities and environments (Beetham& Sharpe, 2013).

Many authors (Wind-chill and Andre, 1998; Loyens, Rikers, and Schmidt, 2009; Schell& Janicki, 2013) support the scrutiny that students construct their knowledge from individual experiences and from thinking through this experience. This is the reason why the behaviourist theorem has been critiqued by many researchers in support of the constructivist model of learning, which opposes the behavioural stance of objectivism, which pursues the initiative the best way to convey knowledge is dissemination from expert to learner. As an substitute, proponents of the constructivist model of learning disagrees that learners should have control over the learning process stating individuals learn better, when they discover things on their own (Leidner and Jarvenpaa, 1995; Schell& Janicki, 2013). It can be disputed that there are circumstances in which it would be more competent for an instructor to simply tell an answer to the student, as opposed to guiding the student to find the answer on his/her own (Schell& Janicki, 2013). However, constructivist proponents believe that the process of determining the correct answer for oneself, or at least formulating an idea and thinking about the question, is a very vital aspect of the entire learning process (Schell& Janicki, 2013). Knowledge by learners is through experiences via mental models, used to assimilate new information into knowledge, and consequently expanded mental models (Schell& Janicki, 2013). Knowledge transfer put emphasis on construction of knowledge and problem solving in sphere of ever-increasing conceptual complexity. Promoters of the constructivist model of education agree that the increased amount of student control in an online course is a great advantage (Schell& Janicki, 2013). However, it could also be argued that an increase in student control has a negative effect on education (Schell& Janicki, 2013).

In the South African context other researchers like Pillay and Alexander, 2015) attempted to apply constructivism by focussing learning through debate, argumentation and reflection. It

concluded that discussion forums offer valuable pedagogical potential for both distance and face-to-face students in higher education. However, they seem not to understand that constructivism is more than just debates and arguments as linked to learning. As highlighted before, constructivism is all about awareness construction and interpretation, active learning, secure instruction, and various points of view (Beetham& Sharpe, 2013 which include mechanisms such as problem/project-based learning, open-ended learning environments, flexible learning within ill-structured domains, and authentic tasks – without generalization of complexity (Beetham & Sharpe, 2013).

In the context of this research a deep knowledge and understanding of the principles of constructivism is assumed to contribute to the effective implementation of e learning in any institute of learning including South African universities. On the other hand, lack of knowledge and understanding of the same principles seem to be a hindrance on effective implementation of the same aspect of e learning, which is expected not to be done in a vacuum but within the parameters of teaching and learning theories. This is the reason why there is need to ascertain the lecturers' level of understanding of such theoretical approaches to find out their potential of implementing the e-learning programmes in relation to quality of teaching and learning. The following section therefore critically discusses the essence of quality teaching and learning.

2.**5Quality teaching and learning**

2.5.1 Knowledge and understanding of quality teaching and learner performance

According to van der Waldt (2004:6) and Musundire, 2015) quality in general terms refers to meeting or going beyond customer expectations (Oakland, 1993:70). From an educational perspective, what determines quality education is correspondence that exists between what the society see as the expectations of their socio-economic needs and the learners' developmental changes and the whole education system at large (Grisay & Mahlck 1991:13, Musundire, 2017). With exceptional reference towards the quality of teaching and learners' performance, literature agrees that the instructor's knowledge level of the quality determines the learners' performance (Grisay & Mahlck 1991:13, Musundire, 2017). In respect of these definitions, it is the assumption of this study to link the knowledge and skills of the instructor of e-learning, pedagogics, e-pedagogics and constructivism theory in relation to curriculum planning, curriculum designing, curriculum implementation, curriculum evaluation, curriculum assessment, curriculum material designing regarded as some of the important aspects that determines quality of teaching and learning. In other words, meeting or exceeding the national standards according to curriculum policies regarded as the important factors that

ensure teaching quality and learner performance (Kilfoil, 2015; DHET, 2013; Ng'ambi, Bozalek &Gachago, 2013; Amory, 2014; Wheeler, 2012).

As indicated in chapter one, research findings still claim that quality of instructional knowledge provided by the lecturer/teacher is still poor in many Institutions of Higher Learning in South Africa despite the introduction of e-learning (Stewart, 2011, Kilfoil, 2015; Musundire, 2017). In the South African context, research has indicated that a better understanding and knowledge of the relationship between e-learning, quality teaching and learners' performance on the part of the instructor and other relevant stakeholders will pave a way and provide insight of rectifying the gaps between these important aspects in order to keep abreast with new developments in education. As indicated in chapter one, research findings still claim that quality of instructional knowledge provided by the lecturer/teacher is still poor in many Institutions of Higher Learning in South Africa despite the introduction of e-learning (Stewart, 2011, Kilfoil, 2015; Musundire, 2017). These demands for further research on the link between e-learning and the specific components of quality of teaching in terms of curriculum development and curriculum implementation.

2.6 Impact of e- learning in relation to the lecturers' level of knowledge and skills in e-pedagogies on quality teaching and learning

In the 21st century, it is necessary to consider a new generation referred to as the digital generation, the existence of which is highly dependent on the opportunities provided by digital technologies (Baldiņš, 2016). Taking into account these needs of the digital generation regarding e learning, pedagogy is expected to respond to the demands of these needs by incorporating e-pedagogy, a new scientific sub-discipline of e-learning (Baldiņš, 2016). Currently, e-pedagogy research and practice mainly addresses the following issues: Methods, forms and resources of learning organization and their relation to distance learning technologies (Syed, 2009; Tomei, 2013); Opportunities provided by the application of the Internet in the conventional learning process (Witta, 2009); Application of mobile technology and distance learning in higher education (Pablos, Tennyson, & Lytras, 2015); Pedagogical and anagogical approaches to learning process using information and communication technologies (Wang, Farmer, Parker, & Golubski, 2012); Assessment of school children and student learning performance in e-learning (McKay, 2013); Professional pedagogical competences, development of competences for distance learning implementation (O'Neill, 2015).There seem to be little research done on the impact of e-learning with regards to the lecturers' level of knowledge and skills in e-pedagogies on quality of learners' performance. There is consensus among other researchers that the instructors' knowledge of e-pedagogical principles and practices is very important to ensure effective implementation of

the identified aspects of e learning (McLoughlin & Northcote, 2017; Baldiņš, 2016)). As highlighted before, e-pedagogy is perceived to be a branch of pedagogy, which puts more emphasis on studying, developing, and enhancing learning technologies in order to improve didactic approaches for the purpose of attaining success the application of technology McLoughlin & Northcote, 2017).

It has also been realised that there are two types of e-learning (Clark & Mayer, 2016). Asynchronous e Learning is considered as e learning designed for the rationale of self- study and synchronous e learning which is led by the instructor and presented at fixed times (Clark & Mayer, 2016). However, benefits gained from these new technologies depends on the extent to which knowledge of e-pedagogy is used well suited to human based cognitive learning processes and well-grounded on research-based principles of instructional design and application of technological developments (Hughes & Daykin, 2002; Jenkins et al 2011; Owens 2012, Wilkinson et al., 2013; Green et al, 2006; Clark& Mayer, 2016). When technophiles ignore the aspect of –pedagogies, they may not be able to control technology in conducts that/ will support learning for quality performance (Hughes & Daykin, 2002; Jenkins et al 2011; Owens 2012, Wilkinson et al., 2013; Green et al, 2006; Clark& Mayer, 2016). Instructional techniques that support as opposed to those that overpower human learning processes are an indispensable component of all successful-learning courseware (Clark & Mayer, 2016). A generally appropriate procedure depends on goals stipulated for training (i.e. to inform or to execute); the learner has related proficiency (case in point, whether they are familiar with the skills or are new to them) as well as an assortment of environmental dynamics, thus, to include technological, cultural, and realistic constrains (Clark and Mayer, 2016).

Research also confirms instructor fears of poor technological or e-moderation skills remain familiar when expected to utilize e learning (Hughes & Daykin, 2002; Jenkins et al 2011; Owens 2012, Wilkinson et al., 2013). As highlighted by Green et al (2006)'s case study, various nurse educators faced challenges to instigate e-learning materials with little or no support; this lead to conclusions that experiments with e learning by lecturers when first conducted is expected to adversely impinge on their success and confident approval of the teaching method. The educator training and support level is imperative, as a survey of 529 carried out, HE lecturers completed e-learning training, that was specific to the university context and information technology used, as incompatible to just general e-learning principles and facilitation techniques, as essential for successful uptake by the educators (Owens, 2012). In the South African context, Ng'ambi, (2013) established there appears to

be an increasing disparity between the newer technology students own and use outside university when accessing the internet and social media, and the technology supported and used within university for e-learning. Ng'ambi argued the deficit was due to the pressure felt by the educators to continuously be pace with their students that which resulted in concerns of pedagogical uses of information technology as alleged by students as obsolete and ineffective, whilst university data search resources were yet again perceived as essential and valuable (Brownsell, 2016). It would happen that both students and educators do need to be responsive of their roles and responsibilities present in the pedagogical design and e-learning strategy in amalgamation with e-pedagogy (Brownsell, 2016).

Garrison & Vaughan (2008) notes the potential of e learning to integrate both verbal and written communication has resulted in lecturers of incorporating campus-based students not only in face-to-face but also online environments. This approach has however, met challenges in the sense that simple rules and or recipes for the design and delivery of an effective e-learning experience does not exist (Garrison & Vaughan, 2008). Any form of an educational experience has shown to demand much of the experience, understanding and great insight of an instructor, who is reflective and highly knowledgeable to translate principles and ensure guidelines linked to the contingencies as well as the exigencies of their contexts that are unique (Garrison, 2011). Now in terms of how effective the implementation of learning's in relation to the level of the educator's skill including e-pedagogies, studies have shown that the success depends on the lecturer's individual innovativeness profile (Rosen, 2004; Garrison, 2011).Rosen, 2004). Rosen (2004) and Rogers (3003) identified professional personalities that also determine the level of e-pedagogies skill, knowledge and understanding on the part of the instructor and the impact on quality teaching and learning. These personalities are associated with individual innovativeness characteristics that are seen as important in terms of the instructor's inclination to use new technologies (Rosen, 2004; Rogers, 2003). These innovative profiles are exhibited under five groups as follows (Rosen, 2004; Rogers, 2003):

- Innovators are people who are brave enough and courageous to adopt and apply new opinions and to take risks
- Early Adopters are the ones who inform, advises and give guidance to others about current novelties
- Early Majority are the ones who are cautious toward novelties but reluctant to take risks
- Late Majority persons are apart from being skeptical and believed to be timid about innovations

- Laggards are people who are resistant to change and have are also believed to have prejudice about change,
- The last group to adopt change is the Agarwal.

Prasad (1998) claim that attitude toward practicing a novelty affects the intention of that person's intention to use technology as well. Similarly, in the study conducted by Yilmaz and Bayraktar (2014), a significant correlation between individual innovativeness and attitude toward usage of education technologies was reported. Köroğlu (2014) also reported a significant correlation between individual innovativeness and attitude toward usage of technological equipment as well and quality of teaching and learning. For example, if we look at the study done at the Gazi University of how effective the introduction of e-learning including knowledge of e-pedagogy is, especially when teachers do not have enough skill. It proved that it depends on the lecturer's level of confidence and creativity in order to successfully implement effective e learning for most students have already adapted to the digital world and therefore assist in guiding the lecture (Thomas-Brown, Shaffer, Werner, 2016).

E learning requires different approaches to pedagogy specifically in focus areas such as individual and group interaction and online assessment. Conversely, these are skills not extraterrestrial to all; distance education has been in existence for decades using postal services, TV, and telephone. Islam, Beer and Slack (2015) argues that as e-learning is currently prevalent, academics who are not technically equipped to manipulate developments of teaching materials as well as delivering online modules are obstructing the progress of learner performance, hence, extensive skills development is required (Islam, Beer &Slack, 2015). However, technical skills should not only be the concern but content be planned suitably for distance learning; it is not about "dumping large volumes of text onto a website" as this is incompetent (Leask, 2004:347). However, academics need to do more than just develop new ICT skills; in order for them to successfully make the switch to become online teachers; it ought to be pedagogy based (Morley, 2010). Having a creative pedagogically focused course, academics understanding diverse tactics of online learning with the understating of assortment, context, and group dynamics is not adequate. As all require management of the institution to market the pedagogical benefits of online learning with practical illustrations' academics can relate to: so they are optimistic to use the e-learning technology (Jackson and Fearon, 2013). According to Martins, etal. (2016), Cornrad (2004) conducted a study with reference to concerns raised by academics related to –pedagogy/e-pedagogy and e learning**.** These included concerns among others, about loss of control of the technology structure not giving them time to concentrate on certain topics,

before moving onto a different topic. This is in contrast to traditional methods of learning, where lecturers pause to explain and cross-examine their students to distinguish if they understood, and if not, to explain further pending agreement to move on (Martins, etal., 2016). For instance, one lecturer found it complicated to use the Web ICT platform to refer back through different postings to repossess messages of interest. It was analysed that when teaching online a lecturer could feel they are "left in the dark" where they are not able to observe students (Islam, Beer &Slack, 2015). There is also evidence in the South African context that there is no much research that has established the instructors' level of e-pedagogy during the implementation of e-learning (Wheeler, 2015; Ng'ambi etal, 2013, Musundire, 2016). Much of the research has been focussing on pedagogical content knowledge in general as related to ICT application learning (Wheeler, 2015; Ng'ambi etal, 2013, Musundire, 2016).

In the context of this research, crucial analysis of the consulted literature indicates that there is either a positive or a negative impact on e learning in relation to the lecturers' knowledge and skills level in e-pedagogics on quality of teaching and learners' performance. The implementation of –learning, quality of teaching and learning improves. A deep understanding and knowledge of the principles of e-pedagogies assumed to contribute to the effective e learning implementation in any institute of learning including South African universities. On the other hand, lack of understanding and knowledge of the same principles seem to be a hindrance on effective implementation of the same aspect of e learning. In the context of South Africa, an investigation, research has indicated that challenges are still common during the implementation of e learning. This is the reason why this research attempts to establish perceptions on the impact e learning in with regards to the lecturers' level of skills and knowledge in e-pedagogics on quality of teaching and learners' performance. The implementation of –learning, quality of teaching and learning improves.

2.7 Impact of e- learning in relation to the lecturers' knowledge and skills level of the application of constructivism theory on the quality of teaching and learning

According to Aparicio, Bacao, & Oliveira (2016) learning is a cognitive process to achieve knowledge, while technology facilitates the learning process to take place. Linked to this view, pedagogical models therefore form the foundation of a learning theory, as they derive from knowledge acquisition. From a pedagogical point of view, these models are mechanisms that link e-learning theory to e-learning practice (Dabbagh, 2005). Piaget's constructivist theory of knowledge (1970) was based on the theory that learners do not copy

or absorb ideas from the external world, but must construct their concepts through active and personal experimentation and observation (Clark& Mayes, 2016).

Learning. Desai, Hart, and Richards (2008) stated that technology provokes new pedagogical changes. Constructivism simply, study how the learners will construct knowledge in a consequential way Desai, Hart, and Richards (2008). This way is performed through focusing on the style of tasks given to learners. There are two guiding principles used to establish if the task falls within constructivist pedagogy incorporate if task is meaningful and authentic. The learner should derive applicable, understandable knowledge for a task to be considered meaningful. A genuine task is correlated with the course of study directly applicable to the real world (Ford, & Lott, 2009).

Constructivism in practice may be defined as multi-interactions of an assortment of activities and contexts of teaching that interlink students, teachers, administrators and community mutually as all of them participate in pedagogy (Kiraly, 2014). Constructivism learning environments are technology-based, where students are expected to illustrate different activities and engage in meaningful interactions (Herrington, J., Reeves, T.C. and Oliver, R., 2014). According to Sultan, Woods and Koo (2011), personal pertinent of the students is essential as it is the sense that concerns the connectedness of school [experiences] to students' out-of-school experiences, and making use of students' daily experiences as a meaningful context for the development of students' knowledge. Student insecurity involves the extent that of which opportunities are provided for students, to experience scientific knowledge arise from theory-dependent inquiries, concerning human experience and values evolving, non-foundational and culturally and socially determined (Sultan, Woods & Koo ,2011). Based on research by Nkandla and Minnaar (2017), representing a theoretical structure designed to elucidate the adoption of social media into e learning with online collaborative learning (OCL) in higher education. It gathered that alliance is the most imperative characteristic of social learning. While instructors support to aid group interactions, students have the sovereignty to self-select what they need to learn to gain a better understanding of the problem. Learners ensured supported each other in their learning and noted there experiences improved by their interactions. Additionally, students did not appear to combine social and educational involvement yet seemed to need support in the management of the expanded amount of information presented to them. To enable learners manage their time and participation, the learners devised strategies and "workarounds" to conclude allocated activities and course obligations (Mnkandla, &Minnaar, 2017).

Sultan, Woods and Koo (2011), accentuates that the crucial voice of students involves the extent to which a social climate has established making students feel it is legitimate and beneficial to question the teacher's pedagogical plans and methods, while express concerns regarding any impediments to their learning and find room and ways of knowing. Students shared control concerns, of students that were encouraged to share with their teacher: controlling of educational environments in a sense of communication of learning goals, design and management of learning practices as a purpose and application of assessment criteria (Sultan, Woods & Koo ,2011). The greater apparent control offered by shared control would reveal positive effects in the direction of the students' inspiration, divulge higher learning effects leading to higher presentation (Moores & Chang, 2009).

The learner-centred models' aimed at designing e-learning assignments and activities that which will persuade learners to actively build up on new knowledge. Learners are optimistic into developing their own goals and objectives in problem solving. The constructive framework strategy throughout eLearning is to support investigations and learner's control of the learning (Blackburn, 2017). Learners will set in motion responsibility for their learning. As the real-world circumstances presented, the learner's own prior experience and knowledge are surrounded into the design of the goings-on. Learners generally apply his or her own experience and/or knowledge in the scenario. The students mindd of the student mediates input from the outside world to determine what the student will learn. Learning is an active mental work, not a passive reception of teaching (Koohang, Riley, Smith & Schreurs, 2009). Constructivist learning and the strategies can foster in-depth learning and practical application. Incorporation of communication and information technologies into curriculum offers considerable potentials for designing new learning environments, and advancing research and development in learning hypothesis. However, based on the main characteristic of the constructivist approach, traditional universities and classroom cannot provide the conditions for learners to construct the knowledge for themselves, for this reason virtual university with the communication and information technologies (ICT) can execute constructivist strategies in the process of teaching and learning. In virtual university, constructivism has promoted the learner's skills to solve real-life problems and practical problems (Sejzi, A.A. and bin Aris, B., 2012).

In the South African context, attempts to apply constructivism as a modern theory as linked to e-learning in high institutes of learning according to research is not a new educational improvement (Kilfoil, 2015; DHET, 2013; Ng'ambi, Bozalek &Gachago, 2013; Amory, 2014; Wheeler, 2012). The failure of adopting constructivism in e-learning may not be a surprise since other studies indicate that even with the traditional modes of curriculum delivery, teachers have been struggling with the application of the objective, cognitive and the

constructivism theories of learning in the classroom which from chapter one have been categorisedby Driscoll (2000) as objectivism, pragmatism, and interpretivisim). This is the reason according to research why it is necessary as part of the research to find out the level of knowledge and skills of lectures in coordinating e-learning with the application of the constructivism theory.

The implication of the theoretical literature above is that if the lecturers' theoretical and practical knowledge and understanding of e learning in relation to the knowledge and understanding of the theoretical and practical application of the constructivism theoretical perspective, there are chances of improved quality of student performance. If the situation is the other way round, poor quality of performance is also expected. This assumption opens doors for this study in the South African context to find out the gaps in the impact of e learning in relation to the level of the lecturers' level of knowledge as related to the constructivism on the quality of learners' performance. Following the challenges that are still faced in High Institutes of learning.

2.8 Relationship between synthesis of the lecturers' knowledge and skills of e-pedagogics, constructivism theory and quality of learner performance for the duration of the implementation of e learning

Critical analysis of the literature above therefore creates and drives a need to find out from further literature reading the effectiveness of e-learning by blending the relationship of the lecturers' knowledge and skills of e-pedagogics, constructivism theory and quality of learners' performance. Previous sections have discussed the components separately as a way of driving to a conclusion of the need to treat the aspects in an interrelated and holistic manner to ensure one main goal of resolving the current challenges encountered during e-learning implementation as the main goal of this study.

The deliberation about the efficiency of e-learning has been linked to historical electronic means of instruction delivery as compared to otherapproaches of delivery thus, including traditional classroom delivery, which even up to now is recorded as the most common form of instruction in higher education (Bell & Federman, 2013). At present, the communication and information technologies is seen as conveying new challenges and opportunities of designing education which demands new pedagogical approaches (Sejzi & Bin, 2012). Constructivism has been viewed as characterising how individuals perceive and construct the way they understand and grasp knowledge of the world, by means of experiencing situations, contexts, objects, events and making a reflection of those experiences (Mahoney, 2004, Huitt, 2003).

Clark and Mayer, (2016) see technology as a mere tool to be utilised in instructional design as linked to pedagogical approaches as well as teacher practices. Referring to other types of instruction, e-learning's Clark and Mayer are of the notion that effectiveness is fully dependant on how well it is designed in order to come up with the instructional experience facilitates learning (Clark and Mayer (2016, Bell & Federman, 2013; Bell &Federman, 2013). A critical analysis of the instruction received by participants pursuing e-learning condition is often not comparable to that received by participants in the classroom or comparison (Clark and Mayer (2016; Bell & Federman, 2013; Bell & Federman, 2013). In definite forms of e learning, such as simulations, for example, students may be obliged to engage more actively than they would in a classroom environment. Because instructional methods that make possible active engagement enhance learning, differences in achievement may be attributable to disparities in activity level than in the delivery media per se (Bell &Federman, 2013). There are several studies comparing e-learning methods. Yet, one of the problems is that the results of studies directly comparing technology-assisted education with traditional teaching seldom conflict and repeatedly do not demonstrate or propose best practices. Critical appraisal of the quality and efficiency of e learning is warranted. Therefore, there is a need to widen a consensus-based quality assurance standard for higher education e-learning (De Leeuw, Westerman, Nelson, Ket & Scheele, 2016).

Moloi, (2014) make a critical analysis of education and relates it to human activities which is believed to be a complex but necessary and inevitable process which cannot be avoided to ensure improvement of the human activities for a better change in life styles. It is consequently known that e learning should be targeted to the needs of the precise audience Moloi, (2014). As mentioned before, the achievement of e-learning programs has also been correlated to the use of a speculative framework or a learning theory (De Leeuw, Westerman, Nelson, Ket & Scheele, 2016). Although there is a perception that education theories are too vast and diversified, there is an agreement that their psychological fundamentalsare obligatory(De Leeuw, Westerman, Nelson, Ket & Scheele, 2016).

In recent times digital technologies and social media have captivated societal imagination across the world, becoming "prevalent in the day-to-day life" of learners characterized as "Next Generation", "Y-generation" or "the digital natives" (Abe & Jordan, 2013; Domingo &Garganté, 2016; Salminen, Gustafsson, Vilen, Fuster, Istomina & Papastavrou, 2016). Simultaneously, interest in the potential for using digital technologies and social media in education precipitated the notion of e-learning (Tower, Latimer & Hewitt, 2014; Domingo & Garganté, 2016; Salminen et al., 2016). However, teachers who, unlike the "Next Generation", were not born to be socialized into the digital technologies, social media, computers and Internet (Domingo & Garganté, 2016; Salminen et al., 2016) facilitate the e-

learning environment. Teachers are however under tremendous pressure to integrate digital technologies and social media in their instructional designs because the learners have positive perceptions of their impacts, usefulness, enjoyment and excitement of these tools, to which they are socialized as part of normal life (Abe & Jordan, 2013; Green, Wyllie & Jackson, 2014; Peck, 2014; Salminen et al., 2016). Previous research suggests that the constructivist approach (founded by Jean Piaget, among others) is compatible and appropriately designed for eLearning. According to this theory, humans are active learners and construct new knowledge based on prior experiences and interactions. An example is problem based learning, which has been shown to be effective in medical education (Ellaway, Masters, 2008; Schmidt, Van der Molen, 2009) Another theory based on the constructivist approach is the cognitive load theory (CLT) developed by Sweller (1998). The constructivist approach also forms the foundation of the cognitive theory of multimedia learning, a well-evaluated learning theory developed by Mayer (2014). This theory has been specifically adjusted for e-learning, and is believed to provide a good basis for an e-learning standard (Mayer, 2014). These theories are not elaborated here. However, De Leeuw, Westerman, Nelson, Ket and Scheele (2016), argue that it is important to remember that learning theory, not technology, should guide the design and content of e learning.

The implementation of blended learning requires an understanding of different contexts of both teachers and learners related to values, knowledge, experience, language and symbols, attitudes and notion of time (Warschauer & Ames, 2010; Mdlongwa, 2013; Viriyapong & Hartfield, 2013; Aesaert & VanBraak, 2014; Aesaertet al., 2015; Hung, 2016; Pruet et al., 2016; Siddiq et al., 2016) as measures for the level of e-culture that is important in e-pedagogies. Evidence reveals that the main failure of the usage of digital technologies in education is mostly interrelated to the ignorance of e-culture of both teachers and learners (Warschauer & Ames, 2010; Viriyapong & Hartfield, 2013; Aesaert & Van Braak, 2014; Aesaert et al., 2015; Pruet et al., 2016; Siddiq et al., 2016). Apparently, the focal point is on delivery of the new technology without taking into considerationthe people's needs, e-culture and how they will use the technology (Warschauer & Ames, 2010; Aesaert & Van Braak, 2014). In education, it may be that teachers and learners in developed countries or urban areas use digital technology differently from the ones in developing countries or rural areas in (Aesaert & Van Braak, 2014; Aesaert et al., 2015; Pruet et al., 2016).

There are formidable problems associated with the management of e learning. However, at least two positive points can be made about quality in the e-university. The pedagogy itself will be more open to scrutiny and thus more likely to be designed and implemented Quality in an e-University. Even more importantly, for perhaps the first time in educational history the transitory outputs of the learning process will be recordable, storable, and open to judgement.

These, provided they are not submerged under the waves of data-protection or commercial and professional sensitivities, will provide a powerful new source of evidence about the true educational value of the activities in question (Mayes, 2017). Although teachers and learners' values, knowledge, experience, language and symbols, attitudes are necessary for transformational pedagogy, "behaviour" also plays a crucial role. Davies' Theory of Planned Behaviour (TPB) states that teachers and learners' actions with regard to the adoption and use of ICT for knowledge transfer and acquisition are strong-minded by their behavioural intentions (Ramoroka, Tsheola & Sebola, 2017).

The implication of the theoretical literature above is that implementation of e-learning is very effective if there is a close link between the lecturers' theoretical and practical knowledge and understanding of e-learning in relation to the knowledge and understanding of the theoretical and practical application of e-pedagogics, constructivism theoretical perspective and quality of students' performance. If the link is loose, poor or negative, the assumption is that e-learning is ineffective resulting in poor quality of performance by students. This assumption open door for this study in the South African context to find out where there are gaps in this link to explore possible professional development strategies that can solve challenges of the implementation of e learning in South AfricanPrivate Institutions of Higher learning. This is going to be area of discussion in the next section.

2.9To explore professional developmental intervention strategies that can be recommended during the implementation of e learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance.

Universities across the globe are attempting to change assessment practice to address challenges in student engagement and achievement. In a very short period, the H.E sector in the UK has been subjected to a plethora of changes: introduction of loans and the withdrawal of the teaching grant; rapid expansion including increased competition and private providers; a fast developing hybrid teaching and learning model as many universities move into technology mediated learning; development of intense audit and public scrutiny of what Universities deliver; diversification of the products and markets of universities into phenomena such as MOOCs and OER; and increasing pressures to widen participation in HE (Evans, Jordan & Wolfenden, 2016).

According to Awidi and Cooper, (2015), Universities with challenges in implementing e-learning may achieve success by assembling an implementation team and a leader, determining the appropriate learning technology, clearly outlining the process of implementation and having an ongoing evaluation process to institutionalise the innovative

e-learning approach. The policy and strategy document, showing the institutional position must include the pedagogical goals, infrastructure requirements, evaluation, collaboration with stakeholders, quality control, technical support, budget and funding and resource planning (Awidi and Cooper, 2015). The constructivism theory framework implies that creative learning occurs when learners are encouraged to think outside of the box and offer the world new knowledge. If the purpose of a university level education is to develop the skills of critical and creative thinking, this in turn means teacher and facilitator must also appreciate the need to relinquish control and be responsive and respective to new ideas, new ways of thinking (Stefani, 2016).

The production of e-learning materials is often time-consuming, andcompete with the more and more condensed work-schedules of medical doctors and their limited time resources (Matthes, Rixen, Tempka, Schmidmaier, Wolfl, Ottersbach, et al., 2009). In addition, most teachers need technical and expert support when it comes to the production and implementation of e-learning (Davids MR, Chikte UM, Halperin ML, 2013). International approval states that a faculty-wide use of electronic learning scenarios should be a central part in the strategic development of medical programs (Steinert Y, Mann K, Centeno A, Dolmans D, Spencer J, Gelula M, et al., 2006). A survey by Back, Behringer, Peters, Plener, Sostmann, and Harms (2015), shows that e learning has expanded a firm place in the curricula of those mid-European medical schools addressed. Several institutions have taken hold of the potential and value of a good infrastructure in this field. However, the allocation and promotion of e-learning is inhomogeneous. In addition, teachers' loyalty is given a better incentive. Aspirations for the next years should include development ofa network with a stable dialog between the medical schools for addressing familiar problems, and expansion of a database with different quality-tested tools that can be accessed on-demand by all schools (Back, Behringer, Peters, Plener, Sostmann, & Harms ,2015).

A great deal of care and consideration needs to go into execution for e learning to be skilled and effective. According to Cox (2010), if e learning be productively be adopted in a school, teachers and head teachers need to be concerned in the decision-making processes. Support and Leadership from senior management are recognized as fundamental factors for conquering implementation (Birch & Burnett, 2009; Browne et al., 2010). Gunawardena (2005) indicate for e learning to succeed in the developing world; it needs to gather on another significant pillar: the survival of infrastructure, along with connectivity. Developing countries like Kenya still face numerous challenges while executing e learning, that which requires advanced level of technological infrastructure and heavy investment of resources especially in the initial stages (Tarus, J.K., Gichoya, D. and Muumbo, A., 2015). E learning in particular has impacted both teaching and learning strongly. As a result, adoption in some

institutions has improved faculty and learner access to information. In that way, a rich environment for collaboration among students can improve academic standards (Tarus, Gichoya, & Muumbo, 2015).

Ssekakubo, Suleman and Marsden (2011) point out the bulk of e-learning projects implemented in Sub-Saharan countries have a propensity to fail, to a certain degree or wholly due to a collection of barriers to e learning in developing countries. The nonexistence and/or inadequacy of infrastructure are an impediment to access among students in developing countries. According to Kashorda and Waema (2014) in their E-Readiness Survey of Kenyan Universities (2013) Report, the networked PCs available per 100 students' ratio was 3.8 in Kenyan universities, which was quite low for a measured. The e-readiness survey also pointed out that 16,174 student computer labs were available for 423,664 students at the 30 universities and only 17% of these students had access to computers from and at their campuses. While, on the other hand, 53% of students owned over 200,000 laptop computers in the 30 universities. It was therefore, recommended in the report that universities should invest in student computer labs to serve the students who are unable to procure laptop computers or those who may not desire to carry their laptop computers to and around university campuses (Tarus, J.K., Gichoya, D. and Muumbo, A., 2015).

Selim (2007) put together the critical success factors (CSF) of e learning into four categories: thus; instructor, student, information technology (IT), and university support. These are factors to utilise in the determination of the effect on e-learning outcomes. The CSF of e learning for instance, is grouped into four dynamics based on the students' interpretation. Thus, the instructors' characteristics (teaching style, attitude toward students, and technology control), students' characteristics (perception of content and system motivation, technical competency, and collaboration in interaction), technology (screen design, ease of access and Internet speed), and institution support (technical support, computer availability, learning material accessibility, and printing) (Keramati, Afshari-Mofrad, & Kamrani, 2011). Lee (2008) identified some factors influencing e learning be adopted based on perceived effectiveness and perceived ease of use. Roca and Gagné (2008) found that perceived usefulness, perceived ease of use, and perceived playfulness are all primary determinants of e-learning persistence intention.

On the E learning studies on the IS success model have found that system excellence and information quality persuade learner satisfaction (Chiu, Chiu, & Chang, 2007; Roca, Chiu, & Martinez, 2006), performance anticipation (Wu, Tennyson, & Hsia, 2010), alleged usefulness (Chen, 2010), and behaviour objective to use e-learning systems (Lin, 2007). Service quality be found to influence simplicity during use (Wang & Wang, 2009) and satisfaction (Lin, 2007;

Roca et al., 2006). Chiu et al. (2007) reported that high information quality will enhance end-user system fulfilment while poorly designed e-learning courses boost learner dropout. Ozkan and Koseler (2009) stated that awareness of system quality increase the effectiveness of learning management systems and that content quality creates value and satisfaction of learners. Technology plays a fundamental role in conveying learning outcomes as learners interact more in e-learning environments as opposed to traditional face-to-face instruction. System design facilitates influential interactions, controls organizational actions, and provides correct and satisfactory information to diminish uncertainty (Su, C.H., Tzeng, G.H. and Hu, S.K., 2016). System quality relate to a learner's conviction about characteristics of e-learning performance and measured according to functionality, simplicity /ease of use, reliability, flexibility, data quality, portability, integration, and significance (Su, C.H., Tzeng, G.H. and Hu, S.K., 2016). System quality exerts a strong positive effect on learners 'satisfaction and directly affects user beliefs (Ozkan & Koseler, 2009). There are diverse dynamics imperative for infrastructure and system quality that which include and most essential, user –friendly systems, Internet quality, facilitating conditions, steadfastness, simplicity, system functionality, interactivity, response, and equipment accessibility (Wu et al., 2010).

The implication of the theoretical literature above is that if lectures are lacking knowledge, understanding and skills of implementation of e learning in conjunction with e-pedagogics, constructivism theoretical perspective, and student performance tend to suffer. In other words, the assumption is that there is a close and blended link between the lecturers' theoretical and practical knowledge and understanding of e learning in relation to the knowledge and understanding of the theoretical and practical application of e-pedagogies, constructivism theoretical perspective and quality of students' performance. In order for the lecturers enhance this link, professional development intervention strategies are therefore necessary. According to research, there are controversial perceptions about effective approaches that will ensure developmental intervention strategies to recommend during the implementation of e-learning yet in compliance to the lecturers' knowledge and skills of e-pedagogies, implementation of the constructivism theory and quality of learner performance .While some are of the idea that total involvement of lecturers and public policy makers in making staff development needs analysis is the best approach, others are still implementing the autocratic approaches to needs analysis and designing professional development policies. This is by so the reason why this study also needs to further establish to explore and establish professional developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and

quality of learner performance with special reference to registered South African private institutions of higher learning.

2.9 CONCLUSION

This section has provided literature in order to understanding aspects of E-learning comprising of e-pedagogics, constructivism and quality of learners' performance in the perspective of this study. Literature resting on the effectiveness of implementing E-learning in relation to the level of the lecturers' level of knowledge and skill in e-pedagogics has been explored. The chapter further exposed the characteristics of constructivism regarding E-learning implementation as well as establishing the relationship between lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance. Finally, the some of the possible professional developmental intervention strategies that can be recommended during the implementation of e learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance are to be discussed. The following chapter deals with the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The preceding chapter focussed on literature review by way of highlighting the important aspects and e learning including the theoretical aspects. This was done in order to establish how current literature relate to the effectiveness of eLearning as linked to the instructor's knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of learners' presentation in the context of South African Institutions of High learning. The investigations will be carried based on the following assumptions:

- Assumption 1: A synthesized soaring level of lecturers' knowledge and skill of e-pedagogy and its application of the constructivism theoretical framework during the implementation of e learning is a requirement for ensuring quality teaching and quality performance of learners.
- Specific innovative professional developmental intervention strategies are required for effective implementation of e learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and eminence of teacher and learner performance in South African institutions of Higher education.

This describes the methodology used to answer raised above assumptions and addressing t research questions. In this section, the first section starts by highlighting research design, which is going to give a framework of the methods of data collection. Thereby, description of the research philosophy and the research approach that suites this study. A description of the research population including sampling is to be provided followed by highlighting research instruments including amongst many the questionnaire construction, administration, collection of data, interview methods and data analysis. The section concludes amid a narrative of how preconception is/was eradicated, with all ethical considerations adhered to in the study including data validity, reliability and research limitations.

3.2 RESEARCH DESIGN

3.2.1 A research design as described by Griffee (2012:44) being a blueprint for a research study. Many researchers (e.g. Saunders, Lewis, & Thornhill, 2013) identifies the exploratory design, descriptive design and the causal- comparative research design and correlation research design as the 5 types of research strategies that can be conserved as a plan for a study. Thesefive determine how data is going to be collected, measured and analysed (Saunders, Lewis, &Thornhill, 2013). The same authors mention that Causal comparative designs make use of experiment or quasi-experimental designs to study comparable groupsto uncover links among variables. Correlations research are referred to as studies in which relationships that appear between variables read discovered by means of correlational statistics (Saunders, Lewis, & Thornhill, 2013). The phenomenon under study cannot be fully dealt with using a single method as highlighted in chapter One because of its multifaceted nature. Dealing with aspects such as relationship between lecturers' knowledge and skills of e-pedagogics, constructivism theory and quality of learner performance during the execution of e learning in the context of this study require the mixed research designthat which combines both quantitative and qualitative investigation all in one (Tashakkori & Creswell, 2007; McMillan & Schumacher, 2010).Creswell and Plano (2011) identifies four main styles of diverse methods research designs comprising of triangulation, embedded design, and exploratory sequential and explanatory sequential design as follows:

- Triangulation Design entails collection of quantitative and qualitative data separately and analysizing the data within same timeframe. The data is then merged during interpretation for validating or confirming findings from one of the methods to completely understand the phenomenon under study.
- Embedded Design is done in form of an experiment whereby conclusive results of one fraction (e.g. qualitative) used to give support findings from quantitative methods. This design can be used to develop complete understanding of interventions.
- Exploratory Sequential Design refers to a qualitative study performed in the initial phase to inform a quantitative study conducted in the second phase. Qualitative findings used to expand a quantitative instrument or theory development when hypothesis from qualitative findings validated or tested using quantitative methods.
- Explanatory Sequential Design is a chronological design where the quantitative study, can be conducted first, to inform, confirm, elaborate or clarify findings of the qualitative study conducted in the second phase or vice versa (Creswell & Plano Clark, 2007, 2011).

The temperament of this study fits the explanatory sequential mixed methods studybecause of its prospective value of combining qualitative and quantitative methods in enhancing the study's rigor and quality (Creswell & Plano Clark, 2011). In this study, the explanatory sequential mixed method design (Quantitative-qualitative) whereby statistical (quantitative) results from a sample are going to be obtained first. These are then thenfollowed by interviews (qualitative) which are going to be exploring the quantitative results in detail (Creswell & Plano Clark, 2007, 2011). The researcher made use of the qualitative interviews to elaborate the quantitatively exploring the perceptions of lecturers and perceptions of participants on the link between lecturers' knowledge and skills of e-pedagogies, constructivism theory and quality of learner performance during the implementation of e-learning. Thus, saying, that the research will operate largely within one dominant paradigm (QUAN →qual) sequential design where, the quantitative being the dominating phase comes first by means of questionnaires (McMillan & Schumacher, 2010:401). This is followed by the qualitative phase, which will be appropriateto focus group interviews with less weight (McMillan & Schumacher, 2010:401).

2.2 Research Philosophy

Linked to the above design from a theoretical point of view, Lankoski and Björk (2015:152) exposed three research philosophies namely; quantitative (positivist), qualitative (phenomenological) or the triangulation (mixed) both quantitative and qualitative approaches. Brymer and Schweitzer (2017:66) delineate phenomenology as a research that serve the purpose of gaining an understanding of participants' real life experiences, through analysis of the world they are currently living in. For this reason, the same philosophy is also referred to as the interpretive with the implication that the researcher interprets the roles and behaviour of individuals according to their own vision of the world (Saunders, Lewis and Thornhill (2009:151). Conversely, Saunders, Lewis and Thornhill (2009:151) state that a positivist methodology is a quantitative approach duringthe measurement of most ideal components when the research is objective. A survey is one of the commonly used positivist research strategy. Phenomological research strategies include a case study, action research, grounded theory and ethnography. Mixed methods research involves combined research strategies from the above two paradigms in one single research design (Saunders, Lewis and Thornhill (2009:151). It is in this regard, a mixed method approach consisting of both phenomological and positivist approaches (quantitative and qualitative) is imperative towards this study as it also allows the researcher to gain a deeper understating of the research problem (Duckham & Schreiber, 2016:59 and Povee & Roberts, 2013:29).

During the quantitative phase of this study, a survey in this research included a sample selected from the lecturers in Higher Institutes of learning by use of questionnaires in order to determine their perceptions on the effectiveness of e learning on quality teaching and learners' performance. The qualitative phase is going to make use of a case study by means of focus group interviews in order to give an in-depth investigation of the research question to collect supplementary data that is going to elaborate or confirm quantitative findings (Saunders, Lewis and Thornhill 2009).

Research Approach

Two distinguished approaches can be used to answer research questions, the inductive or the deductive research (Saunders, Lewis & Thornhill 2009). The researcher may choose the interpretive-inductive (qualitative) approach whereby he/she starts by observing before arriving at possible explanations or opt for hypothetic-deductive (quantitative) approach where the starting point is a theory or a hypothesis. In order to give this study full attention as already highlighted above, this study is going to apply both approaches.

The rationale for using the mixed method

This researchdeemed it necessary to merge both quantitative and qualitative methods because it because of the nature of the complexity of the phenomenon that is being dealt with. The justification for choosing the chronological mixed technique design stems from the need to examine, without prejudice by means of quantitative research methods the relationship and association between the identified variables comprising of e-learning, e-pedagogies, constructivism and quality of learners' performance (Ivankova, Creswell, Plano Clark, Gutmann & Hanson, 2007). This is followed byilluminating, detailing and enhancing subjectively the quantitative results (Greene, Caracelli, & Graham, 1989, Greene, 2007; Creswell, 2008:49). This will be done by means of the descriptivechronological design whereby quantitative data are collected and analysed first; these steps will be followed by collecting and analysing qualitative data before interpreting and synthesising both results (Cresswell, Plano Clark, Gutmann & Hanson, 2006: 269-270; Creswell 2012, 2013). The rationale is based on the principle of complementarity and triangulation as anticipated by Greene, Caracelli, and Graham (1989) and Greene (2007). The principle of complementarities in this research, sought to elaborate, enhance, demonstrate and clarify the quantitative results through the use of a qualitative study (Creswell & Plano Clark, 2011). The principle of triangulation involve supporting, confirming, substantiating and matching quantitative results with qualitative findings (Flick, 2002:227).

From a hypothetical point of view, this research used both positivists and post positivists research approaches with a hope of accumulating enough information and evidence to conduct this research.

3.3 QUANTITATIVE SURVEY RESEARCH PHASE

The quantitative research phase

The quantitative phase in this study was e done by means ofway of collecting numerical data using questionnaires from selectedillustrationsin order to respond tothe research questions. This researchwill quantifydiscernment of lecturers and collected data will then be transposed into numeric numbers making use of a formal, objective and a process that is systematic to obtain information and describe variables comprising of e-learning, e-pedagogics, constructivism, quality of teaching and learning and their relationships as advocated by McMillan &Schumacher (1993). The rationale tochoose this quantitative research as one of the research approaches is because its more structured, definite and objective (McMillan & Schumacher, 2010:395).Reliability is also high (McMillan & Schumacher, 2010:395).

Research Population (The quantitative phase)

Burns and Grove (2007:236) and Bryman et al. (2014:170) define the target population as the entire collection of respondents who meet the expected characteristics of from which a sample is to be selected. In this study, the target population include lecturers from private Higher Institutions of learning in South Africa. According to the register of private higher education institutions (DHE, 2016) there are 96 registered private institutions of higher learning in the nine provinces of South Africa. Approximately 45 of these institutions are located in Gauteng. This study has focussed mainly on lecturers in institutions located in Gauteng mainly Johannesburg basing on the reason that most colleges are established around that area apart from the fact that it is also a cost and time saving measure. It was also considered that targeting this population would provide relevant information and responses for this study.

3.4 Sample

3.4.1 The quantitative phase Sampling Method

Sampling is the course of action used in selecting a fraction of a number of applicants for a study from a relevant population in such a way that they represent the larger group from which they were selected so as to ensure generalisation of research results (Rubin & Babbie, 2008; Burns and Grove,2007; Bryman et al., 2014). Probability and non-probability

are the only two distinguishable sampling methods in research (Gay & Airasian, 2003). Non-probability sampling strategy is not much concerned with the fact that each population gets equal chances of being sampled (Gay & Airasian, 2003; Bryman et al., 2014). This research makes full use of probability sampling that which is characterised by four sampling strategies namely simple random sampling, systematic sampling, stratified sampling and clustered sampling Gay & Airasian, 2003; Bryman et al., 2014). According to the same authors, the following are the characteristics of each of the different forms of probability sampling.

Random sampling: Each population element has an equal chance of being selected into the sample. Sample drawn using random number table/generator.

Systematic Sampling: This process involves selecting an element of the population at a beginning with a random start and following with every element.

Stratified sampling: Dividing the population into sub-populations or strata and use simple random sampling on each stratum

Cluster: Population is divided into internally heterogeneous subgroups.

During the quantitative phase of this research, simple randomising was found suitable in order to establish the population fragment. Thisgoes into the sample based on the principle that whichever member of the population is included in the sample is there purely by chance and each and every member of the population must stand an equal chance of being selected in the sample (Gay & Airasian, 2003:101).

3.4.2 Sample size (The quantitative phase)

In this study, prior to the sampling, the researcher had to ensure that there was enough familiarisation with the principles that guide the process of sample selection as well as representativeness. This study therefore followed Anderson (1990:200) who stipulates that researchers should come up with a sample that is representative by means a statistical technique called the level of significance of .05 or .01.This according to the same author ensures that characteristics of the sample are maintained at not more than 5%or 1% in accordance with the theoretical sizes for different sizes of population and 95% level of confidence. This study therefore complied with Anderson (1990:200) by proposing the samples for target population, at a confidence level of 95%. In this regard, 80 lecturers were selected from 10 higher institutes of learning in Johannesburg to represent the quantitative phase. In the context of this research, the list of all private institutions of higher learning

were provided in a convenient electronic format which made the sampling process easy (McMillan and Schumacher, 2001:170).

3.5 Data CollectionMethods (The quantitative phase)

This study utilized questionnaires for quantitative data gathering method, due to reasons outlined in chapter one. The choice of data- collection methods for the researcher working from a quantitative approach basis can be categorized into questionnaires, checklists, indexes and scales (Strydom, Fouche & Delport, and 2005:166).

3.5.1 The Research Instrument: The questionnaire

According to Neuman (2000: 516), a questionnaire is a manuscript written in a survey research consisting set of questions given to respondents. There are several styles of questionnaires, that which include mailed questionnaires, personal questionnares, hand delivered questionnaires, telephonic questionnaires, and group-administered questionnaires (Strydom, Fouche & Delport, 2005:166-169). The researcher will utilise both self-administered and mailed questionnaires because they save time, reduce financial costs, ensures anonymity, easy access to respondents, and ensures reliability (Best & Kahn, 1993; Neuman, 2000:271-272).

3.5.1.1 **Instrument development**

The questionnaire in this study was developed, and piloted before administering it. The procedure on instrument development followed by this study was the one advocated by Borg and Gall (1989:423) whereby objectives have to be defined, selecting a sample as already done, ensuring that item are written, constructing the questionnaire, pretesting it , preparing a transmittal letter sending the questionnaire and making follow ups.

In this study,a pre-coded questionnaire to answer the following research questions derived from the research objectives was developed:

- What are the perceptions of lecturers regarding their understanding of E-learning, e-pedagogic, constructivism and quality of learners' performance?
- What is the effectiveness of implementing E-learning in relation to the level of the lecturers' level of knowledge and skill in e-pedagogic?
- What is the effectiveness of the implementation of E-learning as related to the constructivist's theoretical framework?
- What is the relationship between lecturers' knowledge and skills of e-pedagogic, implementation of the constructivism theory and quality of learner performance?

- Which developmental intervention strategies can be recommended to solve e-learning implementation challenges aimed at linking and blending teachers' knowledge and skills of e-pedagogic, implementation of the constructivism theory and quality of learner performance?

Part 1: Demographic information

Perceptions of lecturers regarding their understanding of E-learning, e-pedagogics, constructivism and quality of learners' performance?

Part 2:

Section A:
Perceptions on the effectiveness of implementing E-learning in relation to the level of the lecturers' level of knowledge and skill in e-pedagogics.

Section B

Perceptions on the effectiveness of the implementation of E-learning as related to thee-pedagogics.

Section C.

Perceptions on the relationship between lecturers' knowledge and skills of E-pedagogics, implementation of the constructivism theory and quality of learner performance

Section D
Perceptions on the effectiveness of eLearning as linked to the instructor's knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of learners' performance

Section E.

Perceptions on the developmental intervention strategies can be recommended to solve e-learning implementation challenges aimed at linking and blending teachers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance.

In this study, the questionnaire is compiled after a thorough review of the literature and following the above construction ethics. In this study, an expert was consulted in questionnaire development, making use of the professional guidance, all the necessary

changes were made and a suitable sample found to pilot the instrument after which small changes were made to make it more user-friendly.

3.7 Reliability and validity

In quantitative research, Validity is the extent to which the instrument is believed Ameasures what it is expected to measure by the researcher (Ary, Jacobs & Sorenson 2010:228). Cohen, Manion and Morrison (2002:117) believe that a reliable instrument records similar data from similar respondents over time in any research. Taking this view into consideration, this study, increased reliability, by way of pilot-testing (Neuman, 2000:166).

3.7.1 Pilot study

The reason for conducting a pilot study is to classify the feasibility of a research for the purpose of identifying and establishing strengths of the instrument in terms of the research technique in order to make an improvement (Huysamen, 1990:235). In this research,pre-testing of the instrument will be performed from a niche random sample comprising of 10 participants. This is the reason why this study during the pre-testing left space for comments from respondents on the questionnaires on whether or not there was need to make any changes to the questioning techniques (Borg & Gall, 1989). This was aimed at convalescing validity (Delport & Fouche, 2011). By so doing, the researcher will be in a position of having a general overview of the quality of the questionnaire. The selected group for the pilot study was not part of the main study. Based on the outcome of the pilot study, experts on questionnaire development will be consulted and the following changes were made:

Quantitative data analysis

In this project, both descriptive (Graphs, frequency tables) and inferential statistics (chi-square and correlation coefficient) (Rubin & Babbie, 2008),exposed data patterns and relationships that enabled the researcher to address an assortment of sub-problems and eventually the whole research question which involves perceptions on the effectiveness of eLearning as linked to the instructor's knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of learners' performance.

THE QUALITATIVE RESEARCH PHASE

The qualitative phase made use of focus groups interviews which according to Babbie;(2013:349) rely on group members interaction while discussing a topic of concern from a researcher. Creswel (2003:188) mentions that focus group interviews make use of

unstructured and open-ended type of questions intended to elicit views, perceptions and opinions from participants. These questions were facilitated and guided by a discussion leader (Cloete, 2008:83), so as to seek a variety of people's feelings or ideas about a certain topic, establish differences between groups of people better, discovering what influences how people's behaviour, feelings or perception of certain circumstances; initiating ideas to come up from the participants and there is need to pilot a research study (Krueger & Casey, 2000:24-25)

Given, the main purpose of this study was to get a comprehensive insight about the perceptions of eLearning effectiveness as linked to the instructor's knowledge and skills of e-pedagogy, implementation of constructivism theoretical approaches and quality of learners' performance, through means of choosing the strategy, the focus group interviews provided the researcher with an opportunity to ask probing questions that led to a clear understanding and insight of regarding lecturers' experiences, perceptions, feelings and understandings (Hatch, 2002:6) of the topic. . The advantage of using focus group interviews is also because of its potentiality in creating a social environment where members are stimulated by the ideas of each other as a way of increasing the quality and richness of data than one-on-one interviews (McMillan & Schumacher, 1997:453). The other noted advantages of using focus group interviews is that there is high level of face validity, there is speedy and accuracy in collecting the results and the ways of collecting the data are not rigid (Krueger,1988:47).

Sampling of focus group members

Researchers have confirmed that probability-sampling methods are not suitable for choosing focus groups participants (Babbie, 2013:349)) This is because of their lack of representation of any meaningful population (Babbie, 2013:349). In this study, purposive sampling method was done making use of the same population, which representedthe quantitative questionnaires. Each focus group comprised of 10lecturers from different institutions making ten participants per each interview session. This option was due to the stipulations that focus group interviews should have numbers ranging from six to ten participants Strydom, Fouche & Delport, 2005.305).

. This is done in order to have a manageable group and give enough room active participation of every member, in the process of provoking varied responses by the interviewer (Strydom, Fouche & Delport, 2005.305).

For convenience purposes, the researcher used two focus group interviews fromfive institutions. Because of the view that one focus group is not enough to have variety of

perspectives (Strydom, Fouche & Delport, 2005.305). Limited financial resources and time were some of the factors considered for this choice.

Approaches to focus groups

According to Calder (quoted in Nyamathi & Shuler, 1990:1283) there are three distinguishable approaches to focus groups, which are categories as follows:

- The exploratory approach: In this approach, the focus groups are less structured and mostly used in conducting pilot-tests of qualitative research with the purpose of generating hypotheses that is theoretically biased for making potential research;
- The clinical approach: This is a traditionally applied approach to focus group interviews used to collecting information onhow participants' experienced certain practices which are then interpreted in a clinical or scientific by an expert or a qualified professional;
- The phenomenological: When there is need for understanding how participants' daily experiences the phenomenon under study, this approach is the best.

Basing on the grounds of understanding the participants every day experiences and encounters regarding e learning, this study pursued the phenomenological approach.

In this study, the development of the questions and the interview guide/schedule focused on the following central topics:

Piloting focus groups

In the context of this study, first focus group interview was regarded as the pilot group. The second focus group interview sessions made improvement particularly on probing techniques.

Conducting the focus group

Analysing the data

During the focus group interviews, recording of the sessions by a video tape was done, as well as field notes taken. The transcribed video tapes provide all the recorded discussions from all two focus group interviews, which were used for data analysis according to the interview guide (Babbie, 2013:350). A long table approach was used where all data were coded and sorted and the computer used for analysis (Krueger & Casey 2000:132). Analysis in this study will involve drawing together and comparing discussions of similar themes and examining how these relate to the variation between individuals and between groups (Kitzinger &Barbour, 1999:16).During the interview process, notes were taken taking into

consideration the seating arrangements, how the people spoke thus, including voice recognition, nonverbal behaviours such as eye contact, posture and gestures, themes that were striking and highlighting as much of the discussion as possible while attention was also given to the dynamics that took place in a group. (Morgan and Krueger, 1998:3-7). In fact, this study followed a systematic thematic analysis approach as advocated by Tucket, (2005) and Riessman, (1993) as illustrated by the table below:

+

Phases of Thematic Analysis

Phase	Description of the process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Adapted from Clarke, Burns and Burgoyne (2005: 36)

Chapter 4: Data Analysis

Introduction

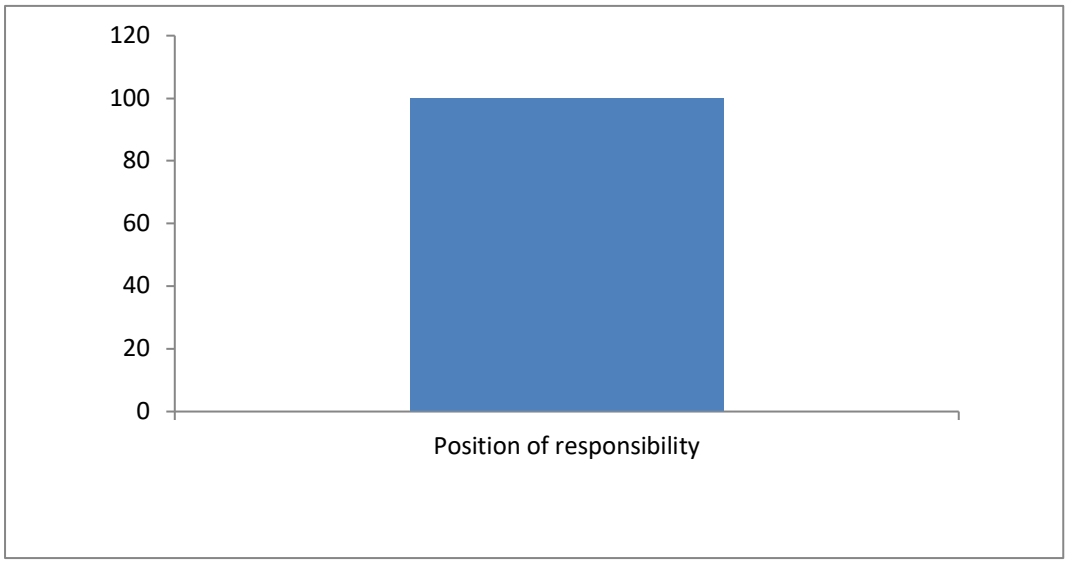
In this chapter, an analysis of data collected from registered Higher institutions of learning in the Gauteng province was analysed. Discussion of these findings will be based on responses of the 62 out of 80 lectures who completed the questionnaires sent to them. Data in this quantitative phase was collected using questionnaires in order to answer the questions below:

- What are the perceptions of lecturers regarding their understanding of E-learning, e-pedagogics, constructivism and quality of teaching and learning?
- What is the effectiveness of implementing E-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics regrading improving quality of teaching and learning in South African private institutions of Higher learning?
- What is the effectiveness of the implementation of E-learning as related to the constructivist's theoretical framework regarding improving the quality of teaching and learning in South African private institutions of Higher learning?
- What is the relationship between lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning?
- Which developmental intervention strategies can be recommended to solve e-learning implementation challenges aimed at linking and blending teachers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning?

The researcher made use of descriptive statistics comprising of frequency tables, graphs and parametrical statistical techniques for the quantitative data analysis. Part Ielicited data about the respondents' biographical information including position of responsibility, gender, age group, experience on the post of the above responsibility, marital status, the level of education (the highest qualification) and race group which are relevant to the objectives of the study.

4.1. **Section A: Biographic and general information**

Figure 4.1: Analysis of respondents according to position of responsibility



Results of Figure 4.1 indicates that all of the respondents (100%) were Lectures. This was significant to the study sinceits focus was mainly onlecturers who are directly linked to the implementation of e-learning during the teaching and learning process.

Figure 4.2: Analysis by gender

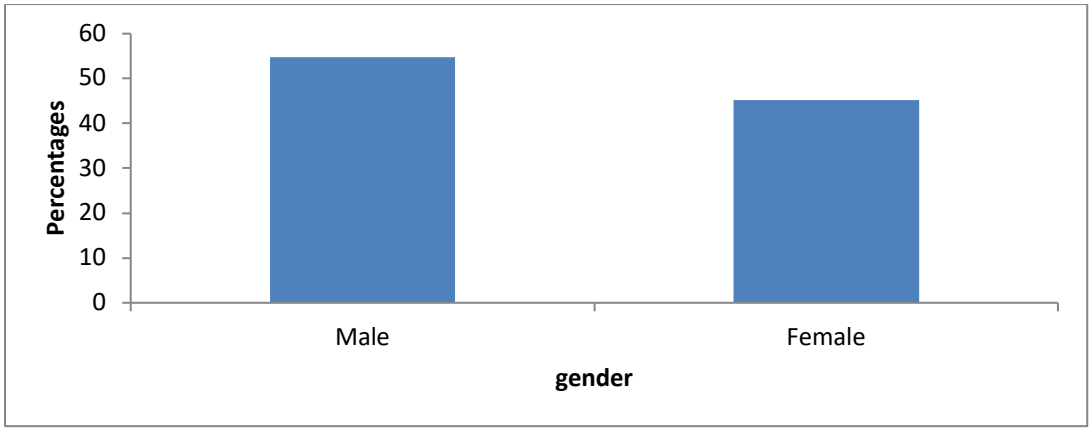
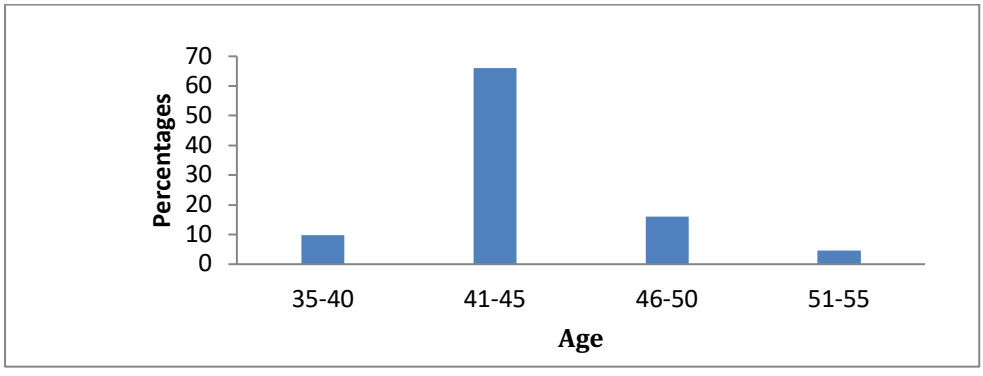


Figure 4.2 shows that of the 62 participants, 54.8% were males and 45.2% were females. That shows that male lecturers are more than female Lecturers.Although imbalances regarding gender are noted, this had no effect at all on the findings. In actual fact, this form of distribution allowed the researcher to collect varies and wider perceptions lecturers of different gender.

Figure 4.3: Analysis by age



In the Figure above (Figure 4.3), 9.7% of the participants were between the ages of 35-40, 66.1%. between 41-45, 16.1% between 46-50 and 8.1% were between the ages of 51-55. The distribution was suitable to the study considering that age sometimes goes with experience, professional maturity and exposure in both traditional modes of curriculum delivery and modern methods of teaching characterised by e-learning. The distribution also

gave this research an opportunity to helped to get a wider views and opinions from lectures of different age groups

Figure: 4.4 :Analysis by Marital status

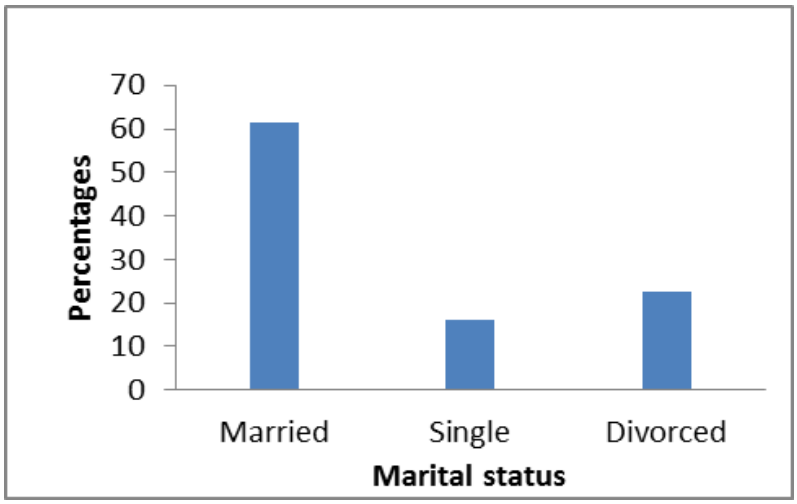
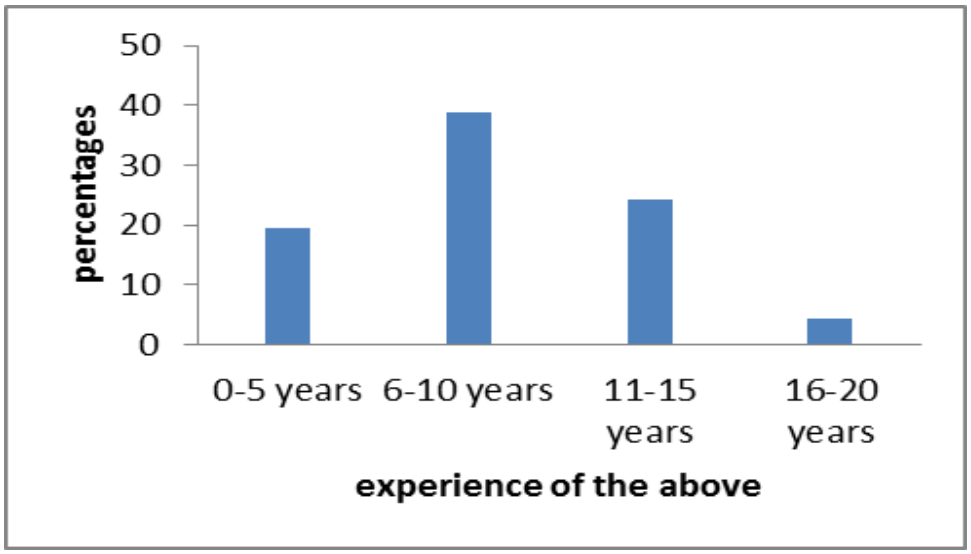


Figure4.4 above indicates that, 61.3% of the respondents are married, 16.1% were unmarried, and 22.6% were divorced. The distribution was necessary just to get a wider selection of different views of lecturers of different marital status.

Figure 4.5: Analysis by experience of the above



This figure 4.5 show the experience of the respondents in their occupational field. The majority of the respondents had 0 to 5 years of experience. 38.7% had 6 to 10 year of

experience. 24.2% had 11-15 year of experience and 17.7% had 16 to 20.This distribution was necessary and relevant for the study considering that knowledge and skills of curriculum development and curriculum implementation goes with experience.

Figure 4.6: Analysis by level of education

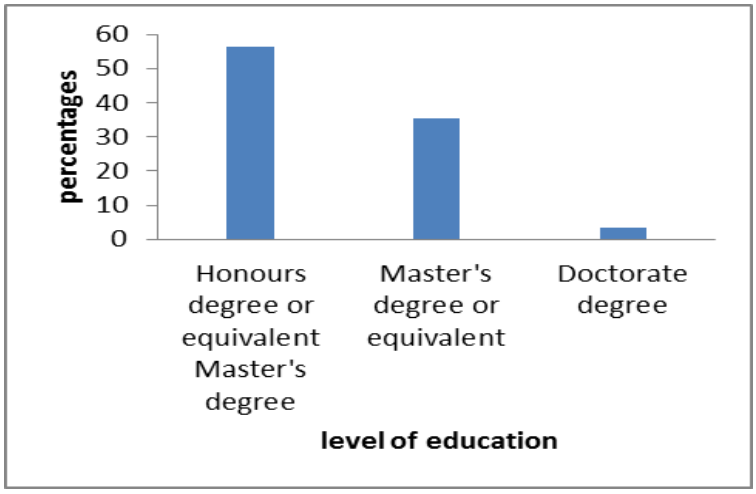
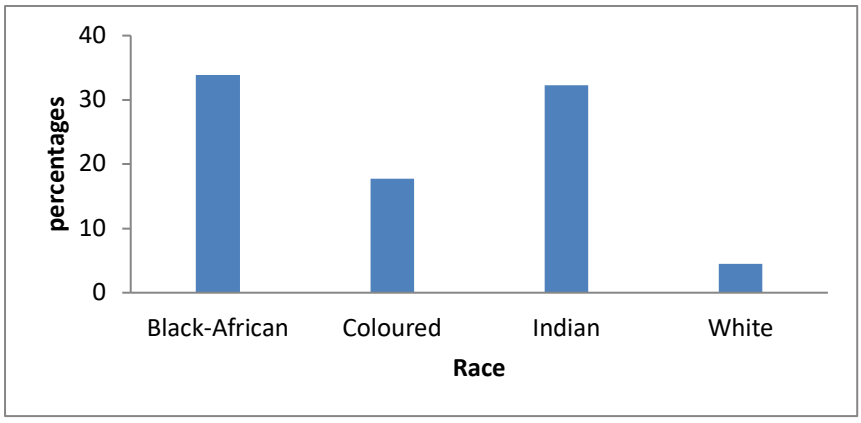


Figure 4.7 indicates that 56.5% obtained an honours degree, 35.5 had a Master's degree and 8.1% had a Doctorate degree. There is an indication that the lectures were in possession of the minimum requirement for a lectureship posts which is an honours degree. This also helped the researcher collect information from lecturers of different levels of qualifications.

Analysis by race



Of the 62 participants, 33.9% were Black-Africans, 17.7% were coloureds, 32.3% were Indians and 16.1% were whites. The results indicate that there were more black lecturers than whites and Indians. The imbalances do affect the study. These results provided a wider perceptions of responses from backgrounds of different races.

Peart Two

Objective one: Investigating the perceptions of lecturers regarding their understanding of E-learning, e-pedagogics, constructivism and quality of teaching and learning from a global and South African perspective.

The researcher started by investigating the perceptions of lecturers regarding their understanding of thefollowing componentsof e-learning from a general perspective:

- Pedagogy
- e-pedagogy,
- constructivism theoretical framework
- quality of teaching and learning

This section consists of 4 variables, each of which was analysed independently using frequency tables. The frequency tables below show responses of the lecturers regarding their perceptions on the extent to which they agree or disagree to the provided definitions of the elements of e-learning

To what extent do you understand do you agree or disagree that the following are the meanings of the components of e-pedagogics as related to e-learning?

Frequency Tables

Table 4.1: Pedagogy is a scientific field of study of the process of education in terms of teaching and learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	31	50.0	50.0	50.0
	Agree	18	29.0	29.0	79.0
	Undecided	7	11.3	11.3	90.3
	Disagree	4	6.5	6.5	96.8
	Strongly Disagree	2	3.2	3.2	100.0
	Total	62	100.0	100.0	

Table 4.1 indicates that 50% (N=31) of the respondents strongly agreed and 29% (N=18) agreed that Pedagogy is a scientific field of study of the process of education in terms of teaching and learning. These results illustrate that majority of lecturers understood the meaning of pedagogic from a theoretical perspective.

Table 4.2: E-pedagogy: a branch of pedagogy that enhances learning technologies in order to improve didactic approaches

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	32	51.6	51.6	51.6
	Agree	15	24.2	24.2	75.8
	Undecided	10	16.1	16.1	91.9
	Disagree	2	3.2	3.2	95.2
	Strongly Disagree	3	4.8	4.8	100.0
	Total	62	100.0	100.0	

Table 4.2 indicated that of the 62 respondents, 51.6% (N=32) strongly agreed and 24.2% (N=15) agreed that e-pedagogy is a branch of pedagogy that enhances learning technologies in order to improve didactic approaches. From these results, it can be obtained that majority of the lecturers had an understanding that e-pedagogy is an element of e-learning that is geared towards improving a number of learning approaches.

Table 4.3 Constructivism: construction of knowledge with interpretations including active learning

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly Agree	27	43.5	43.5	43.5
	Agree	20	32.3	32.3	75.8
	Undecided	8	12.9	12.9	88.7
	Disagree	5	8.1	8.1	96.8
	Strongly Disagree	2	3.2	3.2	100.0
	Total	62	100.0	100.0	

The findings in table 4.3 show that 43.5 % (N=27) of the respondents strongly agreed and 32.3% (N=20) agreed that constructivism involves the process of construction of knowledge whereby active learning is stimulated by application of interpretative skills.

Table 4.4: Quality of teaching and learning: correspondence that exists between the expectations of the national educational standards, the teachers and learners regarding curriculum implementation and development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	24	38.7	38.7	38.7
	Agree	18	29.0	29.0	67.7
	Undecided	12	19.4	19.4	87.1
	Disagree	5	8.1	8.1	95.2
	Strongly Disagree	3	4.8	4.8	100.0
	Total	62	100.0	100.0	

Results of Table 4.4 shows, 38.7% (N=24) of the respondents strongly agreed and 29.0 % (N=18) agreed that quality of teaching and learning is the correspondence that exists between the expectations of the national educational standards, the teachers and learners regarding curriculum implementation and development. These results comprise the majority of the respondents.

Investigating the perceptions of lecturers regarding their understanding of E-learning, e-pedagogics, constructivism and quality of teaching and learning from a South African perspective.

Objective one of the study was finalised by investigating perceptions of lecturers regarding their knowledge and practical skills of E-learning, e-pedagogics, constructivism and quality of teaching and learning from a South African perspective based on the following elements of e-learning in the context of this study.

- Pedagogy
- e-pedagogy,
- constructivism theoretical framework
- quality of teaching

To what extent do you agree that the levels of the South African lecturer' skills and knowledge comply with the following characteristics of e-pedagogics as related to e-learning?

Table 4.5 : Pedagogy is a scientific field of study of the process of education in terms of teaching and learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	4.8	4.8	4.8
	Agree	4	6.5	6.5	11.3
	Undecided	12	19.4	19.4	30.6
	Disagree	20	32.3	32.3	62.9
	Strongly Disagree	23	37.1	37.1	100.0
	Total	62	100.0	100.0	

Table 4.5 shows that 37.1% (N=23) of the respondents strongly disagreed and 32.3% (N=20) disagreed that that the levels of the South African lecturer' skills and knowledge comply with the concept of pedagogy as a scientific field of study of the process of education in terms of teaching and learning. These results reflectthe majority of the respondents

Table 4.6: E-pedagogy: a branch of pedagogy that enhances learning technologies in order to improve didactic approaches

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	4.8	4.8	4.8
	Agree	2	3.2	3.2	8.1
	Undecided	11	17.7	17.7	25.8
	Disagree	19	30.6	30.6	56.5
	Strongly Disagree	27	43.5	43.5	100.0
	Total	62	100.0	100.0	

In the table above (Table 4.6), it is indicated that 43.5% (N=27) strongly disagree and 30.6% (N=19)of respondents disagree that e-pedagogy is a branch of pedagogy that enhances learning technologies in order to improve didactic approaches in accordance withthe levels of the South African lecturer' skills and knowledge. These results reflect the majority of the respondents.

Objective Two: Investigating the perceptions of lectures regarding the effectiveness of implementing of E-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics on enhancing quality of teaching and learning in South African Private institutions of higher learning.

The researcher started by applying the coefficient in order to test of the strength of the relationship between quality of education, curriculum development and curriculum implementation. When the results show that the pvalue is less than 5% ($p < .05$), the null hypothesis is rejected (Best & Khahn, 1993). The null hypothesis is confirmed only when there is an indication that the p value is greater than 5% ($p > .05$). It is important to note that Significance is a statistical word used to make a decision as whether to reject or not the null hypothesis (Best & Khahn, 1993). Cross-tabulation was used for the correlation analysis.

What is the relationship between quality of teaching, curriculum development and curriculum implementation?

hypothesis was tested according to the following statement:

Ho: There is no relationship between quality of teaching, curriculum development and curriculum implementation.

Table 4.7: A Cross-tabulation will be used to analyse correlation for comparison of two sets of variables within the sample

Correlations

		Quality of teaching and learning	Curriculum development	Curriculum implementation
Quality of teaching and learning	Pearson Correlation	1	.966**	.994**
	Sig. (2-tailed)		.000	.000
	N	62	62	62
Curriculum development	Pearson Correlation	.966**	1	.970**
	Sig. (2-tailed)	.000		.000
	N	62	62	62
Curriculum implementation	Pearson Correlation	.994**	.970**	1
	Sig. (2-tailed)	.000	.000	
	N	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed).

All the variables in table 4.7 are significant since the P-value is less than 0.05. The correlation between quality of teaching and curriculum development and curriculum development is (R=0, 966). The correlation between quality of teaching and learning and curriculum implementation (R=0.994) and that of curriculum development and curriculum implementation (R=0.970). This indicates that relationships are strong. The null hypothesis is therefore rejected because the *p* value is less than 5% ($p < .05$). This means that there is generally a is a strong relationship between quality of teaching, curriculum development and curriculum implementation. In other words, curriculum development and quality improvement are the important components of quality teaching in the context of this study.

For as much as the results above show a positive correlation in curriculum planning, curriculum implementation and quality of teaching, individual analysis of the same variables indicate a different picture in the South African education context. Surprisingly, the frequency tables below confirm that the majority of the respondents strongly disagreed and disagreed that there is no positive relationship between the South African lecturers' knowledge and skills of e-pedagogics and the principles of quality teaching and learning comprising of curriculum development and curriculum implementation.

To what extent to you agree that the South African lectures lecturers' knowledge and skills of e-pedagogics have a positive influence on the following principles of quality of teaching and learning?

- Curriculum development
- Curriculum implementation

Table 4.8: Curriculum implementation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	2	3.2	3.2	3.2
	Agree	6	9.7	9.7	12.9
	Undecided	11	17.7	17.7	30.6
	Disagree	21	33.9	33.9	64.5
	Strongly Disagree	22	35.5	35.5	100.0
	Total	62	100.0	100.0	

Results Table 4.8 above reflects that majority of the respondents (N=22) strongly disagreed and 33.9% (N=21) of the respondents disagreed that the South African lecturers' knowledge and skills of e-pedagogics have a positive influence on curriculum implementation. These results comprise the majority of the respondent.

Table 4.9: Curriculum development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	1	1.6	1.6	1.6
	Agree	4	6.5	6.5	8.1
	Undecided	8	12.9	12.9	21.0
	Disagree	19	30.6	30.6	51.6
	Strongly Disagree	30	48.4	48.4	100.0
	Total	62	100.0	100.0	

In the table above (Table 4.9), it is indicated that 48.4% (N=30) strongly disagreed and 30.6% (N=19) disagreed that the South African lecturers' knowledge and skills of e-pedagogics have a positive influence on curriculum development. These results comprise the majority of the respondents. The implication of the of results of table 4.8 and 4.9 is that the level of the knowledge of e-pedagogics is not matching the skills of curriculum development and curriculum implementation. In other words, the low level of understand and application of skill of e-pedagogics are affecting curriculum development and curriculum

implementation. The results are confirming that the level of understanding and skills of e-pedagogics are negatively affecting the quality of teaching and learning.

Objective Three. Establishing the perceptions of lectures regarding the effectiveness of the implementation of E-learning as related to the constructivist's theoretical framework in South African private institutions of Higher learning

The study found it necessary to start by examining the relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning from a general point of view before contextualising it in the South African perspective. The following hypothesis was tested in response to the following questions:

HO: There is no relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning. As indicated before, the null hypothesis is rejected when the pvalue is less than 5% ($p < .05$).

Table: 4.10

Correlations

	Constructivism theory allows learners responsibility learner constructs knowledge in a meaningful way using technology	The student manipulates technology by applying by applying critical thinking while the teacher acts as a facilitator	Constructivism in e-learning promotes the learner's skills to solve real-life problems and practical problems	Initiates child - centered learning that promotes sustainable accumulation of knowledge and skills.	Constructing knowledge and meaningful concepts through active and personal experimentation and observation	Constructing meaningful knowledge by using social media into e-learning using online collaborative learning	Constructing meaningful knowledge by leaners taking control of their learning through their own goals and objectives in solving problems
Constructivism theory allows	1	.930**	.949**	.939**	.954**	.970**	.978**
		.000	.000	.000	.000	.000	.000

learners responsibility learner constructs knowledge in a meaningful way using technology	62	62	62	62	62	62	62
The student manipulates technology by applying critical thinking while the teacher acts as a facilitator	.930** .000 62	1 62	.935** .000 62	.915** .000 62	.933** .000 62	.908** .000 62	.944** .000 62
constructivism in e-learning promotes the learner's skills to solve real-life problems and practical problems	.949** .000 62	.935** .000 62	1 62	.910** .000 62	.941** .000 62	.953** .000 62	.949** .000 62
Initiates child-centred learning that promotes sustainable accumulation of knowledge and skills.	.939** .000 62	.915** .000 62	.910** .000 62	1 62	.918** .000 62	.919** .000 62	.947** .000 62
Constructing knowledge and meaningful concepts through active and personal experimentation and observation	.954** .000 62	.933** .000 62	.941** .000 62	.918** .000 62	1 62	.948** .000 62	.954** .000 62
Constructing meaningful knowledge by using social media into e-learning using online collaborative learning	.970** .000 62	.908** .000 62	.953** .000 62	.919** .000 62	.948** .000 62	1 62	.961** .000 62
Constructing meaningful	.978** .000	.944** .000	.949** .000	.947** .000	.954** .000	.961** .000	1

knowledge by Learners taking control of their learning through their own goals and objectives in solving problems.	62	62	62	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed).

Findings in the correlation table above (Table 4.10) are all significant (P-value less than0.05). This shows a strong relationship between the paired variables. Just for the purpose of illustration, the correlation between constructivism as a theory that allows learners' responsibility and learners construction of knowledge in a meaningful way using technology and the students' skills of manipulating technology by applying critical thinking while the teacher acts as a facilitator is (R= 0.930). The correlation between "The student manipulates technology by applying critical thinking while the teacher acts as a facilitator" and "Initiates child-centred learning that promotes sustainable accumulation of knowledge and skills" is (R= 0.915).

The null hypothesis is therefore rejected because the *p* value is less than 5% ($p < .05$). This means that there is generally a strong relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning. Below are frequency tables which support the same view from a general perspective.

When asked to share their views regarding the extent to which they agree or disagree that the following are the characteristics of constructivism theoretical framework as related to the implementation of E-learning.

Table 4.11: Constructivism theory allows learners responsibility learner constructs knowledge in a meaningful way using technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	24	38.7	38.7	38.7
	Agree	23	37.1	37.1	75.8
	Undecided	9	14.5	14.5	90.3
	Disagree	4	6.5	6.5	96.8

	Strongly Disagree	2	3.2	3.2	100.0
	Total	62	100.0	100.0	

Findings on fable 4.11 indicates that the majority of the participants represented by 38.7% (N=24) strongly agreed and 37.1% (N=23) agreed that the constructivism theoretical framework as related to e-learning allows learners responsibility and learners to construct knowledge in a meaningful way using technology. These results comprise the majority of the respondents.

Table 4.12 : The student manipulates technology by applying critical thinking while the teacher acts as a facilitator

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	29	46.8	46.8	46.8
	Agree	22	35.5	35.5	82.3
	Undecided	7	11.3	11.3	93.5
	Disagree	2	3.2	3.2	96.8
	Strongly Disagree	2	3.2	3.2	100.0
	Total	62	100.0	100.0	

Table 4.12 shows that 46.8% (N=29) strongly agreed and 35.5% (N=22) agreed that the constructivism theoretical framework in relation to e-learning allows the students manipulate technology by applying critical thinking while the teacher acts as a facilitator. These results represent the majority of the findings.

Table 4.13: constructivism in e-learning promotes the learner's skills to solve real-life problems and practical problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	26	41.9	41.9	41.9
	Agree	17	27.4	27.4	69.4
	Undecided	11	17.7	17.7	87.1
	Disagree	4	6.5	6.5	93.5
	Strongly Disagree	4	6.5	6.5	100.0
	Total	62	100.0	100.0	

The results of Table 4.13 reflect that 41.9% (N=26) and 27.4% (N=17) representing the majority of the respondents strongly agreed that constructivism in e-learning promotes the

learner's skills to solve real-life problems and practical problems. These resultsshow the majority of the respondents.

Table 4.14: Initiates child-centred learning that promotes sustainable accumulation of knowledge and skills.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	20	32.3	32.3	32.3
	Agree	28	45.2	45.2	77.4
	Undecided	10	16.1	16.1	93.5
	Disagree	1	1.6	1.6	95.2
	Strongly Disagree	3	4.8	4.8	100.0
	Total	62	100.0	100.0	

In Table 4.14: It is indicated that the majority of the participants, represented by 32.3% (N=20) strongly agreed and 45.2% (N=28) agreed that constructivism in e-learning initiates child-centred learning that promotes sustainable accumulation of knowledge and skills. These results illustrate that the majority of the respondents.

Table 4.15: Constructing knowledge and meaningful concepts through active and personal experimentation and observation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	27	43.5	43.5	43.5
	Agree	20	32.3	32.3	75.8
	Undecided	12	19.4	19.4	95.2
	Disagree	2	3.2	3.2	98.4
	Strongly Disagree	1	1.6	1.6	100.0
	Total	62	100.0	100.0	

The results of table 4.15 reflect that the majority of the respondents comprising of 43.4% (N=27) strongly agreed and 32.3% (N=20) agreed that constructivism in e-learning aid in constructing knowledge and meaningful concepts through active and personal experimentation and observation.These results reflect the majority of the respondents.

Table 4.16: Constructing meaningful knowledge by using social media into e-learning using online collaborative learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	24	38.7	38.7	38.7

	Agree	21	33.9	33.9	72.6
	Undecided	12	19.4	19.4	91.9
	Disagree	4	6.5	6.5	98.4
	Strongly Disagree	1	1.6	1.6	100.0
	Total	62	100.0	100.0	

The findings of table 4.16 indicates that 38.7% (N=24) respondents strongly agreed and 33.9% (N=21) agreed e-learning aid in constructing meaningful knowledge by using social media into e-learning using online collaborative learning. This comprise the majority of the respondents.

Table 4.17:Constructing meaningful knowledge by Learners taking control of their learning through their own goals and objectives in solving problems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	25	40.3	40.3	40.3
	Agree	23	37.1	37.1	77.4
	Undecided	9	14.5	14.5	91.9
	Disagree	3	4.8	4.8	96.8
	Strongly Disagree	2	3.2	3.2	100.0
	Total	62	100.0	100.0	

In the above table (Table 4.17), it is shown that 40.3% (N=25) respondents strongly agreed and 37.1% (N=23) agreed that in e-learning aid in constructing meaningful knowledge by Learners taking control of their learning through their own goals and objectives in solving problems. These results represent the majority of the findings.

When asked to respond by offering their views on the extent to which they agree or disagree that South African lecturers' knowledge and skills of e-learning in relationship to the constructivism characteristics have a positive influence on the principles of quality education and learning comprising of curriculum development and curriculum implementation, majority strongly disagreed and disagree as indicated by the following frequency table:

Table 4.18: curriculum development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	2	3.2	3.2	3.2

	Agree	6	9.7	9.7	12.9
	Undecided	6	9.7	9.7	22.6
	Disagree	18	29.0	29.0	51.6
	Strongly Disagree	30	48.4	48.4	100.0
	Total	62	100.0	100.0	

Table 4.18 shows that of the 62 respondents 48.4% (N=30) strongly disagreed and 29% (N=18) disagreed that South African lecturers' knowledge and skills of e-learning in relationship to the constructivism characteristics have a positive influence on curriculum development. These responses formed the majority of the respondents.

Table 4.19: Curriculum implementation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	1	1.6	1.6	1.6
	Agree	4	6.5	6.5	8.1
	Undecided	6	9.7	9.7	17.7
	Disagree	21	33.9	33.9	51.6
	Strongly Disagree	30	48.4	48.4	100.0
	Total	62	100.0	100.0	

Table 4.19 indicates that 48.4% (N=30) of the respondents strongly disagreed and 33.9% (N=21) that South African lecturers' knowledge and skills of the of e-learning in relationship to constructivism characteristics have a positive influence on curriculum implementation. This formed the majority of the respondents.

When asked to share their views regarding the extent to which they agree or disagree that the following are the characteristics of constructivism theoretical framework as related to the implementation of E-learning.

Objective Four: Investigating the perceptions of lecturers regarding the effectiveness of e-learning by way of synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning

This section in the context of this study investigated to what extent lectures agree that there is positive relationship between e-learning through the synthesis of the lecturers' knowledge

and skills of e-pedagogics, constructivism theory and the following aspects of quality of teaching and learning:

- Curriculum development
- Curriculum implementation

The other previous sections have investigated the components of e-learning (pedagogics, constructivism) on their relationship to each other and their impact on quality of teaching and learning as separate entities. This section consolidates the main research question by investigating the relationship regarding the effectiveness of the level of knowledge e-learning through the synthesis of the lecturers' knowledge and skills of e-pedagogics, constructivism theory and the characteristics of quality of teaching and learning comprising of curriculum development and curriculum implementation.

The researcher had to do a Cross-tabulation correlation analysis.

From the basic statistics theory, the following hypothesis was tested:

Ho: There is no relationship between e-pedagogics, constructivism, and quality of teaching and learning.

Table 4.20

Correlations

	E-pedagogics	Constructivism	Quality of teaching and learning	Curriculum development	Curriculum implementation
E-pedagogics	1	.741**	.712**	.704**	.765**
		.000	.000	.000	.000
	62	62	62	62	62
Constructivism	.741**	1	.961**	.967**	.961**
	.000		.000	.000	.000
	62	62	62	62	62
Quality of teaching and learning	.712**	.961**	1	.994**	.961**
	.000	.000		.000	.000

	62	62	62	62	62
Curriculum development	.704**	.967**	.994**	1	.957**
	.000	.000	.000		.000
	62	62	62	62	62
Curriculum implementation	.765**	.961**	.961**	.957**	1
	.000	.000	.000	.000	
	62	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.20 indicates that all variables are significant (P-value less than 0.05). This shows that the relationships between the two sets of variables are strong. For example, the correlation between “E-pedagogics” and “Quality of teaching and learning” is (R= 0.712). The one between “e-pedagogics” and “curriculum implementation” is (R=0.765).The correlation between “constructivism” and “e-pedagogics” is (R=0.741). The correlation between “constructivism” and “quality of teaching and learning is (R=0.961). The correlation between “constructivism” and “curriculum development is (R=0.967). The correlation between “constructivism” and “quality of teaching and learning is (R=0.961).

The above results therefore indicate that null hypothesis is rejected. This means that thereis a strong relationship between e-pedagogics, constructivism, and quality of teaching and learning as components of learning in the context of this study. In other words, there is a positiveimpact on quality of teaching of characterised by a lecturer with high level of understanding and skills of e-pedagogics, application of constructivism theoretical. Contrary, there is poor quality teaching and learning, if the same skills are low.

To what extent do you agree or disagree that e-learning is effectiveness by way of synthesising/blending/integrating lecturers’ knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning.

When asked to share their views regardingtheir perceptions of lecturers regarding the effectiveness of e-learning by way of synthesising/blending/integrating lecturers’ knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning, the following frequency table shows the lecturers’ responses.

Table 4.21

Synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	29	46.8	46.8	46.8
	Agree	17	27.4	27.4	74.2
	Undecided	10	16.1	16.1	90.3
	Disagree	3	4.8	4.8	95.2
	Strongly Disagree	3	4.8	4.8	100.0
	Total	62	100.0	100.0	

Table 4.21 above shows that 46.8% (N=29) of the respondents strongly agreed and 27.4% (N=17) agreed that Synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning.

Objective Five: Exploring developmental intervention strategies that can be recommended to solve e-learning implementation challenges aimed at linking and blending teachers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance.

Considering the above aspects, respondents were asked to indicate the extent to which they agree or disagree that the following professional developmental intervention strategies can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning:

Table: 4.22: Total involvement of lecturers and public policy makers in making staff development needs analysis.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	27	43.5	43.5	43.5
	Agree	21	33.9	33.9	77.4
	Undecided	12	19.4	19.4	96.8
	Disagree	1	1.6	1.6	98.4
	Strongly Disagree	1	1.6	1.6	100.0
	Total	62	100.0	100.0	

Table 4.22 indicates that 43.5% (N=27) strongly agreed and 33.9% (N=21) agreed that **total involvement of lecturers and public policy makers in making staff development needs analysis is an** intervention strategy that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning.

Table 4.23: Autocratic approaches to needs analysis and designing professional development policies.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	1	1.6	1.6	1.6
Agree	3	4.8	4.8	6.4
Undecided	9	14.5	14.5	20.9
Disagree	20	32.3	32.3	53.2
Strongly Disagree	29	46.8	46.8	100.0
Total	62	100.0	100.0	

Table 4.23 shows that 46.8% (N=29) of the respondents strongly disagreed and 32.3% (N=20) disagreed that autocratic approaches to needs analysis and designing professional development policies can be an effective strategy for designing professional development policies.

Table 4.24: Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	29	46.8	46.8	46.8
	Agree	18	29.0	29.0	75.8
	Undecided	10	16.1	16.1	91.9
	Disagree	3	4.8	4.8	96.8
	Strongly Disagree	2	3.2	3.2	100.0
	Total	62	100.0	100.0	

In Table 4.24, majority of the respondents, represented by 46.8% (N=29) strongly agreed and 29% agreed that setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation is an effective strategy for e-learning curriculum innovation, development and implementation among lecturers.

PRESENTATION OF THE QUALITATIVE FINDINGS

Focus group interviews

Investigating the perceptions of lecturers regarding their understanding of E-learning, e-pedagogics, constructivism and quality of teaching and learning from a global and South African perspective.

In this study, three focus group interviews were conducted each comprising of 10 lecturers. Pseudonyms represented by the letters of the alphabet were used to represent the respondents ineach of the verbatim comments. As indicated in chapter 4, a long table approach was used where all data was categorised and comparing discussions of similar themes and subthemes as illustrated by the tables below:

Category One:

What is your knowledge and understanding of the following components of e-learning?

When asked to share their views about their understanding of the components of e–learning as the first category of the research question, the responses indicated that they had some basic understanding of the theoretical meaning of e-learning, e-pedagogy, constructivism and the principles of quality teaching and learning. Although the level of understanding was not fully established by then including application of needed skills, the researcher was assured that the respondents were in a better position to answer the research questions.

Table 4.25

Themes Respondents	E-learning	E-pedagogics	Constructivism	Quality of teaching and learning

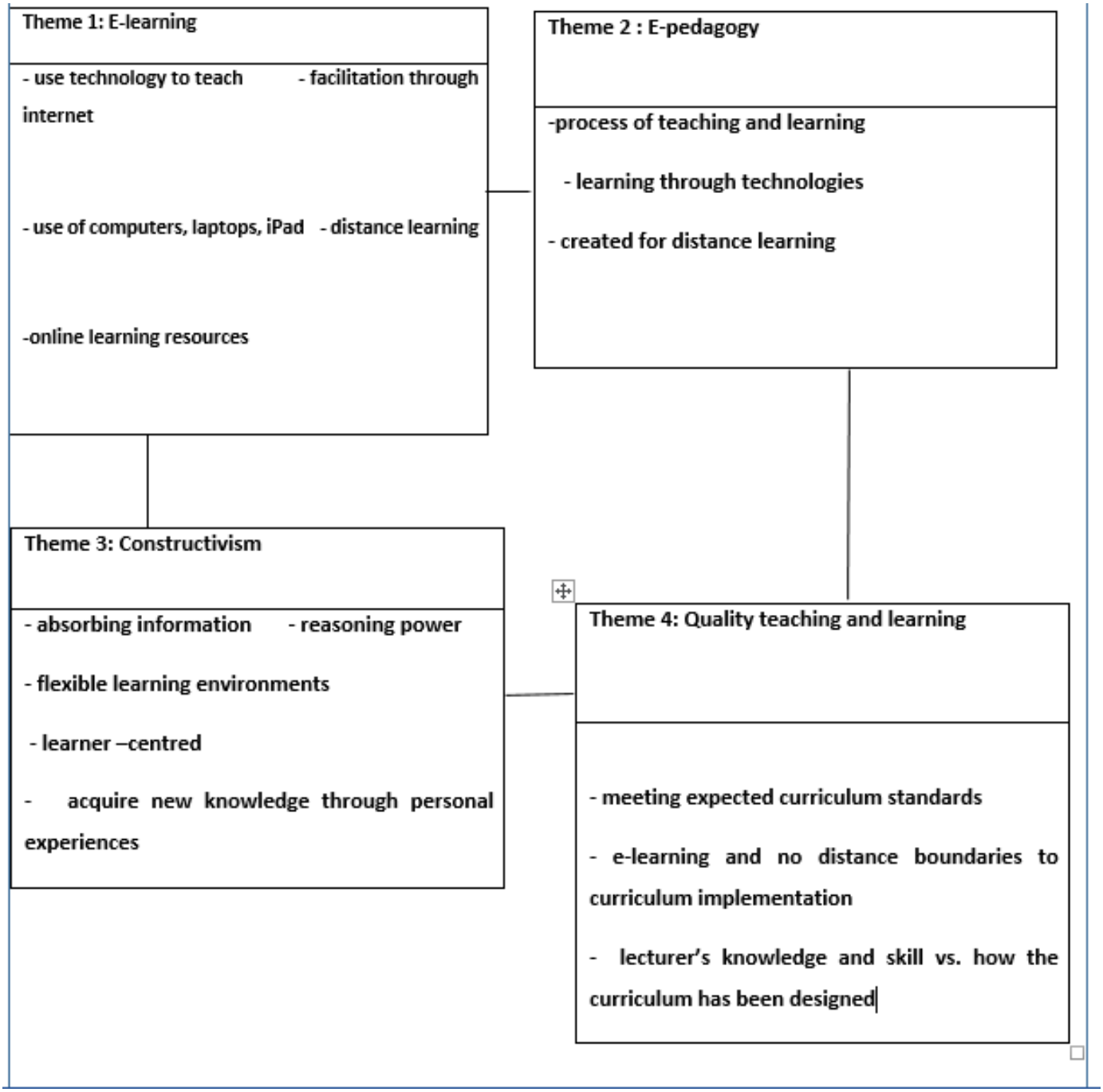
A	**“e-learning is whereby lectures use technology to teach students”**	**“pedagogy is related to the process of teaching and learning”**	**“with constructivism, students absorb information through already existing knowledge”**	**“we could say that quality education as something that is expected to boost or develop students into contributing to the socio economic development of communities”**
B	**“this is a process where knowledge is shared between the student and the facilitator using internet or any other electronic technology”**	**“e-pedagogy involves the use of correct/ appropriate resources in development, such as teaching and learning”**	**“constructivism is something that has to do with the reasoning power of a student in developing knowledge”**	**“learners perform according to how skilled or the amount of knowledge the lecturer compared to how the curriculum has been designed”**
C	**“It’s when you use computers, laptops, iPad and technology to lecture students”**	**“it can be known as pedagogy for learning through technologies as well as knowing how to use the technology”**	**“the methods of constructivism include flexible learning environments”**	**“quality teaching and learning is determined by meeting expected curriculum standards”**
D	**“it is connected to distance learning, used for communicating and sharing**	**“these are methods for teaching a learning using technology to**	**“it focuses on the learners, in other words, it is learner centred”**	**“The more accustomed learners are to technology on a daily basis, the better their understanding”**

	information as well accessing teaching resources through technologies"	**accommodate this generation"**		
E	**"e-learning is absorbing knowledge and skills through internet technologies"**	**"Methods created for distance learning and classes that use technology even in traditional classes"**	**"students are able to get knowledge from things like personal experiences and in that way they are able to acquire new knowledge"**	**"When learners achieve expected goals, it is referred to as quality education"**
F	**"When learners use internet, for example researching on google, etc, that's part of e-learning"**	**"It stands for electronic pedagogy"**	**"Social media is a way of students learning on their own through other people's experiences while at the same time share knowledge"**	**"Whatever method has been used whether just online or blended, if the learners are able to catch the important concepts then that's quality learning"**
G	**"the e in e-learning stands for electronics, so in full it is electronic learning so we use electronics to teach and learn"**	**"the e-learning methods of teaching"**	**"Constructivism is about knowing how to collaborate with other students"**	**"I think the most successful classes are traditional classes, I think that will always bring out quality and the best"**
H	**"using different types of technologies in classrooms , such as the projectors**	**"Just like distance learning they use technology to**	**"Knowing your learning environment"**	**"If the outcome of what has been introduced is good the quality is also good"**

	and Google and the computers and some students have their own laptops"	**learn so we use that kind of method in class"**		
I	**"e-learning is learning using electronic devices"**	**"If we look at blended learning, we realise we have adapted to the type of teaching that involves electronics and so on and that is what we refer to as e-pedagogy"**	**"Maybe knowing how to study on your own and in the way you understand is what it is about"**	**"Because e-learning has no distance boundaries, no student misses any information, therefore cans till bring out the best of results"**
J	**"It is when u can get your learning resources online"**	**"We can say internet plus teaching methods"**	**For example watching news and relating or talking to your peers about the subject**	

As indicated above, although the emerging sub-themes below confirm a theoretical understanding of the background of e-learning components, one could still wonder why implementation of e-learning and quality teaching and learning were still a challenge in the South African context. This however explains why there is also need to understand the difference between understanding and application of specific skills. Below are the emerging sub-themes associated with evidence of the lectures' level of understanding of the basic theoretical meaning of the components of e-learning.

Table 4.26


Theme 1: E-learning
- use technology to teach
- facilitation through internet
- use of computers, laptops, iPad
- distance learning
-online learning resources
Theme 2 : E-pedagogy
-process of teaching and learning
- learning through technologies
- created for distance learning
Theme 3: Constructivism
- absorbing information
- reasoning power
- flexible learning environments
- learner –centred
- acquire new knowledge through personal experiences
Theme 4: Quality teaching and learning
- meeting expected curriculum standards
- e-learning and no distance boundaries to curriculum implementation
- lecturer's knowledge and skill vs. how the curriculum has been designed

Category TWO:

What are your challenges in implementing e-pedagogics, constructivism and quality of teaching and learning in South African private institutions of higher learning?

When the participants in this category were asked to share their views about their challenges regarding the implementation of eLearning in terms of application of e-pedagogics, constructivism theoretical perspective, and quality teaching and learning, the comments in table 4.27 below indicated that there is lack of up skilling sessions, lack of staff development sessions and lack of proper needs analysis as a way of identifying gaps and amending the same gaps for proper coordination of e–pedagogic activities, constructivism principles and essential characteristics of quality teaching and learning. Refer to the table below for supportive comments:

Table 4.27

Theme Respondents	E-pedagogy	Constructivism	Quality of teaching and learning
A	"There are curriculum delivery gaps linked to e-pedagogy skills with curriculum teaching skills"	" I know what constructivism is but linking it to e-pedagogies is a challenge"	" I know that taking education and combining interactive programs with the internet, has created new prospects for the development of instructional resources to deliver the course content, our only challenge here in south Africa is lack of proper skills to do that".
B	"It's not easy to look to improve and integrate teaching and learning effectively if there is no proper training	"Application of constructivism is not a problem to me but resources to use is a challenge"	"We don't have those digital tools to support learning topics in a class as well as support the curriculum by Introducing different teaching ways for each learner's different types of learning needs."

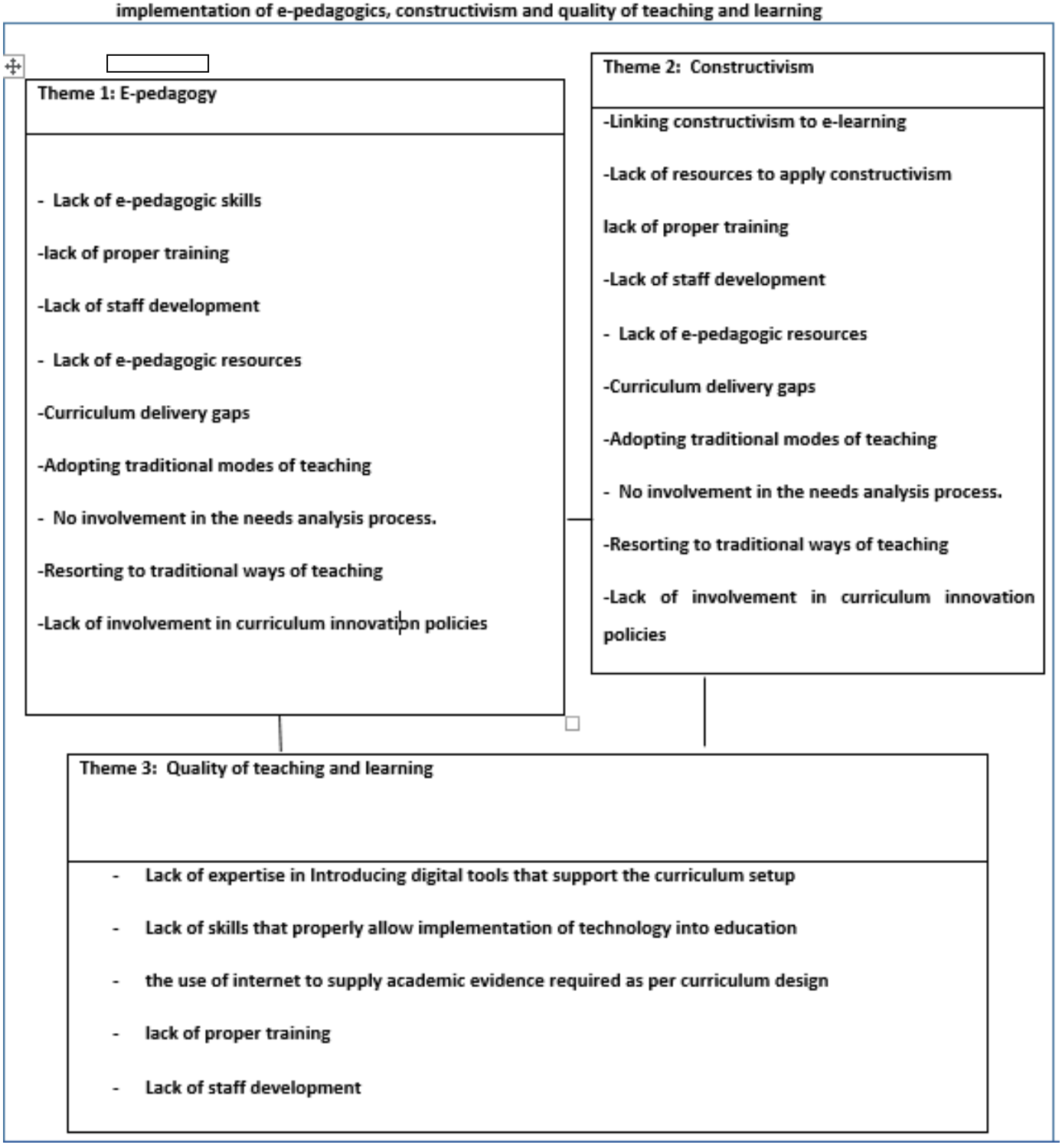
C	**"Yes I know that having the internet added to the classroom gives the lecturer a chance to offer his students a complete view of any topic given and at the same time guide hem on finding correct sources but being a qualified e-pedagogy requires proper training of which we are lacking.**	**"Application of constructivism is a challenge unless we go for proper staff development sessions where we learn from one another".**	**"When technology is properly implemented into education, it guides students in understanding most concepts given in class, it's the implementation skills that I am personally lacking"**
D	**"How can you expect me to practice – pedagogy when the resources are scarce?**	**" I don't deny the fact that constructivism allows students to collaborate and share ideas, for example online forums, …coordinating that with e-learning is my greatest challenge unless I get proper training"**	**"Things like e-portfolio and other tools help the lecturer track the student's progress"**
E	**"If the e-pedagogy methods of teaching are mastered, one can get students to participate at any given time and day, …it is skills for those methods that we are**	**"Application of constructivism is a challenge considering that learners know technology more than us. Guiding and facilitating them is a**	**" If we had the right know how, quality of education wouldn't be much of a problem considering that Learners can write better and produce better academic essays because they can support use the internet to find supporting evidence for their arguments as required by the**

	lacking ”	**challenge”**	**curriculum design”.**
F	**“This type of instructional method brings excitement into the classroom and more participation from students”**	**“Everyone knows that learners understand more when they explore and put it into practice by themselves, however, the problem is with us lectures on the choice of proper strategies to apply this constructivism theory”**	**“Let’s take a look at how it is hard to finish given work through traditional classes and how easy it has become when we have technological devices as a helping hand” “That much I understand but the challenge is that the students that we teach are well skilled in technology than us? It becomes difficult to guide them”**
G	**“I always read and hear stories of e-pedagogies but I still stick to my traditional modes of learning”**	**“Interacting with students using the traditional theories and ways of lesson delivery was better than the current technology and theories that we don’t understand unless we get proper training.”**	**“ELearning allows educators to quickly construct and transfer new policies, ideas, and concepts in formal education”**
H	**“The use of e-learning has been long introduced but the challenge is our learners are the ones who know this better than u:s.**	**“To tell you the truth, very few of us apply such theorems of teaching and learning. We are all mostly into lecturing and nothing else” e-learning gives students the freedom**	**“Traditional learning plus internet learning, equals to a greater information retention rate. It’s easier for the curriculum work to be updated and refreshed at any time.”**

		to learn at their own convenience, and at a pace"	
I	**"We need proper upskilling and we as lecturers are not involved in designing curriculum innovation policies "**	**"An e-learner must always know how to self-motivate to reach her goals"**	**"To my understanding, recorded info mixed with electronic material can diversify the resources for the learner and help faculties in teaching"**
J	**"the knowledge and skill of e-pedagogics helps make the student life easier and more academic friendly, the only challenge is that of lack of e-pedagogic skills among lectures"**	**"One can achieve full potential and bring quality to the learner just through e-learning"**	**"e-learning directs own learning but requires the will as the first rule of learning"**

Table 4.28

Below are the emerging sub-themes associated with challenges faced by lecturers regarding implementation of e-pedagogics, constructivism and quality of teaching and learning



Category 3:

What are your perceptions towards the synthesising or blending competencies of the lecturers' of implementing e-learning comprising of pedagogy, constructivism for quality of teaching and learning improvement?

When asked to share their ideas on their perceptions towards synthesising/blending/integrating the competencies of synthesising or blending competencies of the lecturers' of implementing e-learning comprising of pedagogy, constructivism for quality of teaching and learning improvement, below were the responses per each theme. Responses generally indicated that they were confirming that there is a positive impact of blending good competencies of e-pedagogics and application of constructivism theoretical framework on improving quality of teaching and learning.

Table 4.29

Theme Respondents	E-pedagogy	Constructivism	Quality teaching and learning
A	"What is more important is to become an expert in e-pedagogics that will give no problems in linking teaching approaches to learning theories such as constructivism to improve learner performance."	"The starting point is about acquisition are the skills and expertise in driving and guiding the teaching and learning process through the use of proper digital devices. You won't have problems of integrating the learning theories"	"In order to ensure quality teaching on e-learning, there must be a perfect link between good skills and understanding of e-pedagogics, constructivism theory in line with curriculum development and curriculum

			implementation".
B	**"There should be a link between the theory and practical when designing the curriculum as well as understanding of e-learning in order to effectively apply e-pedagogics and constructivism to enable quality learning"**	**"Learners nowadays are quite resourceful, we find that all the information is just a click away because they just use their devices to google they tend to use social media to source for information, this means that constructivism is always applicable. What is only lacking is the lecturers' competencies in coordinating e-pedagogics with curriculum planning, implementation and evaluation "**	**"There are many factors that contribute to quality teaching and learning in e-learning. The lecturers must not only have full understanding of e–pedagogics, constructivism theory but how to blend the two in order to ensure effective deliver of the curriculum"**
C	**"e-pedagogies are new terms that we getting in education due to technology. That are just elements of the**	**'Yes, I agree, synthesis of e-pedagogics, constructivism, is necessary only**	**"I would like to advise the lecturers to seriously go into technology. We are compromising**

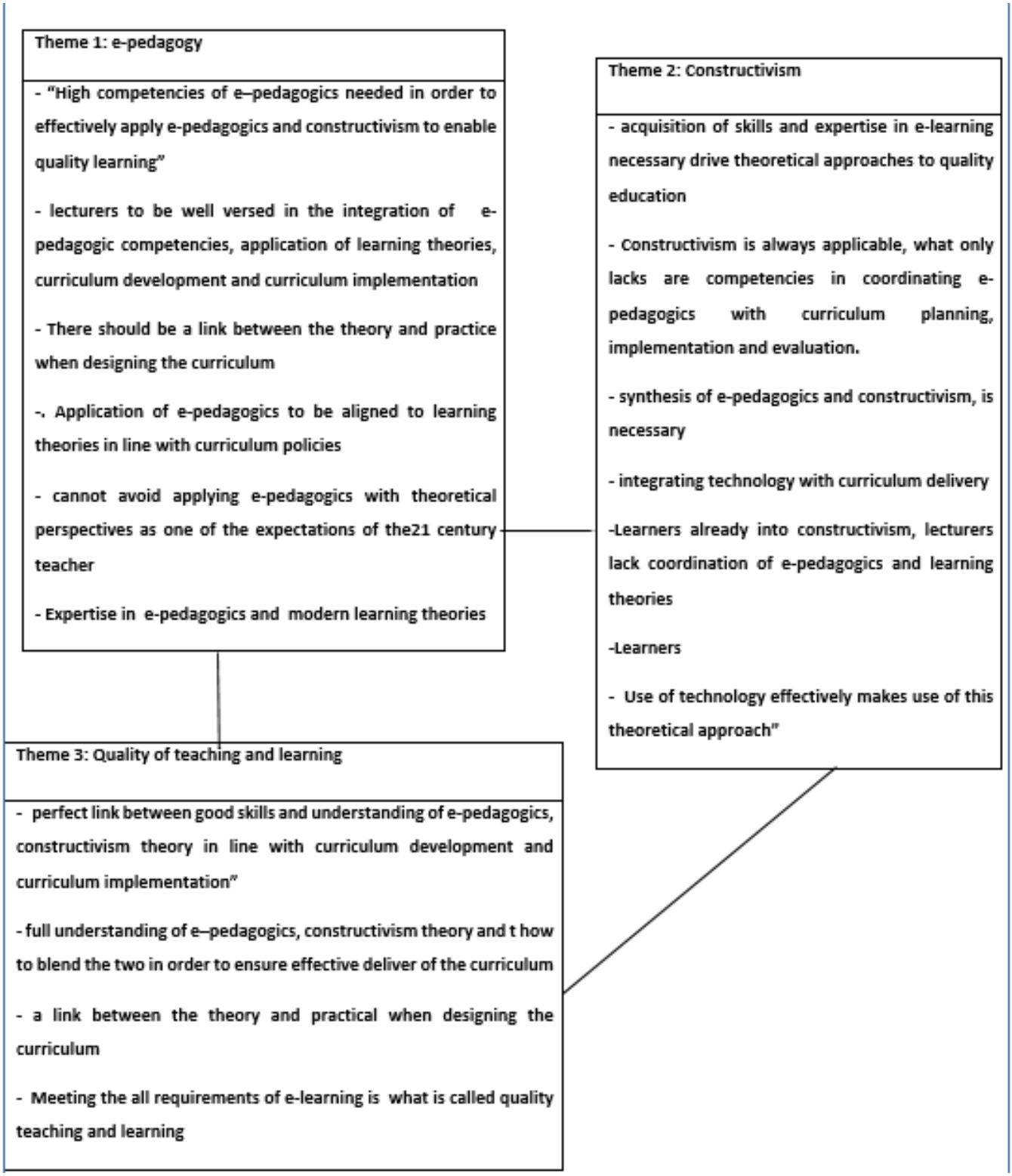
	pedagogics that we already know. For quality assurance, e-pedagogics can make sense without aligning to lea theories in line with curriculum policies" If we can have proper training in that regard, that will not be a problem.	**when there is proper training to improve the competence of blending the two aspects of e-learning in order to improve quality".**	**quality teaching and learning because of our attitude towards technology. Its high tome we must go for it to upgrade our teaching styles in an effective manner by integrating all the components of e-learning to move with improvements in education"**
D	**"I think if as a lecturer you are positive about enhancing learning, there is nowhere you can avoid applying e-pedagogics with theoretical perspectives as one of the expectations of a 21st"**	**"Remember that constructivism cannot be applied in isolation. Use of technology effectively makes use of this theoretical approach"**	**"Some lecturers just brush through the work when they fail to use the projector or computers or internet and learners end up not understanding what is being taught" That's why there is need to have our institutions giving us developmental sessions to improve our competencies in the application of e-pedagogics and relevant learning theories"**
E	**"Higher institutions of learning must just ensure**	**"Come to think of it when you do the**	**"It's not only educators who**

	that lecturers are well versed in the integration of e-pedagogics competencies, application of learning theories, curriculum development and curriculum planning so as to ensure that teaching is done in totality taking into consideration technological changes taking place" "	**same thing over n over the years you will eventually come to terms with how to deal with students in terms of these new developments in technology, however"**	**should have competencies in the use of technology, even the students as well."**
F	**"It is hard to have a teacher who does not know what to do when standing in front of students."**	**"This theory is there and only waiting for the expertise of the teacher to manipulate e-pedagogic skills to effectively apply it"**	**"Quality can only be determined by the outcome of the integration of digital devices, the curricula and the relevant theories"**
G	**"ELearning does not need much sweat since we already use it every day, although we might not know everything, but everyone has some sort of basic understanding so unless the lecturer really does not have any idea whatsoever of other pedagogic skills and learning theories"**	**"This is a new theory that lecturers must engage students in by integrating technology with curriculum delivery"**	**"It affects a lot when the lecturer cannot keep up with technology because students need to be guided and if not the lecturer then who will , otherwise will end up failing"**
H	**"I think it is important for the lecturer to know e-**	**"Yes students should be allowed**	**"If the teacher lacks knowledge, we can't**

	pedagogics in order to teach without encountering problems"	**to learn for themselves, but to take the first they need to be supervised by someone who is supposedly having more knowledge integrating all components of e-learning"**	**expect the learners to pass, and there should always be curriculum evaluation to see where we lack and when to improve or to adjust"**
I	**"If the curriculum requires the use of technology in the process, that means the lecturer needs to be able to know the significance of the synthesis of e-pedagogics and learning theories otherwise students will be left in confusion"**	**"It is not about how much skill, it is about putting yourself in the shoes of these students"**	**"that is why there is supposed to be a more skilled person in the modern teaching and learning to avoid short falls from all angles"**
J	**"Let's think about students coming from rural areas and do not know much about technology, and if the lecturer has no knowledge or skill of e-learning, modern learning theories, how do you expect that student to pass?**	**"I believe that constructivism is a natural factor , it has to do with how the student's cognitive power works and that will meet the lecturer half way unless the lecturer is really clueless, and that becomes a problem"**	**"Meeting the all requirements of e-learning is what we call quality teaching and learning"**

Table 4.30below shoes the e-merging sub themes for the main themes associated with the significance of synthesising or blending competencies of the lecturers of implementing skills and understanding e-learning comprising of pedagogy, constructivism for improving quality of teaching and learning improvement.

Table 4.30



Category Five:

Considering the above question, what are your views regrading professional developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning.

When asked to share their views regarding professional developmental intervention strategies that can be applied during the e-learning process in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning, the results from the respondents' comments indicated that democratic approaches to the process of planning and implementation of staff development programmes/in-service sessions/upskilling sessions regarding e-pedagogics skills, application of constructivism theory for the purpose of quality enhancement were supposed to be considered in place of autocratic approaches that they were experiencing. The implication is that most lectures were just receiving directives without being involved in curriculum innovations that they were expected to implement. Respondents also confirmed that it was necessary to establish a monitoring team to monitor these democratic practices.

Table 4.31

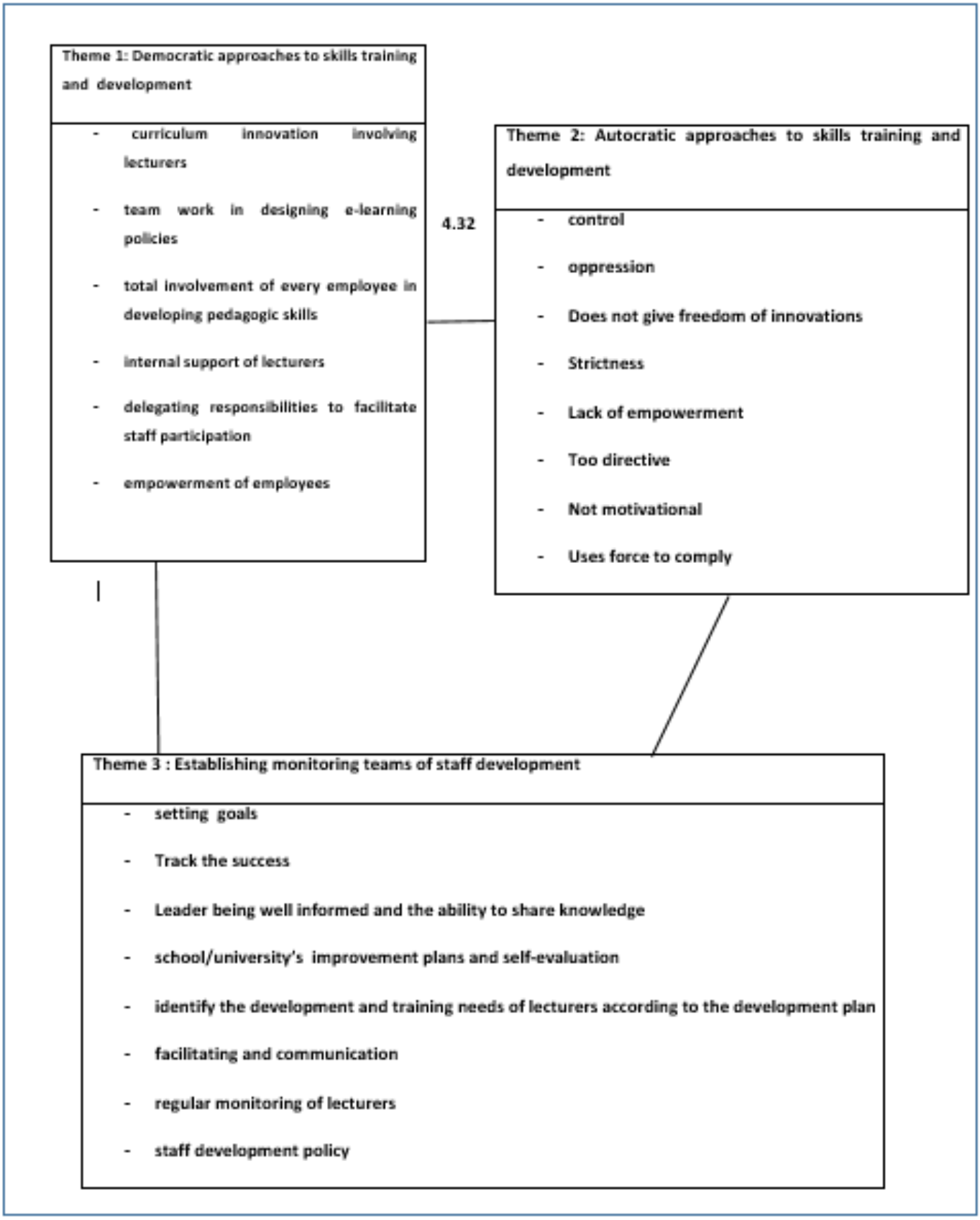
Theme Respondents	Democratic approaches to skills training and development	Autocratic approaches to skills training and development	Establishing monitoring teams of staff development
A	"Designing of curriculum innovation policies should also involve lecturers "	"if we look at the point of implementing strategies of e-leaning, they must be linked to the university's main concerns, but if there is no involvement of lecturers and other employees, these concerns will not be addressed because of oppression and	"I think the first step to monitor teams of staff development is to set goals, like what is needed to be achieved especially in the case of teachers gaining enough knowledge and skill of e-pedagogics."

		therefore hindering development"	
B	**" There must be team work in designing e-learning policies including needs analysis process"**	**"honestly, in my past experience, autocratic approaches in trying to develop quality teaching and learning, do not always work for it takes a will in order to address any form of development. It's like you are forcing things happen without any form of motivation"**	**"The staff members need to be at least educated about it first"**
C	**"It is wise to the managers ensure that skills development sessions are constantly done by total involvement of every employee in developing pedagogic skills**	**"we all know that sometimes directives in an institution retards development…"**	**"Track the success that you have accomplished while using these information technologies as teaching and learning instruments, and this will guide on how to improve and the areas to focus on"**
D	**" I believe that these lecturers should support each other in order to find effective and timely ways of overcoming the challenges that come**	**"With autocratic approach, there are strict decisions and may fail at the end. Because with using technology and improving quality**	**"The leaders, including management team, should be well informed and have enough knowledge and be able to share**

	with the use of technology in teaching"	**teaching and learning, quick, autocratic ways will lower the chances of succeeding"**	**that knowledge"**
E	**"delegating responsibilities amongst students and lecturers in order to facilitate staff participation in this process "**	**"I think in order to make sure that the implementation will work, lecturers must be empowered…."**	**"Staff development should be very linked to the school/university's improvement plans and self-evaluation"**
F	**"Sometimes using the democratic approach, can cause conflict because each and every person has his own way of learning and developing, so people can end up in chaos".**	**"well, I think autocratic leadership styles have never worked"**	**"There is a need to identify the development and training needs of lecturers according to the development plan of the institution"**
G	**"Producing quality education is not an easy process and that is why we have a school management team or stuff members to take on different roles and come together and produce a concept on how to ensure quality education."**	**"I do not agree with such approaches because people work with fear"**	**"I think it is always necessary to evaluate how change affects both the lecturers and students."**
H	**"Using this approach enables the**	**"There is too much control and directives**	**"things like encouraging**

	empowerment of employees to so that they can be properly equipped to accomplish their tasks"	**associated with autocracy"**	**employees, facilitating and communication are important in the development process"**
I	**"when a decision is democratically taken it can last longer and be reviewed continuously as well as allows team work and staff members working well together"**	**"this causes conflictsin the working process…"**	**"First of all there should be staff development policy as a guide on how to follow up staff progress."**
J	**"I think when people work together it creates a creative environment but it can be time consuming at times"**	**"I personally don't like being controlled and oppressed in programmes that I have not been part of in the initial stages of development"**	**"There should be regular monitoring of lecturers in case they struggle to meet requirements"**

Table 4.32



The following are emerging sub-themes from table 4.32 supporting the view that democratic professional developmental intervention strategies should be implemented during the e-

learning programmes in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning.

CHAPTER 5

5. DISCUSSION OF RESULTS

5.1. INTRODUCTION

Chapter 5 discusses the results presented in the previous chapter. In this chapter, the discussions of results are to be done by means of synthesising both qualitative and quantitative results following the principles of the mixed method approach. Triangulation which involves use of mixed methods when answering questions that are almost the same and complementarity which involves supporting or approving quantitative results in the context of this study are some of the principles that were used in this study to ensure that the research questions and sub-questions have been fully answered and well elaborated (Greene, 2007). Qualitative results are going to make a follow up of the quantitative findings as indicated in Chapter Three.

Objective one

Understanding e-learning in the context of pedagogy, e-pedagogy, constructivism theoretical framework and quality of teaching

The researcher investigated the perception of lecturers regarding their understanding of the elements of e-learning based on**:**

- pedagogy
- e-pedagogy,
- constructivism theoretical framework
- quality of teaching

The results of table 4.1 to table 4.4 confirmed that that majority of the lecturers of private institutions of higher learning have an understanding of the theoretical background of components of E-learning comprising of e-pedagogic, constructivism and quality of teaching and learning in the context of this study. What is yet to be confirmed is whether or not they have skills to apply these components in a real teaching and learning situation in the South African context.

Table 4.1 indicated that 50% (N=31) of the respondents strongly agreed and 29% (N=18) agreed that pedagogy is a scientific field of study of the process of education in terms of teaching and learning. These results illustrate that majority of lecturers understood the

meaning of pedagogic from a theoretical perspective. To support this view, literature confirms that the term pedagogical technology is associated a developed pattern of use of technology during the teaching and learning process (Baldiņš, 2016). Furthermore, Table 4.2 indicated that the majority of the respondents comprising of 51.6% (N=32) strongly agreed and 24.2% (N=15) agreed that e-pedagogy is a branch of pedagogy that enhances learning technologies in order to improve didactic approaches. From these results, it can be deduced that majority of the lecturers had an understanding that e-pedagogy is an element of e-learning that is geared towards improving a number of learning approaches. McLoughlin and Northcote (2017) supports this view by stating that e-pedagogics is an approaches to the process of teaching and learning that utilises digital information including communication technologies in order to cater for the digital learning preferences for the digital generation (Wee Hin, & Subramaniam, 2009).

Furthermore, findings of table 4.3 show that 43.5 % (N=27) of the respondents strongly agreed and 32.3% (N=20) agreed that constructivism involves the process of construction of knowledge whereby active learning is stimulated by application of interpretative skills. These results indicated that the majority of the lectures understood e-learning in the context of the constructivism theory with the belief that technology improves learning. Research findings confirm that the most basic assumptions that underlie constructivism is that experience provides basis from which knowledge development is constructed; a learner is able to constructs knowledge actively by means of personal interpretation to visualise the world and make sense of it; it is discovery of knowledge that initiates conceptual growth (Nieman and Monyai, 2007:7).The view that students construct their knowledge from individual experiences and from thinking through these experiences is supported by many authors (Windschitl and Andre, 1998; Loyens, Rikers, and Schmidt, 2009; Schell& Janicki, 2013).

Results of Table 4.4 shows that the majority, 38.7% (N=24) strongly agreed and 29.0% (N=18) of the respondents agreed that quality of teaching and learning is the correspondence that exists between the expectations of the national educational standards, the teachers and learners regarding curriculum implementation and development. These results comprise of the majority of the respondents. Though there are controversial issues as to who is the immediate beneficiary of quality education, South African literature indicates that meeting or exceeding the national standards according to curriculum policies is regarded as some of the important factors that ensures teaching quality and learner performance (Kilfoil, 2015; DHET, 2013; Ng'ambi, Bozalek & Gachago, 2013; Amory, 2014; Wheeler, 2012).

Even though there is evidence of basic knowledge of the theoretical meaning of e-pedagogics among South African lectures as aligned to the general pedagogic principles, there was still need to investigate the level of understanding of e-learning in terms of the practical knowledge and skills in reality in the South African context. This was done by establishing lectures' perception regarding their understanding of the elements of e-learning not from a general perspective but fromspecifically the South African context based on:

- Pedagogy
- e-pedagogy

Table 4.5 and 4.6 indicate that 37.1% (N=23) of the respondents strongly disagreed and 32.3% (N=20) disagreed that the levels of the South African lecturer' skills and knowledge comply with the concept of pedagogy as a scientific field of study of the process of education in terms of teaching and learning. In the context of this research, a deep knowledge and understanding of the principles of e-pedagogics is assumed to contribute to the effective implementation of e-learning in any institute of learning including South African universities. Table 4.6) indicated that 43.5% (N=27) strongly disagreed and 30.6% (N=19) of respondents disagreed that e-pedagogy is a branch of pedagogy that enhances learning technologies in order to improve didactic approaches in accordance with the levels of the South African lecturer' skills and knowledge. Such results may be because of the fact that lack of knowledge and understanding of the principles of e-pedagogics hinders effective implementation of the same aspects of e-learning. These quantitative findings are further supported, and elaborated by the qualitative findings below:

Qualitative findings:

Category One

What is your knowledge and understanding of the following components of e-learning?

When asked to share their views about their understanding of the components of e–learning as the first category of the research question, the responses indicated that they had some basic understanding of the theoretical meaning of e-learning, e-pedagogy, constructivism and the principles of quality teaching and learning. Although the level of understanding was not fully established by then including application of needed skills, the researcher was assured that the respondents were in a better position to answer the research questions. Findings of the analysis of the comments of the focus group interviews on table 4.25 and the sub-themes (Table 4.26) confirm the findings of the above qualitative data. When the

participants in this category were asked to share their views on their understanding e-pedagogics, constructivism theoretical perspective, and quality teaching and learning, the following sub themes emerged (Table 4.25 to 4.26):

- E-learning and e-pedagogics: use of technology to teach, facilitation through internet, use of computers, laptops, iPad and distance learning, process of teaching and learning through technologies,
- Constructivism: absorbing information, encouraging reasoning power, creating flexible learning environments, initiating learner –centeredness and acquisition of new knowledge through personal experiences.
- Quality of teaching and learning: meeting expected curriculum standards, e-learning having no distance boundaries to curriculum implementation, lecturer's knowledge and skill vs. how the curriculum has been designed.

Close analysis of the identified sub themes indicates that they are all related to the definitions of e-learning, constructivism, and quality of teaching respectively as indicate in the quantitative responses. Although the quantitative and qualitative results indicate a theoretical understanding of the background of e-learning components in general, one could still wonder why implementation of e-learning and quality teaching and learning were still a challenge. This however explains why there is also need to understand the real challenges that the lecturers were encountering during the implementation of e-learning in the classroom. Focus group interviews responded to this part of the study before establishing the effectiveness of implementing e-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics regarding improving quality of teaching and learning in South African private institutions of Higher learning.

Qualitative findings

What are your challenges in implementing e-pedagogics, constructivism and quality of teaching and learning?

When the participants in this category were asked to share their views about their challenges they are facing regarding the implementation of e-Learning in terms of application of e-pedagogics, constructivism theoretical perspective, and quality teaching and learning, the following sub themes emerged (Table 4.27 to 4.28):

- E-pedagogy: Lack of e-pedagogic skills, lack of proper training, lack of staff development, lack of e-pedagogic resources, curriculum delivery gaps, adopting

traditional modes of teaching, no involvement in the needs analysis process, resorting to traditional ways of teaching and lack of involvement in curriculum designing.

- Constructivism: Linking constructivism to e-learning, lack of resources to apply constructivism, lack of proper training, lack of staff development, lack of e-pedagogic resources, curriculum delivery gaps, adopting traditional modes of teaching, no involvement in the needs analysis process, resorting to traditional ways of teaching and lack of involvement in curriculum innovation
- Quality of teaching and learning: Lack of expertise in Introducing digital tools that support the curriculum setup, lack of skills that properly allow implementation of technology into education, the use of internet to supply academic evidence required as per curriculum design and lack of proper training and Lack of staff development.

Close analysis of the above themes is an indication that lack of up skilling sessions, lack of staff development sessions and lack of proper needs analysis, lack of involvement in curriculum innovations policies, lack of provided opportunities to identifying gaps and amending the same gaps for proper coordination of e–pedagogic activities, constructivism principles and essential characteristics of quality teaching and learning are the common challenges among the main themes.

Objective 2

The effectiveness of implementing e-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics regrading improving quality of teaching and learning in South African private institutions of Higher learning

Before establishing the impact of the level of knowledge and skills of e-pedagogics on quality of teaching and learning, this study found it necessary to start by establishing the relationship of e-pedagogics to the components of quality teaching and learning comprising of curriculum using cross-tabulation to analyse correlation. The hypothesis was formulated as follows:

HO: There is no relationship between quality of teaching, curriculum development and curriculum implementation. Table 4.7 indicated that the correlation between quality of

teaching and curriculum development was (R=0, 966). The correlation between quality of teaching and learning and curriculum implementation (R=0.994) and that of curriculum development and curriculum implementation (R=0.970). This shows that relationships are strong. The null hypothesis was therefore rejected because the *p* value is less than 5% ($p < .05$). This means that there is generally a strong relationship between quality of teaching and learning, curriculum development and curriculum implementation. In other words, curriculum development and quality improvement are the most important components of quality teaching in the context of this study.

In comparison to the results above, the results of the frequency tables 4.8 to 4.9 portray a totally different picture. The majority of the respondents strongly disagreed and disagreed that there is no positive relationship between the South African lecturers' knowledge and skills of e-pedagogics with the principles of quality teaching and learning comprising of curriculum development and curriculum implementation.

When asked to indicate to what extent they agree that the South African lectures lecturers' knowledge and skills of e-pedagogics have a positive influence on the principles of quality of teaching and learning comprising of curriculum development and curriculum implementation, results of Table 4.8 reflected that majority of the respondents (N=22) strongly disagreed and 33.9% (N=21) of the respondents disagreed that the South African lecturers' knowledge and skills of e-pedagogics have a positive influence on curriculum implementation. These results represent the majority of the respondents.In the South African context, Ng'ambi argued that this shortfall was resulting in educators feeling pressured to continually keep pace with their students, and resulted in concerns of pedagogical uses of information technology being perceived by students as out dated and ineffective, whilst university data search resources were again seen as significant and valuable (Brownsell, 2016).

Table 4.9 indicated that 48.4% (N=30) strongly disagreed and 30.6% (N=19) disagreed that the South African lecturers' knowledge and skills of e-pedagogics have a positive influence on curriculum development. These results comprise of the majority of the respondents. There is also evidence in the South Africa context that there is no much research that has established the instructors' level of e-pedagogy during the implementation of e-learning (Wheeler, 2015; Ng'ambi etal, 2013, Musundire, 2016). A deep understanding and knowledge of the principles of e-pedagogics is assumed to contribute to the effective implementation of e-learning in any institute of learning including South African universities.

The implication of the of results of table 4.8 and 4.9 shows that the level of the knowledge of e-pedagogics is not matching the skills of curriculum development and curriculum

implementation. In other words, the low level of understanding and application skills of e-pedagogics are affecting curriculum development and curriculum implementation. The results are confirming that the level of understanding and skills of e-pedagogics are negatively affecting the quality of teaching and learning in South Africa's high institutions of learning. This can be as a result of the challenges identified through qualitative results (refer to table 4.26-4.27).

Objective Three

Examining impact of the implementation of E-learning as related to the constructivist's theoretical framework

The quantitative study found it necessary to start by examining the relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning from a general point of view before contextualising it in the South African perspective. The following hypothesis was tested in response to the following questions: Is there any relationship between characteristics of constructivism theoretical perspective and characteristics of e-pedagogics?

HO: There is no relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning. As indicated before, the null hypothesis is rejected when the pvalue is less than 5% ($p < .05$).

Findings in the correlation table (Table 4.10) showed that variables were all significant (P-value less than 0.05). The correlation between "constructivism as a theory that allows learners' responsibility" and "learners construction of knowledge in a meaningful way using technology and the students' skills of manipulating technology by applying critical thinking while the teacher acts as a facilitator" is (R= 0.930). The correlation between "The student manipulates technology by applying critical thinking while the teacher acts as a facilitator" and "Initiates child-centred learning that promotes sustainable accumulation of knowledge and skills" is (R= 0.915).
The null hypothesis is therefore rejected because the *p* value is less than 5% ($p < .05$). This means that there is generally a strong relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning.

The implication of the results of frequency tables 4.10 to table 4.18, was that there is generally a strong relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning. The results of the frequency tables supported the same view. In other words, majority of the lecturers confirmed from a theoretical point of view that there is a strong relationship of e-learning and constructivism theory.

Findings on Table 4.11 indicated that the majority of the participants represented by 38.7% (N=24) strongly agreed and 37.1% (N=23) agreed that the constructivism theoretical framework as related to e-learning allows learners responsibility to construct knowledge in a meaningful way using technology. Literature confirms this view by mentioning that constructivism simply contemplates how the learner constructs knowledge in a meaningful way (Desai, Hart, & Richards (2008). Table 4.12 indicated that 46.8% (N=29) strongly agreed and 35.5% (N=22) agreed that the constructivism theoretical framework in relation to e-learning allows the student manipulates technology by applying critical thinking while the teacher acts as a facilitator. These results illustrate that majority of the respondents. To support these results, Mnkandla and Minnaar (2017) in their study found out that students manage their time and participation, learners devised strategies and "workarounds" to complete assigned activities and course commitments (Mnkandla, & Minnaar, 2017).

Table 4.12 indicated that 46.8% (N=29) strongly agreed and 35.5% (N=22) agreed that the constructivism theoretical framework in relation to e-learning allows the student manipulatetechnology by applying critical thinking while the teacher acts as a facilitator. These results represent the majority of the findings.From the research by Mnkandla and Minnaar (2017), representing a conceptual framework designed to explain the adoption of social media into e-learning by using online collaborative learning (OCL) in higher education, it was gathered that collaboration is the most important characteristic of social learning. The results of Table 4.13 reflected that 41.9% (N=26) and 27.4% (N=17) representing the majority of the respondents strongly agreed that constructivism in e-learning promotes the learner's skills to solve real-life problems and practical problems. These results show the majority of the respondents. Such results suggest thatthe constructive framework design strategy through e-Learning is to encourage exploration and learner's control of the learning (Blackburn, 2017).

Furthermore, results of Table 4.14 indicated that the majority of the participants, represented by 32.3% (N=20) strongly agreed and 45.2% (N=28) agreed that constructivism in e-learning initiates child-centred learning that promotes sustainable accumulation of knowledge and skills. These results illustrate that majority of the respondent. Research findings confirm these results by stating that child centeredness develops skills of critical and creative thinking, and teachers and facilitators must also appreciate the need to relinquish control and be responsive and respective to new ideas, new ways of thinking (Stefani, 2016). Still on that noted, table 4.15 reflects that the majority of the respondents comprising of

43.4% (N=27) strongly agreed and 32.3% (N=20) agreed that constructivism in e-learning aid in constructing knowledge and meaningful concepts through active and personal experimentation and observation. Piaget's constructivist theory of knowledge (1970) was based on the assumption that learners do not copy or absorb ideas from the external world, but must construct their concepts through active and personal experimentation and observation (Clark &Mayes, 2016).

The findings of table 4.16 indicated that 38.7% (N=24) respondents strongly agreed and 33.9% (N=21) agreed e-learning aid in constructing meaningful knowledge by using social media into e-learning using online collaborative learning. In that way, a rich environment for collaboration among students can improve academic standards (Tarus, Gichoya, & Muumbo, 2015). Table 4.17 indicated that 40.3% (N=25) respondents strongly agreed and 37.1% (N=23) agreed that e-learning aid construction of meaningful knowledge by learners taking control of their learning through their own goals and objectives in solving problems. These results represent the majority of the findings. These results suggest that constructivism simply, contemplates how the learner constructs knowledge in a meaningful way Desai, Hart, and Richards (2008).

However, there was still need to establish the impact of these relationship in the South African perspective. This was further done by asking the respondents to offer their views on the extent to which they agree that South African lecturers' knowledge and skills of e-learning in relationship to the constructivism characteristics have a positive influence on the principles of quality education and learning comprising of curriculum development and curriculum implementation. The results were totally different from the correlation table (Table 4.10), and the frequency tables 4.10 to 4.17. The majority strongly disagreed and disagreed that the South African lecturers' knowledge and skills of e-learning in relationship to the constructivism characteristics have a positive influence on the principles of quality education and learning comprising of curriculum development and curriculum implementation.

Frequency Table 4.18 shows 48.4% (N=30) strongly disagreed and 29% (N=18) disagreed that South African lecturers' knowledge and skills of e-learning in relationship to the constructivism characteristics have a positive influence on curriculum development. These responses formed the majority of the respondents. The implication is lecturers do not have the theoretical and practical knowledge and understanding of the application of constructivism in conjunction to e-learning. Table 4.19 indicated that 48.4% (N=30) of the respondents strongly disagreed and 33.9% (N=21) that South African lecturers' knowledge and skills of the e-learning in relationship to constructivism characteristics have a positive influence on curriculum implementation. Comparing the results of table 4.18 with those of

table 4.10 to table 4.17, it can be deduced that although the South African lecturers had a theoretical knowledge of the positive impact of e-learning on enhancing performance of learners, they lacked the skills of coordinating e-learning with constructivism theoretical framework. This can be attributed to the fact that they lacked a full understanding and the skills of the application of the principles of e-pedagogics which must be well coordinated with constructivism theoretical approach and quality teaching and learning. Basing on these findings, the following section examines the impact of e-Learning by synthesising or blending the lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality of teaching and learning comprising of curriculum development and curriculum implementation.

Objective Four

Exploring that impact of impact of e-Learning by synthesising or blending the lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality of teaching and learning: comprising of curriculum development and curriculum implementation.

This section in the context of this study investigated to what extent lectures agree that there is positive relationship between e-learning through the synthesis of the lecturers' knowledge and skills of e-pedagogics, constructivism theory and the following aspects of quality of teaching and learning:

- Curriculum development
- Curriculum implementation

The other previous sections have investigated the components of e-learning (pedagogics and constructivism) and their relationship to each other and their impact on quality of teaching and learning as separate entities. This section consolidates the main research question by investigating the relationship on the effectiveness of the level of knowledge e-learning through the synthesis of the lecturers' knowledge and skills of e-pedagogics, constructivism theory and the characteristics of quality of teaching and learning comprising of curriculum development and curriculum implementation.

The researcher had to do a cross-tabulation correlation analysis.

The following hypothesis was tested:

Ho: There is no relationship between e-pedagogics, constructivism, and quality of teaching and learning.

Table 4.20 indicated that all variables are significant (P-value less than 0.05). Correlation between “E-pedagogics” and “Quality of teaching and learning” is (R= 0.712), “E-pedagogics” and “curriculum implementation” is (R=0.765),” Constructivism” and “e-pedagogics” is (R=0.741) and “constructivism” and “quality of teaching and learning is (R=0.961). The correlation between “constructivism” and “curriculum development is (R=0.967) while that “constructivism” and “quality of teaching and learning is (R=0.961). The results therefore indicate that null hypothesis is rejected. This means that there is a strong relationship between e-pedagogics, constructivism, and quality of teaching and learning as components of e- learning in the context of this study. In other words, there is a positive impact on quality of teaching characterised by a lecturer with high level of understanding and skills of e-pedagogics, application of constructivism theoretical. Contrary, there is poor quality teaching and learning, if the same skills are low.

This view is supported by the results of the frequency table 4.21: When asked to share their views regardingtheir perceptions of lecturers regarding the effectiveness of e-learning by way of synthesising/blending/integrating lecturers’ knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning, , the following were the results from table …..frequency table shows the lecturers’ responses.

The table indicated that 46.8% (N=29) of the respondents strongly agreed and 27.4% (N=17) agreed that Synthesising/blending/integrating lecturers’ knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning. The implementation of blended learning requires an understanding of different contexts of both teachers and learners related to theoretical values and knowledgeand experience (Warschauer & Ames, 2010; Mdlongwa, 2013”. Research evidence revealed that the main failure of the usage of digital technologies in education is mostly related to the ignorance of e-culture of both teachers and learners, theoretical perspectives and and the goals and purpose of teaching and learning. (Warschauer & Ames, 2010; Viriyapong & Hartfield, 2013; Aesaert & Van Braak, 2014; Aesaert et al., 2015; Pruet et al., 2016; Siddiq et al., 2016). If the purpose of a university level education is to develop the skills of critical and creative thinking, this in turn means teacher and facilitator must also appreciate the need to relinquish control and be responsive and respective to new ideas, new ways of thinking (Stefani, 2016).

Qualitative findings:

What are your perceptions towards the synthesising or blending competencies of the lecturers' of implementing e-learning comprising of pedagogy, constructivism for quality of teaching and learning improvement?

When asked to share their views on the impact of e-Learning by synthesising or blending the lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality of teaching and learning: comprising of curriculum development and curriculum implementation, focus group interview responses generally confirmed that there is a positive impact. The following emerged themes (Table 4.29 to 4.30):

- E-pedagogy: High competencies of e–pedagogics needed in order to effectively apply e-pedagogics and constructivism to enable quality learning, lecturers to be well versed in the integration of e-pedagogic competencies, application of learning theories, curriculum development and curriculum implementation, there should be a link between the theory and practice when designing the curriculum, application of e-pedagogics to be aligned to learning theories in line with curriculum policies and we that cannot avoid applying e-pedagogics with theoretical perspectives as one of the expectations of the21 century teacher and demonstration of expertise in e-pedagogics and modern learning theories
- Constructivism: acquisition of skills and expertise in e-learning necessary to drive theoretical approaches to quality education, constructivism is always applicable, what only lacks are competencies in coordinating e-pedagogics with curriculum planning, implementation and evaluation, synthesis of e-pedagogics and constructivism, is necessary, integrating technology with curriculum delivery, learners are already into constructivism, lecturers lack coordination of e-pedagogics and learning theories and use of technology effectively makes use of this theoretical approach
- Quality of teaching and learning: perfect link between good skills and understanding of e-pedagogics, constructivism theory in line with curriculum development and curriculum implementation, full understanding of e–pedagogics, constructivism theory and how to blend the two in order to ensure effective delivery of the curriculum, a link between the theory and practical when designing the curriculum and meeting the all requirements of e-learning is what is called quality teaching and learning

The implication of the identified themes is a reflection of the need to synthesise/blend/integrate the lectures' knowledge and skills of e-pedagogics, constructivism theory in order to ensure a positive effect on improving quality of teaching and learning.

In other words, both quantitative and qualitative results indicate that E-learning is a possible effective mode of teaching and learning in South African Institutions of Higher learning by way of synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogy and constructivism theoretical perspectives that can enhance quality of teaching and learning. The results confirm that teachers' level of knowledge and skills of implementing e-pedagogics principles and the constructivism theoretical approach in well blended manner determines the quality of teaching and learning. High level of knowledge and skills in these components of e-learning ensures high level of quality teaching and learning. Low levels of knowledge and skills of the same aspects on the part of the teacher negatively affects leaners and teachers' performances.Some of the South African researchers found out that that there is higher usage of online learning materials in South African Institutions of Higher learning, but levels of blended learning including application of blended learning individual is superficial (Ojiako, Chipulu, Marshall, Ashleigh, & Williams, 2015; Strydom & Barnard,2017). The implication then is that there is need to come up with strategies of blending these components of e-learning in the South African context in order to solve e-learning programmes.

Objective 5:

Exploring professional developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance must take the following teacher development strategies developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance must take the following teacher development strategies.

The last part of the research objectives involved exploring professional developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance taking into consideration the following strategies:

- Total involvement of lecturers and public policy makers in making staff development needs analysis.
- Autocratic approaches to needs analysis and designing professional development policies.

- Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.
- Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.

Table 4.22 indicates that 43.5% (N=27) strongly agreed and 33.9% (N=21) agreed that total involvement of lecturers and public policy makers in making staff development needs analysis is an intervention strategy that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance. The implication is that engage public policy makers in making staff development needs analysis must also engage lecturers'' contributions. According to Cox (2010), if e-learning is to be successfully adopted in a school, teachers and head teachers need to be involved in the decision making processes. Table 4.23 shows that 46.8% (N=29) of the respondents strongly disagreed and 32.3% (N=20) disagreed that autocratic approaches to needs analysis and designing professional development policies can be an effective strategy for designing professional development policies. The policy and strategy document, showing the institutional position must include teamwork and total involvement in planning the pedagogical goals, infrastructure requirements, evaluation, collaboration with stakeholders, quality control, technical support, budget and funding and resource planning (Awidi and Cooper, 2015). Table 4.24 indicated that the majority of the respondents, represented by 46.8% (N=29) strongly agreed and 29% agreed that setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation is an effective strategy for e-learning curriculum innovation, development and implementation among lecturers. According to Awidi and Cooper, (2015), universities with challenges in implementing e-learning may achieve success by assembling an implementation team and a leader, determining the appropriate learning technology, clearly outlining the process of implementation and having an ongoing evaluation process to institutionalise the innovative e-learning approach.

The quantitate findings confirm that the following are the possible intervention strategies that can address the implementation challenges of e-learning in South African private universities of higher learning.

- Total involvement of lecturers and public policy makers in making staff development needs analysis.
- Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.

On the other hand, autocratic approaches to needs analysis and designing professional development policies to profession development and designing curriculum innovations in e-learning has been condemned for producing an incompetent lecturer who only receive instructions regarding e-learning that they have to follow from the public policy makers. The implication is that the lecturer must be part of the whole process of curriculum designing, curriculum planning, curriculum evaluating and curriculum implementation in e–learning programmes so as to ensure high competence and high quality performance (Musundire, 2015). The qualitative findings below support and elaborate the quantitative results.

Qualitative findings

What are your views on professional developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning?

When asked to share their views regarding professional developmental intervention strategies that can be applied during the e-learning process in compliance to the lecturers' lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning, the results from the respondents' comments indicated that democratic approaches to the process of planning and implementation of staff development programmes/in-service sessions/upskilling sessions regarding e-pedagogics skills, application of constructivism theory for the purpose of quality enhancement were supposed to adhered to in place of autocratic approaches that they were experiencing. The implication is that most lectures were just receiving directives without being involved in curriculum innovations that they were expected to implement. Respondents also confirmed that it was necessary to establish a monitoring team to monitor these democratic practices (Table 4.31). The following are the emerging sub themes (Table 4.32).

- Democratic approaches to skills training and development: curriculum innovation involving lecturers, team work in designing e-learning policies, total involvement of every employee in developing pedagogic skills, internal support of lecturers, delegating responsibilities to facilitate staff participation, empowerment of employees

- Autocratic approaches to skills training and development: control, oppression, does not give freedom of innovations, strictness, lack of empowerment, too directive, not motivational and uses force to comply.

- Establishing monitoring teams for staff development: setting goals, track the success, leader being well informed and the ability to share knowledge, school/university's improvement plans and self-evaluation, identify the development and training needs of lecturers according to the development plan, facilitating and communication, regular monitoring of lecturers and staff development policy

Team work, total involvement, collaboration, total insolvent and total participation are the common sub-themes identified in all the main themes. The same terms are generally associated with democratic approaches to leadership. The implication just like the quantitative findings is that teamwork, total insolvent, collaboration and total participation is needed among lectures and curriculum policy makers in e-learning programs that are concerned with curriculum development and curriculum implementation (Musundire, 2015). This can be one of the strategies of resolving e-learning implementation strategies in South African private institutions of higher learning.

CHAPTER 6

DISCUSSION OF FINDINGS OF THE RESEARCH STUDY

Sub question 1 involved investigating the perception of lecturers regarding their understanding of the elements of e-learning based on**:**

- Pedagogy
- e-pedagogy,
- constructivism theoretical framework
- quality of teaching

Both the qualitative findings and the qualitative findings indicated that even though there is evidence of basic knowledge of the basic theoretical meaning of e-pedagogics among South African lectures as aligned to the general pedagogic principles in general, they lacked the practical knowledge and skills of the same components of the same components of e-learning.

Sub-question 2 involved the investigating perceptions of private institutions of learning lecturers regarding the effectiveness of implementing e-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics regrading improving quality of teaching and learning in South African private institutions of Higher learning. Both quantitative and qualitative findings indicated that the lecturers' level of knowledge and skills of e-pedagogics is not matching the skills of curriculum development and curriculum implementation. In other words, the low level of understanding and application skill of e-pedagogics is affecting curriculum development and curriculum implementation. The qualitative findings identified some of the challenges associated with lack of skills training programmes and staff development in general including the unfair bureaucratically distributed curriculum innovation policies without lecturers' involvement. The results are therefore confirming that the level of understanding and skills of e-pedagogics are negatively affecting the quality of teaching and learning.

Sub question 3 involved investigation of the perceptions of lecturers of the South African private institutions of learning regarding the effectiveness of the implementation of E-learning

as related to the constructivist's theoretical framework. The results from a general point of you by means of hypothesis testing, indicated that there is a strong relationship between characteristics of constructivism theoretical perspective and characteristics of e-learning. Even though the results of the frequency tables supported the same view, it was however deduced that although the South African lecturers had a theoretical knowledge of the positive impact of e-learning on enhancing performance of learners, they lacked the skills of coordinating e-learning with constructivism theoretical framework. This can be attributed to the fact that they lacked a full understanding the skills of the application of the principles of e-pedagogics which must be well coordinated with constructivism theoretical approach and quality teaching and learning. The results therefore confirmed that effectiveness of the implementation of e-learning as related to the constructivist's theoretical framework in South African private institutions of learning is ineffective due to lack of lectures' skills and competencies in the application of both e-learning and constructivism theoretical philosophy.

Sub question 4 involved investigating the perceptions of the lecturers of private institutions of higher learning in South Africa regarding the effectiveness of e-learning by way of synthesising/blending/integrating lecturers**'** knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality of teaching and learning comprising of curriculum development and curriculum implementation. Both quantitative and qualitative results indicated that E-learning is an effective mode of teaching and learning in South African Institutions of Higher learning by way of synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogy and constructivism theoretical perspectives that can enhance quality of teaching and learning. The results confirm that teachers' level of knowledge and skills of implementing e-pedagogics principles and the constructivism theoretical approach in well blended manner determines the quality of teaching and learning. High level of knowledge and skills in these components of e-learning ensures high level of quality teaching and learning. Low levels of knowledge and skills of the same aspects on the part of the teacher negatively affect leaners and teachers' performances.

Sub question 5 involved investigating the perceptions of the lecturers of private institutions of higher learning in South Africa regarding exploring professional developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of learner performance taking into consideration the following strategies:

- Total involvement of lecturers and public policy makers in making staff development needs analysis.

- Autocratic approaches to needs analysis and designing professional development policies.
- Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.
- Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.

Both qualitative and quantitative findings in The quantitate findings confirmed that the following are the possible intervention strategies that can address the implementation challenges of e-learning in South African private universities of higher learning.

- Total involvement of lecturers and public policy makers in making staff development needs analysis.
- Democratic approaches to skills training and development to curriculum innovation involving lecturers, team work in designing e-learning policies, total involvement of every employee in developing pedagogic skills, internal support of lecturers, delegating responsibilities to facilitate staff participation, empowerment of lectures.
- Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.

The results therefore confirm that synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality of teaching and learning comprising of curriculum development and curriculum implementation is an effective way of ensuring improved quality teaching and learning. In other word, high skills and competencies in all the components of e-learning in the context of thisstudy including high blending skills ensure high quality of learning and teaching. Low**skills and knowledge of the same aspects on the part of the lectures' results in poor quality of teaching and learning.**

Recommendation

Considering the above discussions, the following **recommendations are made in light of the findings of this study:**

1. The Department of Higher Education and Training must ensure that practical measures are taken to ensure that lectures of higher institutions have received proper training so as to have in-depth understanding of the elements of e-learning based on:

- Pedagogy
- e-pedagogy,
- constructivism theoretical framework
- quality of teaching

2. The Department of Higher Education and Training must ensure that total involvement of lecturers is strictly considered during e-learning curriculum design, planning, implementation and evaluation sessions at institutional, district, provincial and national levels. This can be done by means of the following identified strategies in the context of this research:

- Total involvement of lecturers and public policy makers in making staff development needs analysis.
- Democratic approaches to needs analysis and designing professional development policies.
- Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.

RECOMMENDATIONS FOR FURTHER RESEARCH

This study suggests that more research should be undertaken on how the objective, and cognitive theories of learning should be incorporated with constructivism learning theory during the implementation of e-learning. This suggestion has been inspired by Driscoll (2000) who still views the valueof integrating other traditional learning theories and modern theories during the teaching and learning process.

CONCLUSION

It can therefore be concluded that e-learning is an effective mode of teaching and learning e firstly because of its capacity to synthesise/blend/integrate the principles of e-pedagogics, and the application of the constructivism theoretical. Secondly, since this process of blending the identifies components of e-learning in the context of this study is done by lectures, this provides them an opportunity to upgrade their knowledge and skills of effectively implementation the e-learning programmes in their institutions. This is based on the research findings which confirmed that the level the lectures' knowledge and skill of e-pedagogics, and application of constructivism and the characteristics of quality of teaching and learning determines the level of quality teaching and learning. If the levels of the skills are high,

LIMITATIONS

The research had the following limitations:

This study, however, had its own strengths weaknesses. The strength has been seen in use of the mixed method research approach which has been applied to ensure that all the research questions have been fully answered. limitations of this study have been associated the use of sampling procedures which restricted covering of a large geographical area during bot the quantitative and qualitative phase. The study only concentrated in Johannesburg which made it impossible to generalise the findings to a wider population because of financial constraints, time factor and distance in terms of travelling.

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APPENDIX 1

FOCUS GROUP INTERVIEW GUIDE

PRESENTATION OF THE QUALITATIVE FINDINGS

Focus group interviews

Three focus group interviews each comprising of 10 lecturers were conducted. In case of verbatim comments, participants' pseudonyms are used.

Q1.1 What is your knowledge and understanding of the following components of e-learning:

- E-learning
- Pedagogics
- Constructivism
- Quality of teaching and learning

Q 2. What are your challengesin implementing e-pedagogics, constructivism and quality of teaching and learning?

Q 3. What are your perceptions towards the synthesising or blending competencies of the lecturers' of implementing e-learning comprising of pedagogy, constructivism for quality of teaching and learningimprovement?

Q 4. Considering the above question, to what are your suggestions on professional developmental intervention strategies that can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning.

- Democratic approaches to skills training and development
- Autocratic approaches to skills training and development
- Establishing monitoring teams of staff development

Part A

BIOGRAPHICAL INFORMATION

In all cases, place a cross [x] in the appropriate box. Select one option only, unless otherwise indicated.

Section 1 **FOR OFFICE USE**

1. POSITION OF RESPONSIBILITY

Principal	1		1
Vice Principal	2		
HOD	3		
Lecturer	4	62	

2. GENDER

Male 34	1		2
Female 28	2	28	

3. AGE- GROUP

25-29	1		3
30-34	2		
35-40	3	6	
41-45	4	41	
46-50	5	10	
51-55	6	5	
55+	7		

4. EXPERIENCE ON THE POST OF THE ABOVE RESPONSIBILITY

0 to 5 years	1	12	4
6 to 10 years	2	25	
11 to 15 years	3	10	
16 to 20 years	4	7	

Over 20 years	5	

5. MARITAL STATUS

Married	38	1	
Single	10	2	
Divorced	14	3	
Widowed		4	
Separated		5	

5

6. LEVEL OF EDUCATION (PLEASE INDICATE YOUR HIGHEST QUALIFICATIONS ONLY)

FOR OFFICE USE

Diploma in education	1	
Advanced certificate in education	2	
Bachelor's degree or equivalence	3	
Honours degree or equivalent Master's degree	4	35
Master's degree or equivalent	5	22
Doctorate degree	6	3

6

7. RACE

Black-African	1	21
Coloured	2	11
Indian	3	20
White	4	10
Other	5	

7

Part 2

Section A:

What are the perceptions of lecturers regarding their understanding of E-learning, e-pedagogics, constructivism and quality of teaching and learning from a global and South African perspective?

1. **To what extent do you understand do you agree or disagree that the following are the meanings of the components of e-pedagogics as related to e-learning?**

		STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	
		1	2	3	4	5	
8.1	Pedagogy is a scientific field of study of the process of education in terms of teaching and learning	31	18	7	4	2	8
8.2	E-pedagogy: a branch of pedagogy that enhances learning technologies in order to improve didactic approaches	32	15	10	2	3	9
8.3	Constructivism: construction of knowledge with interpretations including active learning	27	20	8	5	2	10
8.4	Quality of teaching and learning: correspondence that exists between the expectations of the national educational standards, the teachers and learners regarding curriculum implementation and development	24	18	12	5	3	11

2. **To what extent do you agree that the levels of the South African lecturer' skills and knowledge comply with the following characteristics of e-pedagogics as related to e-learning?**

		STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	
8.5	Pedagogy is a scientific field of study of the process of education in terms of teaching and learning	3	4	12	20	23	12
8.6	E-pedagogy: a branch of pedagogy that enhances learning technologies in order to improve didactic approaches	3	2	11	19	27	13

Section B:

What is the effectiveness of implementing E-learning in relation to the lecturers' level of knowledge and skill of e-pedagogics in South African Private institutions of higher learning?

3. **To what extent to you agree that the South African lectures lecturers' knowledge and skills of e-pedagogics have a positive influence on the following principles of quality of teaching and learning?**

		STRONGLY AGREE	AGREE	UNDECIDED	STRONGLY DISAGREE	DISAGREE	
		1	2	3	4	5	
8.7	Curriculum implementation	2	6	11	21	22	14

8.8	Curriculum development	1	4	8	19	30

Section C:

What are the perceptions of lectures regarding the effectiveness of the implementation of E-learning as related to the constructivist's theoretical framework in South African private institutions of Higher learning.

When asked to share their views regarding the extent to which they agree or disagree that the following are the characteristics of constructivism theoretical framework as related to the implementation of E-learning.

		STRONGLY AGREE	AGREE	UNDECIDED	STRONGLY DISAGREE	DISAGREE	
		1	2	3	4	5	
8.9	Constructivism theory allows learners responsibility learner constructs knowledge in a meaningful way using technology	24	23	9	4	2	15
8.10	The student manipulates technology by applying critical thinking while the teacher acts as a facilitator	29	22	7	2	2	16
8.11	constructivism in e-learning promotes the learner's skills to solve real-life problems and practical problems	26	17	11	4	4	17
8.12	Initiates child-centred learning that promotes sustainable accumulation of knowledge and skills.	20	28	10	1	3	18

8.13	Constructing knowledge and meaningful concepts through active and personal experimentation and observation	27	20	12	2	1
8.14	Constructing meaningful knowledge by using social media into e-learning using online collaborative learning	24	21	12	4	1
8.15	Constructing meaningful knowledge by Learners taking control of their learning through their own goals and objectives in solving problems.	25	23	9	3	2
To what extend do you agree or disagree that South African lecturers' knowledge and skills of e-learning in relationship to the constructivism characteristics have a positive influence on the principles of quality education and learning						
8.16	curriculum development	2	6	6	18	30
8.17	Curriculum implementation	1	4	6	21	30

19

20

21

22

23

Section D:

What are the perceptions of lecturers regarding the effectiveness of e-learning by way of synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning?

To what extend do you agree or disagree that the following e-learning implementation strategy has a positive impact on quality of teaching and learning

1. Synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning?

		STRONGLY AGREE	AGREE	UNDECIDED	STRONGLY DISAGREE	DISAGREE	
		1	2	3	4	5	
8.19	Total involvement of lecturers and public policy makers in making staff development needs analysis.	27	21	12	1	1	25
8.20	Autocratic approaches to needs analysis and designing professional development policies.	1	3	9	20	29	26
8.21	Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.	29	18	10	3	2	27

		STRONGLY AGREE	AGREE	UNDECIDED	STRONGLY DISAGREE	DISAGREE	
		1	2	3	4	5	
8.18	Synthesising/blending/integrating lecturers' knowledge and skills of e-pedagogics, constructivism theory and the aspects of quality on teaching and learning?	29	17	10	3	3	24

Section E: Which developmental intervention strategies can be recommended to solve e-learning implementation challenges aimed at linking and blending teachers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning?

To which extent do you agree or disagree that the following professional developmental intervention strategies can be recommended during the implementation of e-learning in compliance to the lecturers' knowledge and skills of e-pedagogics, implementation of the constructivism theory and quality of teaching and learning:

		STRONGLY AGREE	AGREE	UNDECIDED	STRONGLY DISAGREE	DISAGREE	
		1	2	3	4	5	
8.19	Total involvement of lecturers and public policy makers in making staff development needs analysis.	27	21	12	1	1	25
8.20	Autocratic approaches to needs analysis and designing professional development policies.	1	3	9	20	29	26
8.21	Setting a professional development monitoring team that ensures total participation of curriculum innovation policy makers and lecturers in curriculum innovation, development and implementation.	29	18	10	3	2	27

1