Exploring First-year Students' Experiences of Using Moodle in Learning an Accounting Undergraduate Module at a South African University

By

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DECLARATION

I, Siyabonga Alpheos Cele declare that this dissertation contains my own original work. All sources that were used or quoted have been dully referenced accordingly. This research has not been previously accepted for any degree and is not being currently considered for examination at any other university.

(Signature of Candidate)

21 March 2019

Date

Signature of Supervisor

21 March 2019

Date

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DEDICATIONS

I dedicate this dissertation to my mother Thokozile Beauty Cele and my father Thawuzeni Cele who supported me throughout this research project. It is through your oral and financial support that this journey was a success. To my family thank you for your significant support, love, encouragement and motivation.

ABSTRACT

This qualitative case study explored first-year student's experiences of using Moodle in learning an Accounting undergraduate module at a South African university. Studies have revealed that students are driven by three different types of experiences when using Moodle to learn an Accounting undergraduate module. These types of experiences comprises of user-centred, interaction-centred and written-centred experiences. Such experiences drive students' actions when they are learning an accounting undergraduate's module on Moodle. Thus, the focus of this study was to explore first-year student's experiences of using Moodle to learn an Accounting undergraduate module. This study is a qualitative case study of six first-year accounting students in one of the South African universities. Its main purpose was to explore their experiences of using Moodle in learning an Accounting undergraduate module; and to further probe how their experiences improved their learning of Accounting module using Moodle.

This qualitative case study is situated within the interpretive paradigm. Therefore, the researcher engages the situation from the viewpoint of the participants through generation of authentic data. Six first-year students who were doing accounting module in the social science discipline were purposively and conveniently selected at the university in which this study was conducted, based on their experience and expertise of learning accounting and other modules through Moodle. This qualitative interpretive enquiry was characterised by multiple data-generation methods, such reflective activity, one-on-one semi-structured interviews, and document analysis, to respond to key research questions of this study. Data generated in this qualitative research were analysed by using a thematic qualitative data analysis. These qualitative research questions were as follows, exploring what are the first-year student's experiences of using Moodle in learning an Accounting undergraduate module at a South African university; how first-year student's experiences of using Moodle can improve the learning of accounting, and why first-year student's experiences are in a particular ways in the use of Moodle in learning an accounting undergraduate module at a South African university.

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ABBREVIATION AND ACRONYMS

Acronyms	Descriptions
TIE	Technology in Education
TOE	Technology of Education
Moodle	Modular Object-Oriented Dynamic Learning Environment
TPACK	Technological Pedagogical and Content Knowledge
DoE	Department of Education
UKZN	University of KwaZulu Natal
CAPS	Curriculum and Assessment Policy Statement

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CHAPTER 1

The overview, context and objectives

1.1 Introduction

Many countries have successfully raised students enrolment levels at institutions of higher learning (universities), and while other countries still have a way to go, the focus has now shifted towards improving the quality of education at the institutions of higher learning (Berkvens, Van den Akker, & Brugman, 2014a). The focus has now moved from enrolment to education quality (relevant learning). Thus, this study intends to explore first-year students' experiences of learning an Accounting undergraduate's module through Moodle at a South African University. This study begin by exploring their experiences, what informs them, why these experiences are in particular ways, and how these experiences can improve the learning of accounting as per the Learning Management Systems (Moodle). This chapter aims to answer three key research questions posed, presenting the focus and purpose of the study, the rationale, the review of the literature, key research questions, and their respective objectives, research methods, data-generation methods, sampling, data analysis, ethical issues, and limitations.

1.**2 Title**

Exploring First-year Students' Experiences of Using Moodle in learning an Accounting Undergraduate Module at a South African University

1.3 **Focus and Purpose of Study**

The purpose of this study is to explore first-year students' experiences of using Moodle in learning an Accounting undergraduate module at a South African university.

1.4 **Location of the study (delimitation)**

This study was conducted at the South African University, in the University of KwaZulu Natal, school of Education, Edgewood Campus in Pinetown, focusing at Social science discipline. It was looking specifically at first-year students' experiences of using Moodle in learning an Accounting undergraduate module.

1.5 Rationale of the study

As a mentor and part of the Academic Monitoring and Support programme (AMS) at the University of KwaZulu Natal (Edgewood Campus), I have observed that first-year students have various challenges on the use of Learning Management System (Moodle) in learning an Accounting undergraduate module. In the accounting discipline there are many students, most of whom, especially first-year students, do not have laptops. Students are also lacking basic computer literacy skills. This makes it exceedingly difficult for them to use Moodle. Students are referred to Moodle user-manual which is meaningless to them: students are lacking technological skills on both hardware and soft-ware. This suggests that they are drawing too much on their personal experience. These conditions which are experienced by first-year students makes it more difficult for them to receive learning material such as assignments, tests, and tutorials. This challenging condition has an impact on first-year students' experience of academic life which may result in the missing of assignment due dates, and ultimate failing of the module. This aroused the interest in me to conduct a study exploring first-year students' experiences of using Moodle in learning the undergraduate accounting module.

Dewey' (1934, p. 5) defines experience as "a result, the sign and the reward of interaction between the organism and environment which or when it is carried to the full or is a transformation of interaction into participation and communication." Dewey and Vygotskij (1929) maintained that experience refers to participation in an activity. They further regard experience as a set of thinking, a basic unit of analysis that involves people (their intellectual and practical qualities), their material and social environment, their transactional relations (mutual effects on one another) and affect. Scholars such as Forlizzi and Battarbee (2004) noted that there are three major levels on understanding of experiences. First, the user-centred experience, which mainly focuses on different individual human aspects contributing towards the experience with the system (personal experience). This experience focuses on user's (student) personal experience in the operation of any learning programme. Second, written-centred experience, also known as professional rationale, focuses on different attributes of product design (for example, the goals of a learning programme) and their influence on student experience. Third, interaction-centred experience follows a communicative way of understanding experience. Alben (2011) noted that this level of experience refers to a dynamic process in which both the user (student) and the LMS contribute towards an unfolding experience in real time and real context (societal rational). The written-centred experience is

currently driving the use of Moodle because students are guided by formal written step-by-step procedures (user manual guide) on how to use the Learning Management System (Moodle).

The concept of curriculum, according to Thijs and Akker (2009) stems from the Latin verb "currere" which means to run. This study further states that the curriculum also refers to a course or a vehicle. However, when it is applied in the context of education, it is defined as course of learning. Curriculum refers to the systematically learning plan. Salter and Tapper (1981) accord with Pinar (2012) in referring to curriculum as a planned learning experience that the education institution (such as school, university or college) aims to provide for its pupils. The curriculum deals with specific learning goals, (aims and objectives), discipline content, assessment, and organization (activities, roles, accessibility, time, and environment) at any level of education. Furthermore, Khoza (2016) and Gutiérrez, Trenas, Ramos, Corbera, and Romero (2010) indicate that there are number of studies conducted which explore lecturers' and student's experiences and reflection on the use of Moodle. However, none of the studies declare which of these experiences helps students perform well in the accounting module. For this reason, this study intends to explore the first-year students' experiences of using Moodle in learning an undergraduate Accounting module, closing the above-mentioned gap.

Lecturers may benefit from the study by making sure that all students are able to access Moodle and thus improve their learning. Second, the university may also benefit from the study by reviewing its policies, providing adequate training to both staff and students on the use of Moodle. The university may also benefit by referring to the findings of this study, identifying which of these experiences has the potential of improving student performance. Students may also gain from this study by making effective use of the Learning Management System (Moodle).

1.6 Review of literature

Experience refers to the interaction between people and the learning programme, and the experience that results. This includes all aspects of experience such as physical, cognitive, and emotional. Studies by Dewey' (1934), Forlizzi and Ford (2000) and Forlizzi and Battarbee

(2004) outlined that experiences are momentary constructions that grow from the interaction between the user (student) and the learning environment (Learning Management System). According to the study conducted by Alben (2011, p. 1) "on Quality of Experience", experience refers to all "aspects of how students use Learning Management System (LMS), how well they understand how it works, how well it serves their learning purpose, and fits into their learning context." Experience is categorised into user-centred experience, interaction-centred experience, and written-centred experience (Dewey, 1958; O'Brien, 2002).

Sanders (2003) defines user-centred experience as an activity which is constructed in two equal parts: what the Learning Management System (Moodle) provides, and what the user (student) brings to the interaction. Forlizzi and Battarbee (2004) noted that user-centred experiences help one to understand the types of people (students) who will use the LMS. This kind of experience "also allows them to design and integrate a number of disciplinary approaches to understand user's (student) actions and aspects of experience that students will find relevant when interacting with a system" (Hassenzahl, 2003, p. 262).

Interaction-centred experience is defined as the most important tool in understanding how users (students) experience a designed or adopted Learning Management Systems (Moodle). Forlizzi and Battarbee (2004) notes that this level of experience is a valuable tool in exploring the role that the Learning Management System (Moodle) plays in bridging the gap between the curriculum designers and users (students). Interaction-centred experience is situated within a social context, in which students can interact with each other to share/exchange ideas about the curriculum content. It also emphasises the importance of these experiences in the context of social interaction, in which students interact and interpret particular events and create meanings (Dourish, 2004).

According Karat et al. (2005), written-centred experience plays a vital role in providing directions and guidelines on the development of navigational aids that will enable students to produce desired performance in reduced time and effort. This level of experience provides straight forward user-guides and procedures on how user(s) (students) may navigate the Learning Management System (Moodle). As Forlizzi and Battarbee (2004) argue, in general, this level of experience provides information to assist users (students); and in the process,

learning activities that evoke compelling experiences. This kind of experience should be considered by users (students) in their learning using a Learning Management System (Moodle) and their context. This level of experience provides step-by-step procedures or criteria to use as a checklist when accessing teaching and learning materials on the Learning Management System (Moodle) (Hassenzahl, 2003). User-centred and interaction-centred experience refers to subconscious experiences that are fluent, automatic, and fully learned; whereas written-centred experiences refer to cognitive experience which requires effort, focus, and concentration (Forlizzi & Ford, 2000).

One of the well-known LMSs used by most institutions of higher learning to manage their learning activity is Moodle. Moodle stands for Modular Object-Oriented Dynamic Learning Environment. According to Kotzer and Elran (2012), Moodle is defined as one of the (LMSs) that has been gradually gaining worldwide popularity. It is also called a Course Management System (CMS) for online learning (Khoza, 2016; Tunks, 2010). This LMS (Moodle) was introduced to promote a "social constructivist learning environment, where students use their experiences to construct knowledge" (Amory, 2012, p. 2). Brandl (2005) defines Moodle as an 'open Source' which allows developers (lecturers) to tailor the system to individual student's needs. It also fully compatible with other web-based resources such as (Facebook, Emails, Wikipedia, etc.), allowing for students' creativity and versatility (Shulamit & Yossi, 2011). Interaction-centred experience allows students to acquire skills for effective use of the LMS. As Brandl (2005) notes that Learning Management Systems such as Moodle encourage students to learn skills for intelligent use of information and technological communications. Furthermore, it also helps in enhancing face-to-face learning for both curricular and extra-curricular activities. Khoza (2013a) maintains that LMS also enables students to create and access chats and discussion forums allowing students to socialise.

Various international and local studies such as those by Martin and Madigan (2006), and Kotzer and Elran (2012) reveals that institutions of higher learning have been undergoing a variety of changes to deal with new ways of learning accounting as a subject. Such ought to prepare students for a productive future in a learning management environment (Moodle), featuring increasing online access to digital and electronic information. Further to this, LMSs such as Moodle are designed for a diverse community of users such as universities, librarians,

information technologists, and researchers, in order for students to successfully learn accounting in the technological and digital global learning environment. ,It is outlined that LMSs such as Moodle are beneficial in that they focus on giving students the best material to manage and promote learning, and also allow them to organise, manage, and receive accounting course materials (Goodwin-Jones, 2003). It requires students to draw much from written-centred experiences when using Moodle in learning accounting. Studies from Australia such as Liu (2012), Carrington and Robinson (2009), Tunks (2010), Dougiamas and Taylor (2003) and Weil, McGuigan, and Kern (2011) stated that students are enjoying Moodle especially when they are learning accounting content because they use Moodle activities such as chats and discussion forums to share information about the content. This suggests that students' actions are also informed by interaction-centred experience because these allow student's interaction and collaboration in the learning process. A qualitative action-research study was conducted by Mpungose (2018) on lecturers' reflection on the use of Moodle to teach a physical science education module. The study revealed that there is no policy guiding the use of Moodle by lecturers. These findings suggested that students may draw much only from their user-centred and interaction-centred experience rather than drawing from their written-centred experiences. This also influences students' experiences when using Moodle in learning an accounting module, such that they may select Moodle from their personal point of view and from what they were told by their friends. Students are therefore also not guided by any policy document on the use of Moodle. As a result, this study will explore first-year students' experiences of using Moodle in a professional university learning management platform that is not guided by any policy document.

1.7 Objectives of the Study

The purpose of this study is:

- To explore first-year students' experiences in the use of Moodle in learning an Accounting undergraduate module at a South African university.
- To understand how first-year students' experiences of using Moodle can improve the learning of Accounting undergraduate module?
- To understand the reasons that inform first-year students' experiences in the use of Moodle in learning an Accounting undergraduate module at a South African university.

1.8 **Research questions**

- What are the first-year student's experiences of using Moodle in learning an undergraduate Accounting module at a South African University?
- How may first-year students' experiences of using Moodle improve the learning of the Accounting Module?
- Why are first-year student's experiences particular to the use of Moodle in learning an undergraduate Accounting module at a South African university?

1.9 **Research Design and Methodology**

1.9.1 Introduction

Research design refers to a plan that guides the research study (Cresswell, 2009; Maxwell, 2012). This study will adopt a qualitative approach. According to Bertram and Christiansen (2014a) and Kozleski (2017), a qualitative approach refers to verbal, textual, and visual data. They further outlined that the main purpose of this approach is to establish the nature of socially constructed reality. The qualitative approach comprises feelings, opinions, and experiences and subjective data that are produced by the minds of the participants and related to the assumptions and ideology of the interpretive paradigm. This demonstrates an interconnectedness between data generation, key research questions, and conclusion. Therefore, the qualitative approach will assist me, as the researcher, to generate more textual data from first-year students' experiences of using Moodle, a Learning Management System. This study will also use this approach to gain an in-depth knowledge and understanding of first-year students' experiences of using Moodle in learning an undergraduate Accounting module. This qualitative approach will assist me to study first-year students' experiences in their natural settings. It will further assist me to make sense of and to interpret their experiences according to the subjective meaning they bring to them (Creswell, 2013). Using this approach will further allow data to be generated in natural settings sensitive to students. However, the qualitative approach does not use numerical data (Bertram & Christiansen, 2014a). I shall use written words instead of numbers or figures.

1.10 Research Paradigm (Interpretive)

According to Bertram and Christiansen (2014a), the research paradigm refers to ways of perceiving and understanding social phenomena. Cresswell (2009, p. 6) defines a research paradigm as "worldviews which refers to general orientation about the world and the nature of research that the researcher holds." In other words, research paradigm may be understood as various ways of understanding and perceiving the social world. Paradigms contains the following key important aspects: ontology, epistemology, methods, and methodology (Burrell & Morgan, 1979; Scotland, 2012).

According to Crotty (1989), and Blewett (2014), ontological assumptions are concerned with what establishes a social reality or nature of social reality being investigated. Researchers must take a stand based on how they view and perceive how things are and how they work (Scotland, 2012). According to Burrell and Morgan (1979), Cohen, Manion, and Morrison (2007b) and Cohen, Manion, and Morrison (2011a), epistemological refers to ways of enquiring into the nature of reality or forms of knowledge. Epistemological assumptions are concerned with how knowledge may be constructed, created, and communicate to individual human beings. Scotland (2012) postulates that various paradigms are based on their own epistemological and ontological viewpoint. Therefore, they all contain various assumptions of knowledge and social reality which substantiate their particular research approach. The ontological position of interpretive paradigm is relativism, which is defined as the view that reality is subjective and differs from individual to individual (Ernest, 1994; Scotland, 2012). Reality is constructed by individuals ─ persons' perceptions and experiences cannot be the same. The researcher cannot therefore expect similar responses from research participants. This research paradigm will be relevant to this study because the researcher aims to explore first-year student's experiences of using Moodle in learning an undergraduate Accounting module at a South African university. The epistemological view of the interpretive paradigm is also related to relativism, which is also based on real-world phenomena. This study will be conducted in an interpretive paradigm. According to Smith and Heshusius (1986), Bertram and Christiansen (2014a), Hussain (2015), Cohen, Manion, and Morrison (2007a) and Cohen, Manion, and Morrison (2013), researchers working in the interpretive paradigm requires to understand beliefs, values, behaviours, and how people make meaning of their own social phenomena (experiences) and thus extract a vigorous understanding of social human experiences and activities. Therefore in this study I shall use the interpretive paradigm in order to explore and understand beliefs, values, behaviour

and experiences of first-year students when using Moodle in learning an Accounting undergraduate module.

1.11 Research style: Case Study

This study will be situated within a case study research strategy. According to Rule and John (2011) and Bertram and Christiansen (2014a), a case study refers to a systematic and in-depth study of one particular case in its context. Bromley (1990, p.302) accords with the above studies, defining "case study research strategy as a systematic inquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest". A case may be a person as an individual, (such as a student, lecturer or parent), a group of people (a class of students) or an organisations, school or university. Creswell (2014), Cohen et al. (2013) and Nisbet and Watt (1984) define case study as a specific instance that is often designed to illustrate a more general principles. It may be regarded as a study of instance in action. Case study methods take a particular situation as given, and try to find out what in particular it means to the participants. Further to this, a case study research strategy aims at gaining greater insight into and understanding of a specific situation (Maree, 2007). This study will adopt a descriptive case of six first-year students learning the Accounting module. Cresswell (2009) and Creswell (2014) remark that descriptive case studies (provides narrative account) refer to studies that are undertaken in order to understand the particular case in question. Thus, a descriptive case study will be relevant to this study. I am intending to gain great insight into the students' experiences when using Moodle in learning an undergraduate Accounting module. This research style will help me to understand which experience, whether the user-centred, interaction-centred, or interaction-centred experience drives the use of Moodle during the learning process.

1.12 Sampling

Maree (2007) and Yin (2003) define sampling as the process employed to select a portion of the population for study. Thus, I will use sampling in order to make decisions on how many individuals, groups, or objects (students) will participate in this study. Thus, purposive and convenience sampling will be utilized in this study to select Six first-year students from the University of KwaZulu-Natal (Edgewood campus) in the social science cluster. Purposive sampling refers to the process whereby participants are selected based on some defining qualities that make them the holder of data needed to answer key research questions (Bertram & Christiansen, 2014a; Maree, 2007). For example, in this study, participants are learning an

Accounting module at the university in which the study will be conducted. Students are therefore easily reachable because they are within the same university.

Second, this study will also adopt convenience sampling, According to (Bertram & Christiansen, 2014a), convenience sampling refers to the type of sampling in which participants are selected because of their convenient accessibility and closeness to the researcher. I shall use convenience sampling because participants are first-year students at the university in which this study will be conducted and are closer to the researcher. I will approach ten first-year students who are doing Accounting module, through emails, as potential participants to this study. I shall explain to them the purpose and importance of the study and request them to voluntarily participate in the study. I shall conveniently select five first-year students who are easy accessible to me, and who are relevant to this study because they are learning an undergraduate Accounting module. Cohen et al. (2007a) state that factors such as expenses, time, and accessibility often prevent the researcher from using the whole population to obtain more data needed to answer the key research questions. To overcome this limitation, I shall try to use a smaller group or subset of the population in such a way that the data generated will be representative of the entire group.

1.13 Data generation methods

This study will adopt multiple data-generation methods, such as reflective activity, one-on-one semi-structured interviews, and document analysis.

1.13.1 Reflective activity (open-ended interviews)

This study adopted reflective activity as the first method of data generation/production from the participants (Six first-year students). Reflective activity may be described as an activity that requires participants to complete a short series of questions about the phenomenon (experiences) under exploration (Cohen, Manion, & Morrison, 2011d; Khusainova, Chirkina, & Gabdrakhmanova, 2015). On the other hand, Biktagirova and Valeeva (2013) and (Menke, 2018) define reflective activity as the fundamental mechanism for self-reflection and critical evaluation of the individual's own experiences and actions. Reflective activity may be regarded as a fundamental technique for organising educational activities for a research study. Simpson, Jackson, and Simpson (2004) and Cushion (2018) maintain that one of its distinct

characteristics is that it provides deeper and richer data than any other data-production methods. Thus, this study used reflective activity in order to allow participants (first-year students) to critically reflect, understand, and evaluate their own experiences of using Moodle in learning an undergraduate Accounting module. Similarly, Robins, Ashbaker, Enriquez, and Morgan (2003) argue that reflective activity allows participants (first-year students) to understand themselves, their personal experiences, and the dynamics of using a Learning Management System (Moodle) to take an Accounting undergraduate module on a deeper level. Thus, I designed reflective activity that was in line with principles of technological, pedagogical and content knowledge (TPACK) as the theoretical framework adopted in this study (see Chapter Two). The activity requested first-year students to reflect on a set questions (refer to Chapter 3).

1.13.2 One-on-one semi-structured interview

An interview may be defined as pre-planned oral formal conversations between interviewee (participant) and a panel of interviewers (researcher). According to Cohen et al. (2013) and Maree (2007), an interview refers to a formal conversation between the researcher and the respondents, in which the interviewer asks the participant questions to collect data needed; and to learn about ideas, opinions, views, beliefs, and behaviours of the respondents. Additionally "it also refers to structured and focused conversation where the researcher has in mind particular information that he/she wants from the participants, and has designed particular questions to be answered by participants" (Bertram & Christiansen, 2014a, p. 81). In this study, one-on-one semi-structured interviews will be used. This will allow me, as the researcher, to ask more questions to obtain more detailed information about first year-students' experiences on the use of Moodle. Cohen et al. (2011a) maintain that interviews enable participants to discuss their experiences of the worlds in which they live, and to express how they regard the situation from their own point of view. Thus, this method of data generation will be most suitable and relevant to this study because I will be exploring first-years students' experiences, they will be able to express their own point of view in the use of Moodle when learning an undergraduate Accounting module. I shall allow students to talk freely about their experiences; this will enable me to generate much more detailed and descriptive data. This study consisted of six participants. This method of data generation will allow me to gain more in-depth data from a small number of participants. The limitation of this method of data generation is that participants can give information that does not accurately represent what is related to the study

(Bertram & Christiansen, 2014a). To overcome this limitation, if participants give data not related to the study, I shall then use that data to formulate new themes using deductive reasoning.

1.13.3 Document analysis

According to Bowen (2009) and Bertram and Christiansen (2014a), document analysis research methods refer to systematic procedures for evaluating and viewing documents, be they electronic or printed resources. Document analysis involves information that is collected by other people or derived from existing data. Document analysis research methods may be defined as analysis of documents that contain information about the phenomenon that researchers wish to explore. It is also used to categorise, interpret, investigate, and identify physical sources such as written documents, whether in the public or private domain (Bailey, 1994; Payne & Payne, 2004). Document analysis, as a research method, will help to generate data. This research method is good and sometimes even more cost effective than any other methods of data generation such as questionnaires and participants' observation (Gaborone, 2006). However, documents are sometimes not accessible or not retrievable. Yin (2003) contends that sometimes documents may be deliberately blocked. To overcome this shortcoming, I shall use a gatekeeper's letter and ethical clearance to retrieve and access all relevant documents for this study.

1.14 Data analysis

This study will adopt a qualitative data analysis. Qualitative data analysis may be referred to as constructing a sense of data in terms of the participants' definitions of their experiences, noting patterns, themes, categories and regularities (Cohen et al., 2011a). Maree (2007) maintains that qualitative data analysis tries to establish how participants make meaning of a specific phenomenon, by analysing their perceptions, values, experiences, knowledge and understanding, as an attempt to approximate their construction of the phenomenon. After the data-generation process, the researcher has to read and make meaning of raw data that has been gathered. According to Bertram and Christiansen (2014a), data analysis comprises three main steps: reduction (sorting and cleaning it up); display (presentation in an orderly manner); and conclusion drawing (what the data says to you/interprets). Data analysis consists of inductive and deductive reasoning. According to Bertram and Christiansen (2014a) inductive reasoning

works from specifics to broader generalisations. Deductive reasoning starts from general to specific theories or categories; emerge-data can be fitted into specific patterns. Themes will emerge from generated data using inductive reasoning. This study will use thematic analysis to analyse data. Thematic analysis allows me to present structured themes; other themes will be emerging from the data which will help me to modify the themes that I already have. According to Bertram and Christiansen (2014) thematic analysis is guided by two approaches ─ inductive and deductive reasoning. As Znaniecki (1934), LeCompte, Preissle, and Tesch (1993) and Gilgun (2015) maintain that in thematic analysis, data generated are scanned to generate categories of phenomenon, and relationships between these categories are sought. Maree (2007) further states that the main purpose of this approach is to allow research findings to emerge from the dominant and significant themes inherent in the raw data. Therefore, other themes emerging from the data will be structured according to the principles of the theory using deductive reasoning. "Deductive reasoning works from general to the more specific" (Bertram & Christiansen, 2014a, p. 116). In the study, data generated will be framed around three types of experiences ─ user-centred experience, interaction-centred experience, and written-centred experience. Therefore, data will be organised into categories, and patterns will be identified among the categories. Inductive and deductive reasoning will help me as the researcher to categorise participants' responses from interviews, focus group interviews, and document analysis. This w reveal the purpose of this study, which is to explore students' experiences in the use of Moodle in learning an undergraduate Accounting module.

1.15 Trustworthiness

Trustworthiness refers to the extent to which research may be trusted (Bertram & Christiansen, 2014a). To develop trustworthiness in this qualitative research study, studies such as those of (Lincoln & Guba, 1985) and (Guba & Lincoln, 1994a) presented specific criteria, such as credibility, triangulation, dependability, confirmability, and transferability.

Credibility refers to the extent to which the research findings reflect the realities or lived experiences of the research participants (Bertram & Christiansen, 2014a). Pilot and Beck (2012) define credibility as the truth of the research findings or participant views, and the interpretation and representation of them by the researcher. According to Merriam 1988, p. 63) credibility deals with question of "How congruent are the research findings with reality?"

As Cope (2014a), Guba (1981) and Shenton (2004) insist, ensuring credibility is one of the important aspects in establishing trustworthiness in research. Therefore, to enhance credibility in this study I shall use an audio-recording device to record the interviews and focus groups' discussion verbatim. Second, in this study, triangulation will be applied in order to enhance credibility. According to Bertram and Christiansen (2014a) and Shenton (2004), triangulation refers to generating data from various sources. Therefore, in this study I shall generate data using different methods of data generation such as one-on-one semi-structured interviews, focus group discussions, and document research analysis (such as modules outlines and university policies) in order to ensure triangulation. Confirmability is defined as making sure that the research process is transparent, with detailed information for the reader to decide whether they would have reached the same or similar conclusions (Bertram & Christiansen, 2014a). Lincoln and Guba (1985) and Bertram and Christiansen (2014a) maintain that confirmability also refers to the researcher's ability to demonstrate that the data presented represents the participants' responses, and not the researcher's biases or viewpoint. In this study, I shall ensure confirmability by demonstrating how conclusions and interpretations of generated data were established. This will show that the findings were derived directly from the data. Further to this, I shall also provide rich quotations from the participants' responses.

Dependability occurs when the researcher can account for why there may be any variations in the study. It can also means comparing the study with previous studies in the field and explaining the differences (Cope, 2014b). In order to enhance dependability in this study, I shall conduct a literature review, and be able to account for any variations in the data. Transferability refers to findings that may be applied to other contexts or groups (Casey & Murphy, 2009; Pilot & Beck, 2012). According to Guba and Lincoln (1994a) and Bertram and Christiansen (2014a), transferability refers to the extent to which the research may be transferred to another environment. This study will be using a qualitative research approach. According to Koch (2006), a qualitative study has met this criterion if the results have meaning to individuals not involved in the study; and readers can relate to the results from their own experiences. The researchers provided sufficient information and the research context to enable the readers to assess the findings' capability of being transferable.

1.16 Ethical issues/ clearance

Ethics refers to behaviour considered either right or wrong in the research study (Bertram & Christiansen, 2014a). The study by Blanche, Blanche, Durrheim, and Painter (2006) argues that the main purpose of research ethics is to protect the welfare of the research participants. Therefore, in order to ensure ethics in this research study, Blanche et al. (2006) and Bertram and Christiansen (2014a) identified three ethical principles which may be used to ensure research ethics, namely, autonomy, non-maleficence, anonymity/confidentiality and beneficence. According to Blanche et al. (2006), autonomy refers to respect for the dignity of the research participants. Bertram and Christiansen (2014a), Stevens (2013) and Grove (2011) believe that researchers must obtain an agreement from every person who will participate in the research study. Participants should participate voluntarily in the research study and must be allowed to withdraw from participating in the research study at any time, with no repercussions ensuing. Therefore, to ensure autonomy in this study, I shall start by obtaining a gatekeeper's letter from the university before applying for ethical clearance from the School of Higher Degrees committee at the university. I shall ask for consent from all the research participants in this study. Participants will be given detailed information about the purpose of the study so that they can make an informed decision to participate voluntarily in the research study. Participants will be given freedom to withdraw from participating in this study at any time.

Non-maleficence implies that the researcher must ensure that the research does no harm to the research participants or to any other individuals (Bertram & Christiansen, 2014a). Blanche et al. (2006) concludes that research must try to avoid and minimise wrongs and harms. Thus, to ensure non-maleficence in this study, I shall ensure that the research does no harm to the research participants either physically, emotionally, socially, or in any other way. Participants will be given the assurance that their names will be kept confidential during the publication of the research report: pseudonyms will be created to ensure their safety.

"Beneficence means that the research study must be beneficial, either directly to those involved or more broadly to other researchers or the community at large" (Bertram & Christiansen, 2014a, p. 43). Blanche et al. (2006) recommend that researchers make the attempt to increase the benefits that the research study will afford to the research participants. Therefore, this study

may be beneficial to the university, lecturers, and student teachers. The university will be able to provide sufficient training on the learning management system (Moodle) to both staff and students. Lecturers may be able to modify and enhance curriculum delivery through the use of Learning Management System (Moodle); and students may be able to enhance their learning experience through Moodle in learning an undergraduate Accounting module.

According to Eriksson and Kovalainen (2015), Bertram and Christiansen (2014b) and Denzin (2017), the issue of confidentiality and anonymity is closely related to the rights and respect for the dignity and fidelity of the research participants. In support of this, Leino-Kilpi and Tuomaala (1989), Noble and Smith (2015), and Graneheim and Lundman (2004) maintain that anonymity is protected when the participant's identity cannot be linked to their personal responses. Consequently, to strengthen anonymity in this study, participants were assured that their confidentiality was guaranteed; and that their contributions were not going to be attributed to them in person, but reported only as a population member opinion. Furthermore, participants' real names were not used in the research report; instead, they were given pseudonyms. Brannen (2017) explains that, if the researcher is not able to promise anonymity, he/she has to address confidentiality, which is the management of private information by the researcher in order to protect the participants' identity. Thus, to maintain anonymity in this study, participants were assured that any information given by them would not be used against them ─ data were used for expressly for the purpose of this research.

1.17 Anticipated Problems/Limitations of the Study

Due to the fact that I planned to generate data in July and August, the availability of my research participants (first-year students) was not be guaranteed; this is be a period of classroom technology and micro-mini teaching practice. First-year students may be busy with their preparations. However, to overcome this limitation, I plan to make early arrangements with them through emails and documents, hoping to interview them on the days they are available.

1.18 Chapter overview

1.18.1 Chapter 1

This chapter seeks to provide the readers with the general overview of the study. This chapter also demonstrated the title, the rationale behind the study, the purpose of the study as well as key research questions and its respective objectives. Chapter one further outlined what the literature revealed about the phenomenon of the study (experiences) and its focus (first-year students). Moreover, this chapter also outlined the research design and methodology, data analysis, trustworthiness, ethical issues and limitations for the study.

1.18.2 Chapter two

This chapter reviewed the literature which is based on four important aspect of this study such as phenomenon (Students' experiences), curriculum representations (intended, implemented and achieved curriculum), curriculum approaches (instrumental, communicative and artistic approaches) and Technological, Pedagogical and Content Knowledge TPACK as a theoretical framework.

1.18.3 Chapter three

This chapter is very crucial for the study because it discussed the methodology, methods and strategy in which this study was located. Methods and sampling strategies were used to select suitable participants and generates data for this study. Moreover, Issues of data analysis, trustworthiness, ethical issues and limitation were also taken into accounts in this study.

1.18.4 Chapter four

The chapter covers the discussion and analyses of research findings as per participants' responses to study through interviews and reflective activities. This discussion of findings will also be driven by TPACK theory which was used as a theoretical framework in this study.

1.18.5 Chapter five

This chapter presents the conclusions and recommendations by responding to key research questions and its respective objectives. In this chapter, the summary of the findings is also aligned with key research questions that are used to attain the purpose of the study.

CHAPTER 2

The literature review and theoretical framework

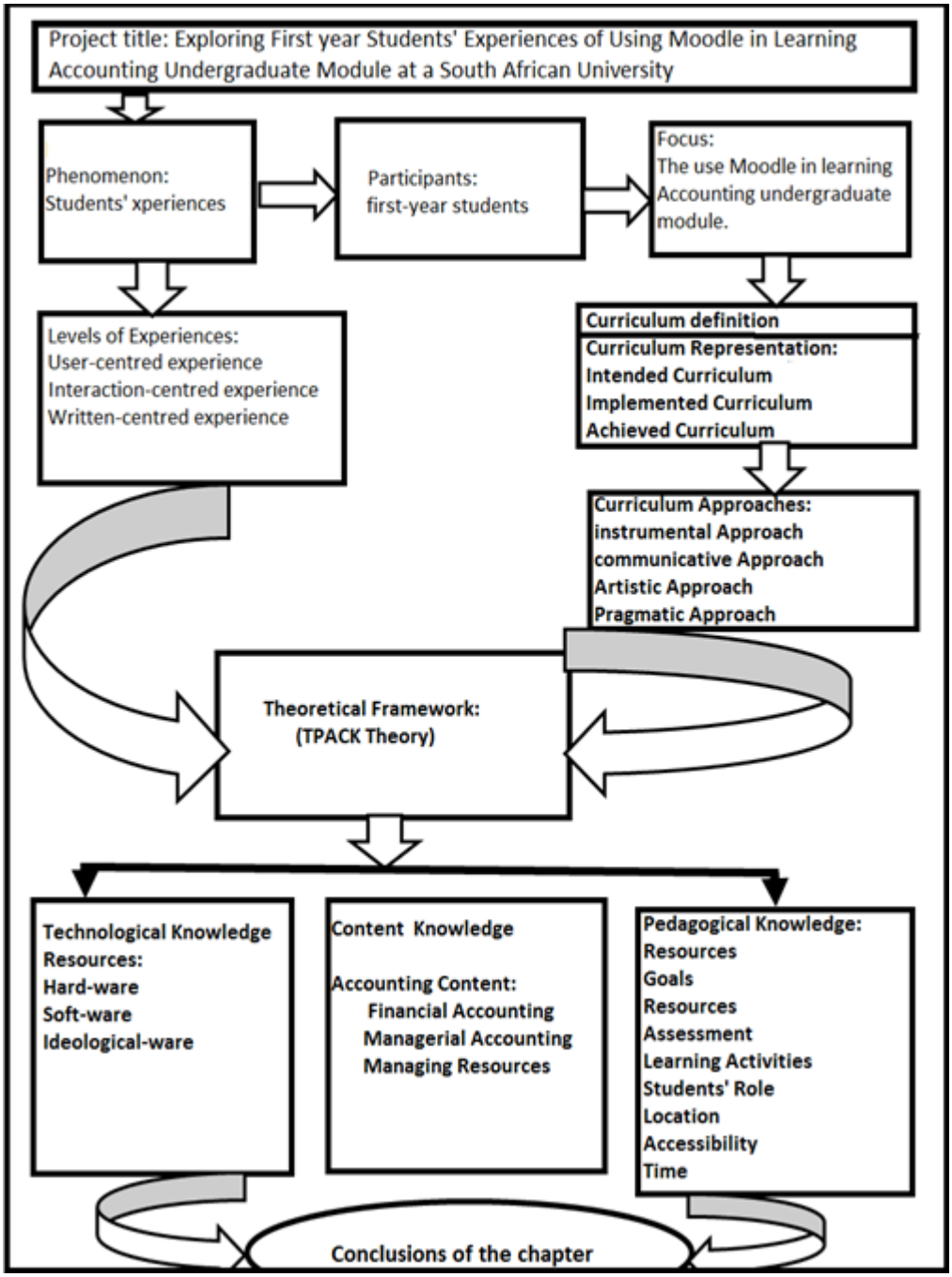

Figure 2.1 flow chart

2.2 Introduction

This chapter presents the review of the literature based on the research phenomenon (experiences) focusing on the use of Moodle by first-year students when learning their module. This chapter aims to unpack key relevant concepts and issues related to the curriculum, such as intended, implemented, and achieved curriculum, including curriculum development approaches such as instrumental, communicative, and artistic approaches. Literature review is a fundamental component of the study. It helps to share the results of previous studies related to the one under studied; also extending prior studies and filling the gaps (Cooper, 1984; Cresswell, 2009; Marshall & Rossman, 2014). Guthrie (2010) states that a literature review is an analysis of relevant resources for the research that help set the context and define the research topic. Hence, this chapter intends to explore students' experiences of using Moodle in learning an undergraduate Accounting module at a South African university. This chapter also aims to understand students' experiences, explaining first-year students' experiences of using Moodle in learning an undergraduate Accounting module, how their experiences of using Moodle may be improved, and why their experiences of using Moodle are understood and experienced in particular ways.

2.3 Phenomenon (students' experiences)

Experience is defined as interaction between students and any learning programme/activity (Moodle) (Forlizzi & Battarbee, 2004). It includes all aspects of experiences ─ physical, cognitive, and emotional. Studies such as that of Dewey (1934), Forlizzi and Ford (2000), Forlizzi and K. Battarbee (2004) and Kolb (2014) outline that experiences are momentary constructions that grow from the interaction between the user (student) and a programme such as a Learning Management System (Moodle). According to a descriptive case study conducted by Alben (2011, p. 1) on quality of experience, experience refers to all "aspects of how students use Learning Management System (LMS-Moodle), how well they understand how it works, how it serves their learning purpose, and fits into their learning context." Experience refers to a set of thinking, a minimal unit of analysis that includes people (their intellectual, affective, and practical characteristics), their materials, social environment, and their transactional relations (mutual effects on one another) (Forlizzi & Ford, 2000).

Boehm and Hansen (2000) define experience as a framework for learning. They further state that experience is the knowledge of an activity or subject acquired through involvement in a

particular situation. In line with this, Vyas and van der Veer (2005) define experience as a subjective and holistic phenomenon in which users (students) construct the eventual experience within the setting afforded by the learning environment (Moodle). On the contrary, Dewey (1934) and Forlizzi and Battarbee (2004) conclude that the most basic condition of experience is that it occurs as a result of interaction between individuals and objects in a specific environment (Moodle). Experience occurs through interaction between human beings (students) and the learning programme in a specific learning context (Moodle). As Forlizzi and Battarbee (2004) put it, experience may be regarded as an ongoing reflection of an event. Experiences are categorised into three different aspects: user-centred, interaction-centred, and written-centred experience (Dewey, 1958; O'Brien, 2002; Garrett, 2010).

Furthermore, Sanders (2003), Law (2009), Karapanos (2009), Dell'Era and Landoni (2014) define a user-centred experience as an activity which is constructed in two equal parts (programme and the user); first, what the programme (Moodle) provides; and second, what the users (students) bring to the interaction learning process. Similarly, Forlizzi and Ford (2000) and Clark, Crowe, Martin, Morgan, and Murphy (2012) assert that user-centred experiences help to reveal the types of people (students) who will use the LMS. This kind of experience "also allow[s] them to design and integrate a number of disciplinary approaches to understand user's (student) actions and aspects of experience that students will find relevant when interacting with a system" (Hassenzahl, 2003, p. 262). Students may therefore reflect own experiences in executing any given activities (user-centred experiences) on the use of (Moodle). According to Hassenzahl (2008) and Galer, Margaret, Susan, Jürgen, and Galer (2016) user-centred experience is not new in an interactive learning environment but it is an extension and separate perspective on the quality Learning Management System (Moodle). User-centred experience may be influenced by many factors such as the student's personal experience, prior knowledge, and context. Desmet and Hekkert (2007) posit that experience is shaped by various qualities of the user, such as cultural values, background, skills and attributes, personality, and motives, together with those of the Learning Management System (Moodle) (e.g., shape, design, learning resource). All factors, process and actions involved may contribute to the habitual actions during the learning process (Dewey, 1980). In line with this, Pucillo and Cascini (2014), and Law, van Schaik, and Roto (2014) confirm that this level of experience is often influenced by the personal habits of using any programme (LMS-Moodle) for interaction during the learning process.

Interaction-centred experience is defined as the most important tool in understanding how users (students) experience a designed or adopted Learning Management System (Moodle) (Battarbee, 2004; Bourrier, Jambon, Garbay, & Luengo, 2016). Furthermore, Forlizzi and Battarbee (2004) note that this level of experience is a valuable tool in exploring the role that the Learning Management System (Moodle) plays in bridging the gap between the curriculum implementers/enactors (lecturers) and users (students). Interaction-centred experience is situated within a social context, in which students can interact with each other or with lecturers in order to share/exchange ideas about the curriculum (Accounting content). As Alben (1996), Alben (2011) and Fallman (2003) suggest, interaction-centred experience focuses on interactions between individuals (students) and the Learning Management System (Moodle) and experiences that result. This level of experience also emphasises the importance of social interactions, in which students interact and interpret particular events and create meanings (Dourish, 2004). Hohr (2013, p. 1) avers that "It takes all sides of human existence, it brings in the world, as the methodological point of departure". A user-centred experience is a central aspect when using LMS such as Moodle because it requires an interaction among students so that they may share and communicate ideas on any given activity. This level of experience refers to all possible affective experiences involved in students' interaction with the Learning Management System (Moodle) (Desmet & Hekkert, 2007).

Karat et al. (2005) assert that written-centred experience plays a vital role in providing directions and guidelines towards the development of navigational aids that enable students to produce the desired performance in reduced time and with less effort. This assertion suggests that this level of experience relies on policy documents which provide straightforward user-guides and procedures on ways in which user(s) (students) can navigate a Learning Management System (Moodle). Consequently, Forlizzi and Battarbee (2004) agree that, in general, this level of experience provides strict written steps to assist users (students) to use any programme during the learning process. This kind of experience should be considered by users (students) in their learning, using a Learning Management System (Moodle) and their context. This level of experience provides step-by-step procedures or criteria to use as a checklist when accessing learning materials on the system (Moodle) (Hashemi & Herbert, 2016; Hassenzahl, 2003). User-centred and interaction-centred refers to subconscious experiences that are fluent, automatic, and fully learned; whereas written-centred experiences refer to cognitive experience which requires effort, focus and concentration (Cowley & Gahm-

Andersen, 2015; Forlizzi & Ford, 2000; Wang, Chen & Anderson, 2014). However, students' experiences may only be understood after the curriculum has been defined.

2.4 Curriculum representation (Intended curriculum, implemented curriculum and achieved curriculum)

According to Hoadley and Jansen (2013), Pinar (2012), Pinar (2013) and Thijs and van den Akker (2009b), the term curriculum stems from Latin verb "currere" which means to run, for instance, a course. These studies further imply that curriculum also refers to a course and a vehicle for learning. However, when it comes to the context of education, curriculum is referred to as planned learning experiences that the educational institution such as school or university aims to provide for its pupils (Salter & Tapper 1998; Kelly, 2009). Further to this, from the intended view of curriculum, it is explained as a plan for learning Berkvens (Curriculum developers' and designers' views) (Van den Akker & Brugman, 2014). Curriculum from an implemented and achieved view, is defined as plan of learning (students' experiences) (Pinar 2004; Khoza, 2016). Consequently, Hoadley and Jansen (2012), Pinar (2013) and Van den Akker et al. (2009) state that curriculum may be represented by three main categories ─ intended, implemented, and achieved.

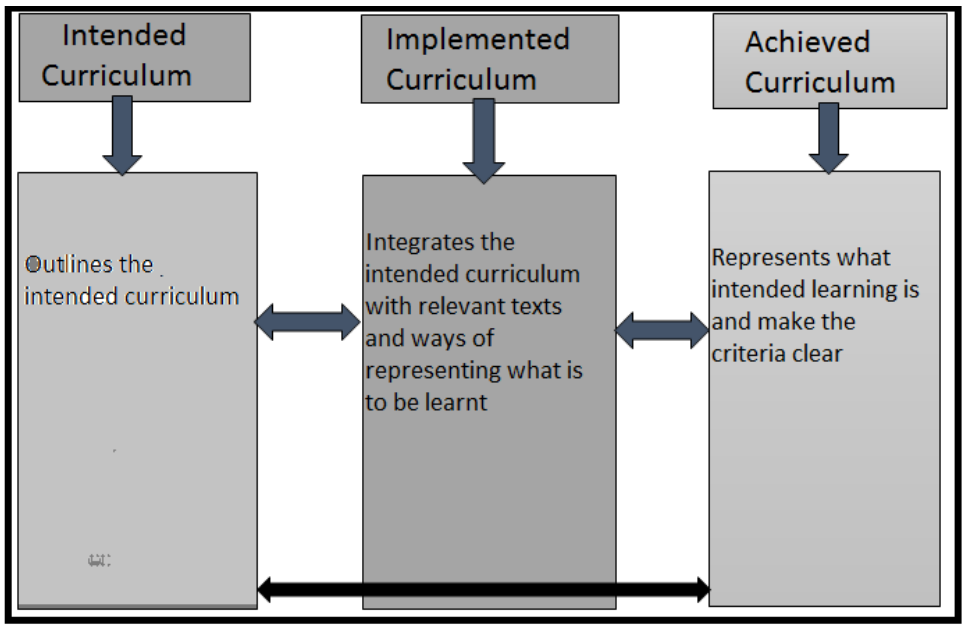

Figure 2.5 Curriculum representation

This diagram in figure 2. Shows how each categories of the curriculum is related to each other. Curriculum refers to what is planned or prescribed for students to learn in the practise of learning (intended, formal, planned, or prescribed curriculum) (Hoadley & Jansen, 2013). These studies further assert that an intended curriculum represents the basic philosophy underlying a curriculum and the intentions as prescribed by curriculum policies. It sets out what its designer aims should be learnt (Thijs & Akker, 2009). The curriculum draws from written policies of thoughts which are guided by fundamental educational vision, and theories which specify the intentions of the curriculum (Khoza, 2015a; Van den Akker & Thijs, 2009). The intended curriculum is influenced by written-centred experience because this category of curriculum is driven by organised written ideas, principles, procedures, and knowledge on the policy documents intended to be learned by students. When students are learning Accounting they are guided by a written module course outline that has the content showing the module aims, objectives, and assessment tasks that students are expected to accomplish. Furthermore, intended curriculum cannot be successful without being implemented by curriculum practitioners such as lecturers, teachers, and other curriculum practitioners.

According to Hoadley and Jansen (2013), Thijs and van den Akker (2009) practice curriculum is concerned with curriculum practitioners' (lecturers) role to interpret the intended curriculum and the actual process of student learning. Curriculum is defined as pre-planned learning experience that the educational institution aims to provide for its pupils. It also includes other aspects such as what is taught (content) how it is taught (pedagogy). "Curriculum in practice can also be referred to as enacted curriculum or simple as pedagogy" (Hoadley & Jansen, 2013, p. 120). Implemented curriculum relates to interaction-centred experience because it requires lecturers and students to interact in the learning process. Intended curriculum and practised curriculum must be evaluated in order to determine whether what is taught and learned has been achieved through the attained curriculum.

Achieved or attained curriculum is defined as the students' learning experiences measured through the attainment of learning outcomes by the students (Hoadley & Jansen, 2013; Thijs & Akker, 2009). This category of curriculum helps to ascertain whether what is intended and implemented has been achieved. Hoadley and Jansen (2013) claim that achieved curriculum provides feedback to and input for both intended and implemented curriculum.

Achieved/assessed curriculum acts as a bridge between an intended and an implemented curriculum. Achieved/assessed curriculum should give feedback on what students do or know in connection with what they should know (Ingram, 2014; McNeil, 2014). Whatever is in the intended curriculum, is that which must be achieved/assessed. Assessment may be conducted formatively (assessment for learning) and summatively (assessment of learning). Formative assessment may be used as a continuous way of monitoring students' performance. According to DoE (2012), formative assessment refers to a daily monitoring of students' progress and it provides information in order to help students to grow and to make progress in their learning, for example, class activities, projects, etc. Summative assessment helps lecturers to decide how much a particular student has achieved by a certain stage, for instance, tests, examinations, and assignments. , Such a summative assessment may be used to decide whether certain outcomes have been achieved.

Furthermore, Van den Akker et al. (2009) define curriculum as plan for learning (intended perspective) and organised, written policies of ideas which relate to written-centred experiences. Such requires students to follow a written manual of using Moodle in learning an undergraduate Accounting module. On the contrary, Pinar (2012) defines curriculum according to implemented and achieved perspectives. This refers to a curriculum practitioner's role to interpret the intended curriculum, and as students' experiences which are measured through the attainment of learning outcomes. This relates to user-centred personal and interaction experience of using Moodle in achieving learning outcomes when learning an undergraduate Accounting module. Curriculum development is concerned with bringing innovation and improvement into education, and therefore, four curriculum development approaches may be differentiated (Thijs & Akker, 2009).

2.6 Curriculum Approaches

According to Visscher-Voerman and Gustafson (2004), there are three curriculum development approaches. These are instrumental, communicative, and artistic approaches. An instrumental approach is concerned with the systematic design process, based on careful analysis. Explicit, measurable, and attainable objectives for the development process are formulated, also called planning by objectives (Ralph, 1949; Tyler, 2013). Further to this, Tyler also provided a framework known as the Tyler Rationale, in which the researcher suggested

that all curriculum developers consider these questions for curriculum development and innovation. For instance, objectives (which objectives should education aim for?); learning experiences (which learning experiences are most relevant in order to attain these objectives?); organisation (how could these objectives be organised effectively?); and evaluation (how can we determine whether the objectives have been achieved?) (Ralph, 1949; Taba, 1962; Thomas, Kern, Hughes, & Chen, 2015). This approach relates to written-centred experience which requires curriculum designers to follow certain procedures and framework when developing the curriculum.

Communicative approach involves all the stakeholders in curriculum design. Van den Akker & Thijs (2009) note that this approach emphasises the importance of rational strategies in which building relationships with other stakeholders and the input of other stakeholders involved are important. Curriculum design in this approach becomes a social process in which all stakeholders have their vision of the problem and desired developments and improvements (Van den Akker and Thijs, 2009). The best curriculum design is the one in which all stakeholders involved reach an agreement. According to Walker (1990) the communicative approach involves a deliberative model which comprises the following stages of curriculum development. The platform of ideas: during this stage, curriculum designers and other relevant stakeholders involved present their ideas and views about the problem, while striving for agreement. Second, deliberation, in this phase curriculum designers and other stakeholders develop possible solutions for the identified problem and discuss the most suitable solution. Third, design: during this phase, the outcomes of the deliberation phase are changed and modified into the draft of the final product (curriculum). This curriculum approach relates to interaction-centred experience because it allows students to interact with their peers to construct Accounting knowledge on the Learning Management System (Moodle) using platforms such as discussion forums and chats. The most noteworthy advantage of this approach is that all participants or stakeholders are given opportunities to contribute. However, this approach may be very time-consuming.

Furthermore, artistic approach is concerned with the practical usability of a curriculum (Van den Akker & Thijs, 2009). In this approach, a first rough outline of a possible final product is developed quickly. The specifications of curriculum design are demonstrated. After several

numbers of rounds of design version and evaluation, the curriculum is designed. There is a close interaction with practise in the Learning Management System (Moodle). As a result, this approach relates to user-centered experience because of its focus on the practical aspect of a Learning Management System (Moodle).

According to these studies (Bernstein, 1999; S. Khoza, 2016; Oliva & Gordon, 1988; A. Thijs & van den Akker, 2009a), and (Van den Akker, Branch, Gustafson, Nieveen, & Plomp, 2012) any learning curriculum consists of ten curriculum concepts: rationale, goals, resources, assessment, content, accessibility, teaching role, environment, activities, and time. The above studies confirmed that students' experience of using Moodle revolve around the understanding of these curriculum concepts.

2.7 THEORETICAL FRAMEWORK (MOODLE-TPACK)

This chapter also reviews the literature related to both the key research questions and objectives covering the experiences of first-year students of using Moodle in learning an undergraduate Accounting module. As a result, this chapter also intends to unpack key theoretical principles guiding the study. Thus, this study is framed around the TPACK theory also known as a framework for teacher knowledge for technology integration which has the following principles: technological, content, and pedagogical knowledge (Herring, Koehler, & Mishra, 2016; Mishra & Koehler, 2006) as displayed in figure 2.7.1 below.

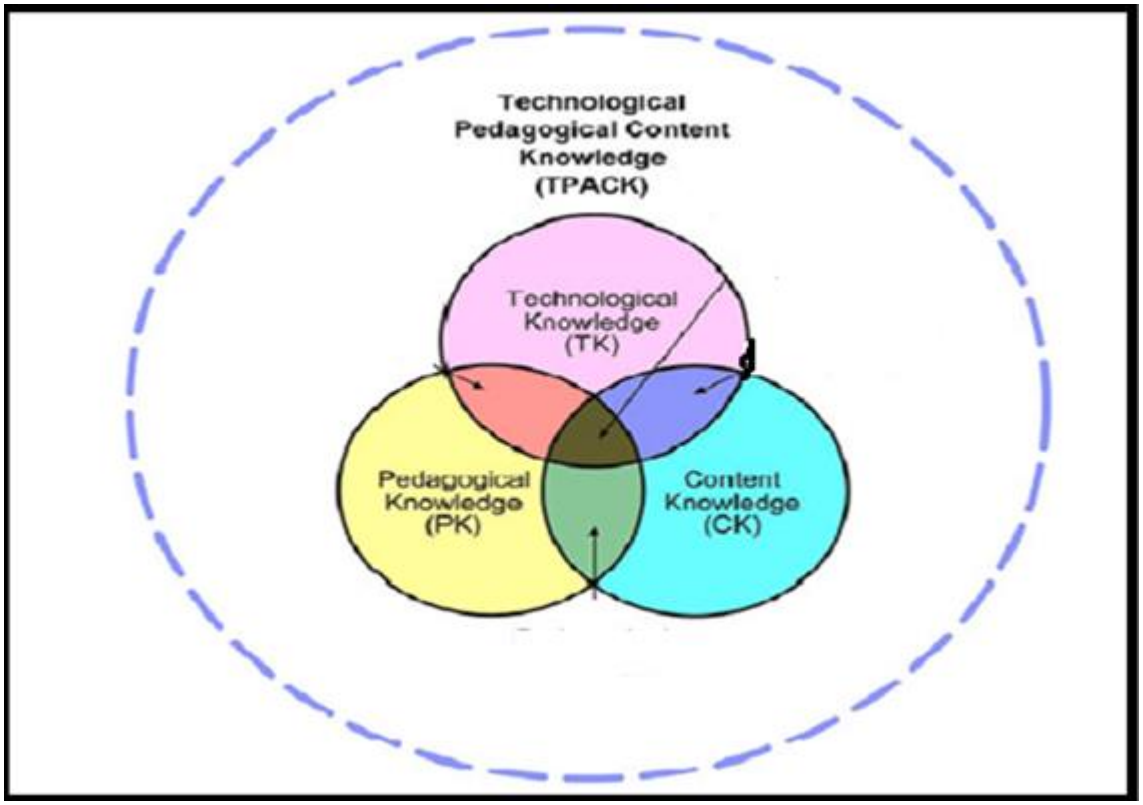

Figure 2.7.1 Technological Pedagogical and Content Knowledge (TPACK) by (Mishra and Koehler, 2006, p. 3).

2.7.1.1 Technological Knowledge

Moodle is one of the Learning Management Systems (LMSs) used by most institutions of higher learning to manage their learning activities. Moodle stands for Modular Object-Oriented Dynamic Learning Environment. According to Kotzer and Elran (2012), Moodle is defined as one of the Learning Management Systems (LMSs) that has been gradually gaining worldwide popularity. This is also called a Course Management System (CMS) for online learning (Khoza, 2016; Tunks, 2010). This Learning Management System (LMS-Moodle) was introduced to promote a "social constructivist learning environment, where students use their experiences to construct knowledge" (Amory, 2012, p. 2). Brandl (2005) defines Moodle as an 'open Source' which allows developers to tailor the system to individual student's needs. It is also highly compatible with other web-based resources such as (Facebook, Emails, Wikipedia, etc.), allowing for student's creativity and versatility (Shulamit & Yossi, 2011). Interaction-centred experience requires students to have skills for effective use of LMS. As Brandl (2005) notes, LMSs such as Moodle encourage students to learn skills for intelligent use of information and technological communications.

Furthermore, various international and local studies such as Martin and Madigan (2006); Kotzer and Elran (2012); Frailich, Kotzer, Elran, and Scherz (2011); Gašević, Dawson, Rogers, and Gasevic (2016); Prensky (2001); Casquero, Ovelar, Romo, Benito, and Alberdi (2016);Selwyn (2007), and Kop and Carroll (2011) revealed that institutions of higher learning have been undergoing a variety of changes to deal with new ways of learning Accounting as a subject. The main purpose was to prepare students for a productive future in a learning management environment (Moodle), featuring increasing online access to digital and electronic information.

Furthermore, LMSs such as Moodle are designed for a diverse community of users such as universities, librarians, information technologists, and researchers in order to help them enable students to successfully learn Accounting in the technological and digital global learning environment. It is outlined that LMSs such as Moodle are good because they focus on giving students the best material to manage and promote learning, and also allow them to organise, manage and receive Accounting course materials (Henderson, Selwyn, & Aston, 2017a). The study requires students to draw much from written experiences when using Moodle in learning Accounting. Studies from Australia such as Liu (2012), Carrington and Robinson (2009), Tunks (2010), Dougiamas and Taylor (2003), stated that students are enjoying Moodle especially when they are learning Accounting content because they use Moodle activities such as chats and discussion forums to share information about the content. Student's actions are also informed by interaction-centred experience. This allows student's interaction and collaboration in the learning process. A qualitative action research study was conducted by Mpungose (2018) on lecturers' reflections on the use of Moodle to teach a physical science education module in a South African context. The study revealed that some of the universities have no policy guiding the use of Moodle by lecturers. These findings suggest that students may tempted to draw only from their user-centred and interaction-centred experience, rather than drawing from written-centred experience if there is a guiding policy on the use of Moodle. For instance, the use of Moodle without a guiding policy may also have an influence on students' experiences when using Moodle in learning Accounting module such that they may use Moodle from their personal point of view and what they were told by their friends. Students seek to address their own personal needs and their societal needs when using Moodle; and they need to possess technological knowledge.

Moodle is regarded as technology in/of education. It is divided into two levels, namely, technology in education (TIE) and technology of education (TOE) (Pervival & ellington, 1988; Prensky & Berry, 2001; Thompson, 2013). Students should have certain technological knowledge or skills (user-centred experience) to use this Learning Management System (Moodle). This level of experience can allow students to execute any given activity.

Moodle consists of three main knowledge aspects: Moodle technological knowledge, Moodle content knowledge, and Moodle Pedagogical knowledge (Mishra & Koehler, 2006). Moodle is described as technological knowledge because it is a resource for/of learning (Govender & Khoza, 2017). A resource refers to any learning equipment or material that may be used to enhance students' learning. Criticos et al. (2002, p. 296) "define[s] resource as anything which helps students to learn." Resources may be used in supporting student learning. Khoza (2015a) defines a resource as anything that aids the learning process. According to these studies ─ Criticos et al. (2005) and Khoza (2012), resources are divided into hard-ware, soft-ware resources and ideological-ware. Furthermore, hard-ware resources refers to any mechanism or equipment used in learning (computer, overhead projector, SMART boards, Smartphones, etc. (Criticos et al., 2002). Hard-ware resources relate to written-centred experience because hardware resources require students to follow step-by-step procedures, which are written, such as following a written user-manual. Students may therefore operate any particular hardware resources.

On the contrary, software resources refer to any tools used to display information, such as (computer application software, e-books, scholarly articles and OHP transparencies) (Khoza, 2011a; Percival & Elington, 1988). Students are enabled to interact with one another using software resources in order to share information. This relates to an interaction-centred experience: it requires the sharing of ideas to be dominant during the learning process, using Moodle. Ideological-ware may be defined as any learning tool that a person cannot see and touch, but which drives the learning process (Khoza, 2012). For example, it may consist of any learning aids, such as learning approaches, theories, research findings, subject knowledge, and experiences. (Amory, 2010; Davids, 2013; Govender & Khoza, 2017). These above-mentioned studies imply that students are more interested in hardware and software resources (technology

in education), rather than in ideological-ware (technology of education). They are lacking user-centred experience because they are more interested in technology in education. However, education is not only about technology in education (hardware and software); it is mostly about technology of education since it involves ideologies (ideological-ware), which drives the learning process (Amory, 2012; Khoza, 2013a). The exploration of students' experiences may assist students to know and understand their identity, being guided by particular theories when using the Moodle Learning Management System (LMS-Moodle).

2.7.1.2 Content Knowledge

Content refers to subject matter that students are expected to acquire or learn after they have been taught. Similarly, Mishra and Koehler (2006) and Ward, Kim, Ko, and Li (2015) maintain that content may be defined as the actual subject matter that is to be learned. However, in the context of education, content knowledge refers to the understanding of the learning experience of a subject matter such as Accounting content. Studies of Graham (2011) and Koehler, Mishra, Kereluik, Shin, and Graham (2014) define content knowledge as the phenomenon that involves an understanding of the content which comprises knowledge of how one's subject matter may be improved by the application of technology.

Furthermore, Loewenberg Ball, Thames, and Phelps (2008) and Koh, Chai, Benjamin, and Hong (2015) assert that content knowledge refers to a wide range of aspects of a subject matter knowledge; and the learning of subject matter such as knowledge of a subject and its organising structures. Shulman (1987), Dunekacke, Jenßen, and Blömeke (2015) and Engel, Claessens, and Finch (2013) argue that knowing a module content for learning requires more than knowing its facts and concepts. Similarly, Loewenberg Ball et al. (2008), Neuendorf (2016) and Herring et al. (2016) further pointed out that lecturers should also understand the organising principles and structures of the subject matter knowledge. Lecturers must not only understand why certain content in accounting is learned; they must understand why it must be learned ─ on what grounds, that its worth may be asserted. Literatures from studies such as Ward et al.'s (2015) and Mishra and Koehler (2006), note that it is imperative that lecturers understand and know the accounting content that they deliver to the students, including theories, concepts, and facts. Consequently, Ball and MacDiarmid (1990), and Entwistle and Ramsden (2015), aver that if lecturers lack an understanding of accounting content, they may misrepresent it to the students.

According to DoE (2011a, p. 8), “Accounting subject focuses on measuring performance, processing and communicating financial information about economic sectors, this discipline also ensures that principles such as ethical behaviour, accountability, and transparency are adhered to”. Correspondingly, Amernic and Craig (2004) maintain that accounting may be described as a craft of summarising and classifying financial information in an important manner and interpretation of the results. This makes accounting, as a subject, a unique discipline from other disciplines. As Needles, Powers, and Crosson (2013) note, its role is that of measuring, processing, and communicating financial information to be used by both internal and external stakeholders.

Furthermore, Weetman (2011, p. 6) further describe Accounting “as a process of identifying, measuring and communicating financial data about a business to permit informed decisions and judgments by the users of information.” As with a bank, shareholders, competitors, customers, government departments, external investors, inter alia, the accounting course outline (2018) states that accounting content deals with the logical, systematic, and accurate selection and recording of financial information and transactions. This includes the compilation, analysis, interpretation, and communication of financial statements and managerial reports for use by interested parties. Additionally, (De Wet & Van Niekerk, 2001; DoE, 2008b, 2011c), and Accounting module outline (2018) further outlined that in the Departments' curriculum policies such as In the Curriculum and Assessment Policy Statements (CAPS), the accounting discipline comprises knowledge, skills and attitudes that concentrate on three main topics, namely, financial accounting (analysing, recording and reporting through financial statements), managerial accounting (includes costs and budgeting), and managing fields/resources (inventory, ethics and internal control in the business environment) (Needles et al., 2013). This is in line with the module outline 2018, which maps out that accounting is divided into financial accounting, Managerial accounting and managing resources.

2.7.1.2 .1 Financial Accounting

Financial Accounting focuses on collecting, organising, recording, analysing and interpreting financial information for decision-making purposes. This aspect of accounting content ensures that students are able to organise, apply, and manage financial activities and data in a responsible and effective manner in their lives, communities, and economic environments (Deegan, 2012; DoE, 2012; Horngren & Harrison, 1994; Prem, Hugh, & Tony, 1989;

Weygandt, Kimmel, & Kieso, 2015). Financial accounting is also concerned with the preparation of financial statements such as the statement of comprehensive income previously known as the income statement, the statement of financial position also known as balance sheets, and cash flow statements for the purpose of providing financial information to various interested stakeholders (DoE, 2008b, 2011b; Hines, 1989). Similarly, Weetman (2011) maintains that reporting financial information is an important process of communication between a business and its stakeholders ─ banks, creditors, government institutions, consumers, shareholders, competitors, and creditors, amongst others. Financial accountancy is managed and influenced by both local and international accounting bodies, policies, and standards. Studies by Needles et al. (2013) and Carpenter and Feroz (2008) outline that the General Accepted Accounting Practice (GAAP) acts as a standard framework of guidelines for financial accounting reporting. GAAP includes rules, conventions, standards, and principles that must be followed in recording, analysis, and preparation of financial statements. This part of the accounting content is normally used by outside stakeholders to make financial decisions. Needles et al. (2013) note that "external decision makers use financial Accounting to measure and evaluate how well the entity has achieved its goals." A financial statement is as a statement of comprehensive income and a statement of financial position. Zimmerman and Yahya-Zadeh (2011), Weil, Schipper, and Francis (2013) and Barr and McClellan (2018) contend that financial statements of an entity are largely used by both inside and outside stakeholders to evaluate how the entity is progressing financially.

Moreover, financial statements are the central factor in accounting as a discipline. This part of the accounting content relates to written-centred experience. Students must follow written accounting principles, conventions, policies, and procedures. These consist of GAAP principles, the Companies Act, the double-entry principle, the framework for International Accounting Standard Board (IASB), and the international financial reporting standard (IFRS) which provides guidance on the preparation and presentation of financial statements in order to determine the operations and financial activities of the entity to the interested parties during a certain period. As DoE (2008b), DoE (2011b) and the course outline (2018) notes, financial statements of a business indicate how business activities have been conducted during a given period of time. Students can use a Learning Management System such as Moodle to access all accounting learning materials which are uploaded by their lecturers to complete all accounting activities following written policies, principles, and frameworks. Students should also develop

certain skills that will enable them to produce managerial reports though managerial accounting that will assist in informing management decision-making processes.

2.7.1.2 .2 Managerial Accounting

Managerial accounting focuses on developing managerial, financial, and communication skills to interpret financial and managerial information in order to make informed decisions and communicate these decisions to relevant stakeholders (DoE, 2011b; Perks, 2007). It focuses on the use of accounting data for the managerial decision-making process. Similarly, Needles et al. (2013), Garrison, Noreen, Brewer, and McGowan (2010), and Weygandt et al. (2015), maintain that internal stakeholders such as management, employees, shareholders, among others, use information provided by managerial accounting about financing, investing, and operating activities of the business, to make informed decisions.

On the other hand, Ittner and Larcker (2001) and Otley (2016) pointed out that the primary concern of managerial accounting practices is for financial control and cost determination through the use of systems such as budgeting and cost accounting systems. Correspondingly, Anthony (1965) and Gitman, Juchau, and Flanagan (2015) describe managerial accounting as the act of making sure that resources are extracted and are used effectively to obtain the business objectives. Managerial accounting is thus related to user-centred experiences. Students must possess certain personal managerial, financial, communication skills and knowledge that will enable them to interpret managerial accounting information in order to assist all other stakeholders to make informed decisions. Students must also be able to learn managerial systems through a Learning Management System such as Moodle. This may be used to determine price and budgeting cost and projections. This level of experience also enables students to execute any given activities using chats and discussion forums on the Learning Management System (Moodle). As Kolitz (2009), DoE (2011b), and the accounting course outline (2018) state, students must possess certain skills and personal experiences such as critical thinking skills, language, and communication skills and be able to develop the ability to apply principles and concepts to practical situations and to solve problems in accounting.

2.7.1.2 .3 Managing resources

Managing resources focuses on adherence to the code of ethics and internal control in the business environment to ensure transparency and accountability (De Wet & Van Niekerk, 2001b; DoE, 2008b, 2011b; Lawson et al., 2013). According to Adler and Milne (1997), Biggs (1989), Jones (2010), Lavia López and Hiebl (2014), Tan and Laswad (2015), and Langfield-Smith, Smith, Andon, Hilton, and Thorne (2017), students focus more on financial accounting because it allows the active involvement of students with the subject matter, promoting cooperation and interaction among students. Financial accounting is the dominant topic in accounting and students are more assessed on this topic. For example, the weighting of the accounting curriculum in policy documents such as Curriculum and Assessment policy statement (CAPS), and the accounting module course outline (2018) comprise 50 % to 60% of the accounting formal assessment. Students' actions in unpacking the accounting content are informed by interaction-centred experience, accounting being a practical subject. For instance, students may interact with one another in the group discussions forum in the Learning Management System (LMS) to exchange ideas about the content in the process of teaching and learning. In this way, the Moodle LMS can play a vital role in facilitating interaction between students and content, and thus, it can improve a student's learning experiences. Relevant pedagogical knowledge should be employed in order to enhance students' learning experiences.

2.8 Pedagogical Knowledge

Pedagogical knowledge refers to profound or in-depth knowledge about methods and practices of learning. Pedagogical knowledge may be described as knowledge of using various technologies and their competencies to unpack the learning content (Chai, Koh, Tsai, & Tan, 2011; König & Kramer, 2016; Ward, Kim, Ko, & Li, 2015). Likewise, Mishra and Koehler (2006) and Hutchison and Woodward (2014) assert that pedagogical knowledge may be referred to as having sufficient knowledge about methods, processes, and practices of learning. It also involves, among other things, general educational goals, values, and purposes. Thus, this kind of knowledge includes knowledge about learning approaches that lecturers can employ to teach accounting content to students. Mishra and Koehler (2006) confirm that this type of knowledge also involves knowledge about learning methods, strategies, and approaches that may be used in the classroom context; and assessment tools for evaluating student learning/understanding. Additionally, Ward et al. (2015) accord with the above studies and put it clearly that pedagogical knowledge is concerned with the process and practices of learning.

Further to the above, Hutchison and Woodward (2014), and Herring et al. (2016) share this view to maintain that pedagogical knowledge is a general kind of knowledge which involves all matters of student learning such as lesson planning development and implementation, classroom management, and student assessment. Pedagogical knowledge enables lecturers to know which learning approach may be used to teach specific accounting content, understanding how students learn. Lecturers with sufficient or deep subject knowledge understand how students construct knowledge and acquire essential knowledge and skills (Mishra & Koehler, 2006). Pedagogical knowledge requires lecturers to have a deep knowledge of various theories of learning such as constructivism, behaviorism, among others, which may be used in the students' learning. Mishra and Koehler (2006) and Berkvens, Akker, et al. (2014) assert that this kind of knowledge needs an understanding of cognitive, social and developmental theories of learning, and how they apply to students learning in the classroom context. This consists of the following principles, goals, assessment, learning activities, student roles, location, accessibility and time.

2.8.1 Goals

Goals are referred to as what students may experience and accomplish at the end of the course, term, or semester, and what lecturers aim to accomplish through teaching particular content (Latham & Locke, 2007; Locke & Latham, 2006; Suskie, 2018b; Valle et al., 2003; Waage et al., 2010). However, Anderson and Krathwohl (2001), Wenzel (2000) and Adams (2015) posit that educational goals refer to broad statements of purpose and intentions for the course or module. Goals have the potential of enhancing students' learning experience and performance. Correspondingly, Ambrose and Lovett (2014), Midgley (2014) and Hattie (2009) propose that research in education has revealed that educational goals are crucial for maximising student's achievement. Such goals also serve as one of the powerful learning interventions commonly applied in enhancing students' academic progress. Goals must be clear, specific and attainable. Similarly, Latham and Locke (2007) suggest that goals should be explicit, challenging, and specific in such a way that they provide clear success criteria and an evaluative process that may be used to ascertain students' progress. This suggests that, when educational goals are written down and are stated explicitly, they may have the potential to improve students' learning experiences, particularly when learning an accounting module using Moodle LMS. Further to this, Hattie (2009) and Mento, Steel, and Karren (2017) state that students should be encouraged to participate in goal-setting processes in order to enhance their learning

experiences and to connect learning goals to students' aspirations and interests. Studies such as those of Berkvens, Van den Akker, and Brugman (2014a), Kennedy et al. (2009b) and Redelius, Quennerstedt, and Öhman (2015) postulate that educational goals are divided into aims, objectives and learning outcomes.

2.8.1.1 Aims

Aims maybe defined as long-term goals. However, when it comes to an educational context, aims of a module refer to broad general statements of learning intentions (Hall, Hanna, Hanna, & Hall, 2015; Kennedy et al., 2009b; Suskie, 2018b). Donnelly and Fitzmaurice (2005) and Redelius et al. (2015) point out that aims indicate the overall direction of a module in terms of its content and context within a learning programme. Similarly, Moon (2002), and Reece and Walker (2016) assert that aims of a module are general statements concerning overall goals, ends, or intentions of learning. Aims also provide an indication of orientation in terms of content for the writing of learning outcomes. Furthermore, aims are crucial to showing what is expected to be accomplished by students at the end of the term or cycle. Literature from studies such as those of Kennedy, Hyland and Ryan (2006), Kennedy et al. (2009b) and Ewing (2015) claim that aims may be used as indicators of what students are expected to cover in a block of learning. The aim of the accounting module may give broad purpose or general learning intention of the module at the end of term or semester. An interpretive study conducted by Moon (2000) and Chipman, Segal, and Glaser (2013) reveals that aims may include abstract terms such as critical skills or professional characteristics. However, this kind of learning may be difficult to measure, yet is nevertheless important. As DoE (2011b, p. 5) outlines in its policy document, the Curriculum and Assessment Policy Statement, aims of the accounting module are to produce accounting students "who are able to identify, solve problems and make decisions using critical and creative thinking skills, work effectively as individuals and with others as members of a team; organise and manage themselves and their activities responsibly." Therefore aims of a module are related to user-centred experience. Students are expected to acquire certain skills such as problem-solving and critical skills. Using Moodle in dealing with the accounting content (managerial Accounting) or Course outline (2018) accords with the DoE (2011b) and reflects that aims of a module at higher education are intended to develop knowledge and skills required for accounting for sole proprietorship. Kennedy et al. (2009b) and Suskie (2018b) conclude that aims are general, whereas objectives are specific.

2.8.1.2 Objectives

Objectives are short-term goals. They are also referred to as specific statements of learning intention (Anderson et al., 2001; Hutchings & National Institute for Learning Outcomes, 2016; Kennedy et al., 2009b; Kiresuk, Smith, & Cardillo, 2014). Further to this, Hartel and Foegeding (2004) and the National Institute for Learning Outcomes (2016) regard objectives as detailed statements about the larger goals of the learning programme. Furthermore, they focus on the content and on identifying behaviour that may be expected as a result of working through the learning programme. It also includes statements about knowledge, skills and values which must be part of the shared learning practices and experiences (Kennedy, 2006; Moon, 2002; Redelius et al., 2015). , objectives can be established in order to indicate the learning content to be acquired by the students for that particular learning programme as a whole.

Furthermore, Kennedy (2006), Moon (2003) and Rieckmann (2017) agree with the above scholars, referring to objectives as a normally specific statement of students' learning intentions, because they indicate specific areas that students are expected to cover in a block of learning. Objectives give more specific information about what the learning of the module content hopes to achieve (Bowen & Fincher, 2018a; Kennedy et al., 2009a). For example, one of the objectives of an accounting module could be that students must be able to understand the importance of GAAP principles when preparing the financial statements; such as the statement of comprehensive income and statement of financial position. Further to this, DoE (2011b, p. 2) states that "objective of Accounting module aim to produce students who can work effectively, collect, analyse, organise and critically evaluate content knowledge, demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation." However, the accounting course outline (2018) has addressed two goals, namely, aims and learning outcomes, but has omitted stipulations of the third goal, objectives. However, accounting objectives seem to be related to written-centred experience because objectives are concerned with the learning content that should be achieved by students. Content refers to content that is to be learned. It is also comprises written knowledge, ideas, and concepts which students are expected to master. When students are learning an accounting module on the LMS (Moodle), they are guided by written educational objectives which stipulate the specific objectives to be achieved by students through the learning and application of a particular accounting content such as financial, managerial, and managing resources at the end of the whole programme. Students also use

written accounting books, articles, accounting activities and other related study materials which are uploaded by accounting lecturers on the LMS, to achieve educational goals.

2.8.1.3 Learning Outcomes

Learning outcomes are referred to a statement of what students are expected to know, understand, and/or be able to display after the completion of a learning process (Burston, 2015; Entwistle & Ramsden, 2015; Kennedy, 2006). Similarly, Gosling and Moon (2001) propose that learning outcomes be defined as a statement of what a learner is expected to know, understand, and be able to demonstrate at the end of a period of learning. Moon (2002) notes that the primary aims of learning outcomes are concerned with the standard of students' learning, and the relationship of learning outcomes and assessment. Learning outcomes make it clear what the expected lessons will be; and the work to be achieved and assessed. Learning outcomes are what is expected that the students will be able to achieve in order to show that they have acquired particular competencies (Eom, Wen, & Ashill, 2006; Hartel & Foegeding, 2004; Haßler, Major, & Hennessy, 2016). For example, one of the learning outcomes could be that students are able to apply skills of double-entry principles when preparing ledger accounts of companies. Gosling and Moon (2001) and Araujo, Carneiro, Cruz-Aguayo, and Schady (2016) suggest that learning outcomes are more dominant than aims and objectives. This implies that learning goals are informed by user-centered experience: they are capable of having an influence on meeting the needs of students in using Moodle (LMS) in learning an accounting module. Moon (2002) and Araujo et al. (2016) conclude that learning outcomes must be closely related to assessment activities.

2.8.2 Assessment

Furthermore, drawing from Brainard (1997), Reddy and Le Grange (2017), the concept assessment originates from the Latin verb assidere, meaning to sit beside. Further to this, Ramrathan, Grange, and Higgs (2017) outline that, in order to disclose what students know and/or understand it is important to be close to them, as they engage in the learning process. In its very simplest form, assessment may be defined as a systematic process of gathering, collecting, and recording data about students' progress in their learning. According to these studies, Broadfoot* and Black (2004), Black and Wiliam (1998), Fitzpatrick and Pagani (2013), Black and Wiliam (2009), and Godfrey et al. (2015) contend that the concept of assessment serves as a communicative means between the world of education and that of the

wider society. In this way, assessment may be thought of as a channel between the teaching and student learning process. It also helps in providing feedback on what students wish to know and/or understand. On the other hand, Reddy and Le Grange (2017, p. 159), state that "assessment is basically viewed by many studies as the act of determining student achievement". Assessment therefore involves the lecturers' capacity to explore what students can do, with the intention of understanding how they construct knowledge using their own experience so as to scaffold their learning. Further to this, Harlen (2006) and Pyle and DeLuca (2013) and Afflerbach (2017) define assessment as the vehicle for enhancing the students' motivation to learn and master new concepts of knowledge and skills. According to Black and Wiliam (2009), DoE (2008a), DoE (2011b), Rowntree (2015) and the course outline (2018). Assessment activities are divided into assessment for learning (formative assessment), assessment of learning (summative assessment), and assessment as learning (peer assessment).

2.8.2.1 Assessment for learning

Assessment for learning (AFL) refers to regular or day-to-day observation of how students are performing in their learning. Formative assessment is described as being an assessment for learning (AFL) and it is the kind of assessment that refers to daily monitoring of how students are progressing (Black & Wiliam, 2009; DoE, 2008a, 2011b; Wiliam, 2014; Wiliam & Thompson, 2017a). Similarly, Kennedy (2006), Kingston and Nash (2011) and Wiliam and Thompson (2017a) declare that assessment for learning (AFL) helps to inform lecturers on their students' progress in their learning. This may be achieved through observation of informal classroom interaction during classroom learning (Broadfoot & Black, 2004b; DoE, 2011b; Graham, Hebert, & Harris, 2015). These studies (Black & Wiliam, 2009; Hyland, Kennedy, & Ryan, 2006; Kennedy, 2006; Lee & Lembke, 2016), regard (AFL) as all those learning activities undertaken by the students in assessing themselves. This provides data to be used as feedback to enhance learning activities which they are involved in. On the other hand, Education and Science (1987), Broadfoot* and Black (2004) and Wiliam and Thompson (2017b) argue that any form of assessment that is used by lecturers to provide feedback to the students is fulfilling a formative purpose. Any positive achievements of a student may be discussed and recognised, and thus, relevant steps of learning may be planned. Additionally, this form of assessment may take place at the beginning of or during the learning process. As Delandshere (2001), Kennedy (2006), Broadfoot and Black (2004), Earl and Giles (2011), Harlen and James (1997), Griffin and Care (2014) and William (2014) demonstrate, students'

performance on assessment activities can allow students and lecturers to make informed decisions regarding the direction of the learning content. Thus, this form of assessment (AFL) is closely related to a user-centred experience. Students may use their personal experiences, knowledge, and attributes on the Learning Management System (Moodle) in executing any given accounting assessment activities. They may also gain continuous feedback on their learning progress as they engage with their lecturers through discussion forums and chats. As Black and William (1998) and Evans (2013) have clearly shown, providing feedback to students through AFL can assist in improving learning and maximize the performance of students. Correspondingly, Blanchard (2009, p. 139) maintains that "assessment for learning requires to enrich the students' commitment to curriculum activity as an intrinsically enjoyable experience and catalyst for further learning." However, when lecturers wish to assess students for promotional, grading reporting purposes, they may use assessment of learning.

2.8.2 .2 Assessment of learning

Assessment of learning (AOL) is normally used for grading purposes at the end of the learning process. According to studies such as those of Black and William (1998), Biggs (1989), Vaden-Goad (2009), DoE (2011b), and Houston and Thompson (2017), assessment of learning refers to the recording of the overall achievements of a pupil in a systematic way. Brookhart, Moss, and Long (2007), and Perera, Nguyen, and Watty (2014) are aligned with the above authors in stating that, when assessment activities are used to record a judgment of competence and performance of the student, this serves a summative purpose. Similarly, Harlen (2006), and Lam (2013) promote that assessment of learning (AOL) may be used to support and report on learning. Further to this, Beere et al. (2005) and Ellis (2017) suggest that assessment must be reliable and valid in promoting achievement, and progression, ensures that universities are accountable to parents, students, and the public for the achievement of every student. These above studies claim that assessment of learning (AOL) is predominant in learning activities because the students' strong conceptualizations of assessment are strongly linked to tests, assignments, and examinations. This claim suggests that students' actions are informed by a written-centered experience. Actions provide written procedures and guidelines on how assessment of learning should be conducted. As the accounting course outline (2018) states, students must achieve dual performance (DP) of 40 % before they can sit for examinations. This is conducted following procedures and guided by written policies and principles such as subject assessment guidelines.

2.8.2.3 Assessment as learning

Assessment as learning (also known as peer-assessment) refers to the assessment of students' work by their peers. According to the literature from these studies (Brown, 2015; Brown & Knight, 2012; Brown, 2015; DoE, 2011b; Norcini, 2003; Reinholz, 2016; Shih, 2011; Topping, 1998, 2009), assessment as learning involves students learning responsibility for evaluating the work of their peers against set assessment standards. Similarly, Topping (2009), Sandvoll (2014), and Reinholz (2016) describe assessment as learning as a form of participatory assessment in which students grade and/or provide feedback on the work of other students. Students are afforded the opportunity of providing oral or written feedback on written drafts from their peers. The primary purpose of involving students in this form of assessment is the notion that students have to engage themselves in the curriculum activities and thus learn through interaction with other students (Duncan, 2012; Suskie, 2018a). Students' actions are therefore guided by interaction-centred experiences because their assessment activities are conducted through involvement with other students in the LMS (Moodle). Students interact with one another in the discussion forums and chats to practise accounting activities, assessing one another. Further to this, Sandvoll (2014) claims that the rationale for involving students in assessment as learning is that learning primarily happens through interaction with others through curriculum-based activities.

Assessment as learning in the classroom can offer a number of benefits for students. For instance, it has the potential to increase the likelihood of active learning from students. del Mar Sánchez-Vera and Prendes-Espinosa (2015), Bostock (2000) and Suskie (2018b) observe that assessment as learning allows students to receive more, and more immediate feedback from their fellow students than when they depended upon their lecturers. Assessment as learning has the potential to give autonomy to students, developing higher-order thinking skills and abilities. Innovative assessment as (Bostock, 2000; McDowell & Mowl, 1996), call it, is a new term for assessment as learning. The researchers state that its aim is to empower students and improve the quality of learning. This form of assessment allows student to develop analytic and evaluation skills by using subject knowledge. Brown, Rust, and Gibbs (1994) believe that when students evaluate other students' work, they also gain insights into their own performance, and thus develop their ability to make judgements. However, knowing the assessment practices without understanding the learning activities is not sufficient.

2.8.3 Learning Activities

Learning activities may be described as those classroom activities that involve students' interactions. These activities are conducted to enhance students' experiences. Peeck (1994), Chi (2009), Jang, Reeve, and Deci (2010), Ramani, Rowe, Eason, and Leech (2015) and Johnson and Van Wyk (2016) define learning activities as active learning which includes all sorts of classroom activities that engage students with their learning experiences. Learning activities allow students to base choices of activities on their learning intentions. Studies such as those of Kennedy (2006), Gosling and Moon (2001) and Hwang, Lai, and Wang (2015) remark that learning activities are regarded as more relevant if students are the ones who decide on the curriculum content of these activities. On the other hand, Okubo, Shimada, Yin, and Ogata (2015) observe that learning activities allow students' active involvement during a learning process. These above studies further outline that learning activities are divided into lecturer-centred, learner-centred, and content-centred activities.

2.8.3.1 Lecturer-centred activities

Johnson and Van Wyk (2016, p. 104) "define[s] lecturer-centred activity to learning as the one in which lecturer's plan lessons activities and are controlled by the lecturer, who is in a position of authority". The lecturer is thus the core focus in performing the planning of the lesson to attain the lesson goals. This type of activity speaks to the lecturer's inputs and assessment in terms of how well the students have absorbed the learning content. As Vakalisa (2011), and Johnson and Van Wyk (2016) maintain, in this activity, the lecturers remain custodians of knowledge (the accounting content to be learned); and the students remain passive listeners (only conforming to the learning instruction by the lecturers). As a result, lecturers' role may be regarded as that of a knower, as Mtika and Gates (2010), Alvarez, Alarcon, and Nussbaum (2011) and Schweisfurth (2015a) put it. Lecturers are treated as sources of knowledge both in terms of content selection and choice of methodology. The lecturer is seen as a figure of authority who decides what must be learned and how this should happen.

On the other hand, Harvey, Cushion, and Sammon (2015) and Johnson and Van Wyk (2016) point out that the lecturer's role in this approach is the transmission of knowledge required of students in order to progress to another grade. The lecturer's action in this activity is guided

by written-centred experience. Lecturers take a dominant position in selecting and pacing of the content to be learned by students. These activities comprise written text, written assessment (such as test and examinations), policies, and procedures, written theories, which are used by lecturers in conducting learning and teaching activities on the LMS (Moodle). Thus, there is a need for written-centred experience to prevail during the process of learning when lecturer-centred activities are conducted. Schweisfurth (2015b, p. 396) concludes that "lecturer-centred activity makes less demand upon students while student-centred activity promotes active learning and requires students to play a more active role during the learning experiences."

2.8.3.2 Student-centred activities

Local and international trends in education have shown a paradigm shift from a traditional way of lecturing (lecturer-centred activity) to student-centred activities. Mtika and Gates (2010) elucidate that student-centred activities (also known as student-centredness or outcome-based activity) are the most predominant educational notions in contemporary international and sub-Saharan Africa. Further to this, writers such as Baeten, Dochy, Struyven, Parmentier, and Vanderbruggen (2016) and Baeten et al. (2016) state that in recent years, there has been significant interest in students' autonomy. This has resulted in a re-examination of what students can contribute to their own learning. On the other hand, Gosling and Moon (2001) and McCormack (2017) outline that student-centred activities (also known as outcome-based activity) refer to the ways of organising classroom learning activities around students' experiences.

In contrast, Sak, Erden, and Morrison (2016, p. 380) "stated that student-centred activity is regarded as an effective answer to the dominance of a transmissive Lecturer-centred activity, which is blamed for perpetuating route learning and stifling critical, problem and creative thinking among students". Gahwaji (2016) suggests that this approach also involves lecturers helping students to structure their personal experiences and use other strategies that include the pooling of experiences among various students. This shows that student-centred activity is guided by user-centred experience. Students are required to use their personal experiences, knowledge, and skills to perform accounting activities on the LMS (Moodle). Additionally, student-centeredness is concerned with what students will know or understand as a result of learning activities. According to Hopkins (2015), this alternative idea of learning concentrates

on what students are expected to demonstrate or be able to do at the end of the module. Further to this, some studies have claimed that student-centred activity requires curricular reforms in order to engage students' interests and to develop knowledge and skill in the key content areas (Baeten et al., 2016; Schweisfurth, 2013, 2015a). In this way, students will be able to assume a more active and participative role. Baeten, Struyven, and Dochy (2013) and Kim and Davies (2014) note that this approach is based on the philosophy that students' involvement and motivation will be greater if they can decide on how learning activities are structured. Students' learning experience can be greatly enhanced if they are included in the selection of content and curriculum decision-making. This can also allow them to gain more from learning activities, having a voice in deciding their accounting content and organising the learning activities.

2.8.2.3 Content-centred activity

Content-centred activity is an activity in which learning is organised around the content. Stryker and Leaver (1997), Crandall (1992), Robinson, Olvera-Lobo, and Gutiérrez-Artacho (2016), Overman, Vermunt, Meijer, Bulte, and Brekelmans (2014) stress that the main assumption behind this activity is that it is aimed at empowering students to become independent students and continue with the learning process beyond the classroom context. It comprises the knowledge, skills and attitudes students are expected to learn in a particular subject/module. Berkvens, Van den Akker, and Brugman (2014), Bickerdike (2014), Arshad (2017) define content-centred activity as knowledge, skills, and values-, culminating in learning activities that students experience in and outside of school. It allows students to realise what they are learning. In accounting there are three key curriculum contents that students are expected to cover in the subject. As DoE (2011b) and course outline (2018) show, in policy documents such as CAPS, the accounting discipline consists of three main content and corresponding topics in the accounting curriculum ─ financial accounting, managerial accounting, and managing resources.

Content-centred activity determines how learning is organized in the subject/module. Meymandpour and Davis (2016), Cenoz (2015) and Rege and Nicole (2017) observe that content-centred activity is significant if it is selected and organised for the development of student learning experiences, skills processes, and attitudes. Content-centred activity is influenced by interaction-centred experience because it allows students to interact with each

other in groups through discussion forums and chats on the LMS (Moodle) when performing or practising accounting. As Rege and Nicole (2017) note, the main idea behind content-centred activity is enhancing the learning partnership and social interaction in learning. Rege and Nicole (2017) suggest that this be achieved by increasing students' experience in collaborative learning and peer learning and teaching. Correspondingly, Phenix (1962), Baeten et al. (2013), and Rege and Nicole (2017) express that the content chosen should able to develop the three domains of learning ─ cognitive, affective and psychomotor skills ─ and consider the cultural aspects of the students. If students come from different cultural backgrounds and race, the content must be culturally sensitive. Policymakers should be able to select the content that will achieve the overall aims of the curriculum. However, this may be attained if students know their roles.

2.8.4 Lecturer's Roles

Transition in teacher education has evolved through various teacher roles and competencies. According to DOE (2000), Criticos et al. (2002), Gazette (2000), Shaffer and Thomas-Brown (2015) and Vázquez and Ellison (2018), Norms and Standards for Educators (NSE) require student teachers to perform a variety of roles within the classroom contexts, and thus, the changing roles of the South African teacher have made great alterations. New notions confront South African teachers, for example, student teachers are expected to teach students how to solve problems, think critically, design classrooms and apply learning strategies which are student-centred. NSE also aims to produce student-teachers who are competent educators. According to these studies (DoE, 2008a, 2011b; Killen, 2007; Sherbino, Frank, & Snell, 2014; Sibaya & Sibaya, 2008), lecturers' roles are divided into three, involving a combination of instructor, facilitator, and assessor.

2.8.4.1 Learning instructors

An instructor may be defined as an individual who is responsible for guiding and directing the learning experiences of students in educational settings such as the LMS (Moodle), face-to-face and blended learning. Good and Merkel (1973), McGrath (2013) and Côté and Laughrea (2014) describe the instructors' role as the continuous process of facilitating learning and giving assistance to individual students so as to enable them to make adequate and independent decisions both in social and economic contexts. Lecturers are expected to be instructors. This means that they must be able to interpret the official policy documents such as CAPS, planning

and designing inventive learning programmes (Accounting Course Outline) which is appropriate for the individual student and their background. Thus, it may be concluded that this student role is informed by written-centred experience because it regards students as passive recipients of information ─ lecturers are the ones who give learning instructions such as accounting activities to students through the LMS (Moodle). Veda and Martinson (2003) and Alutu (2006) conclude that this role helps to provide the opportunity of a further understanding of learning content, enhancing interaction with students on the LMS (Moodle). This also required lecturers to facilitate students' learning so as to help them achieve learning objectives.

2.8.4.2 Facilitator

A facilitator may be defined as managing a group of people in order to help them achieve identified relevant learning goals. However, when it comes to the education context, the facilitators' role as Reeve (2006), Hunter (2007), and Nyström (2014) put it, is to provide guidance to help students attain their learning objectives. Killen (2007), Rogers et al. (2007), and Dismukes and Smith (2017) assert that the facilitator may be described as guiding students as they work with the learning content on the LMS (Moodle). This means that a facilitator may help students to explore, understand, organise, apply, analyse, and evaluate accounting information using knowledge acquired during the learning process. According to DoE (2008; 2011), Gazette (2000) and Goodyear and Dudley (2015), Norms as Standard for Educators outlined that lecturers are expected to act as facilitators of learning. This role in guided by interaction-centred experience because it allows students to be active participants. They are given a task to be done during the learning process. Similarly, Reeve (2006) argues that facilitators must also understand how to help students construct knowledge from background knowledge to attain critical and specific goals. Facilitators have a crucial role to play in ensuring that there is an alignment between teaching, learning, and assessment. Additionally, studies such as Biggs (2011) and Skrypnyk, Joksimović, Kovanović, Gašević, and Dawson (2015) contend that lecturers must use the LMS (Moodle) to create activities that help students attain intended learning outcomes. However, lecturers must also assess students' progress on these activities.

2.8.4.3 Assessor

An assessor may be defined as someone who is able to plan and conduct assessment activities. According to (DoE, 2008a, 2011b), Gazette (2000) and Looney, Cumming, van Der Kleij, and

Harris (2017), assessors may be described as individuals who understand that assessment is an essential feature of the learning process and know how to integrate it into the learning process. On the other hand, Looney et al. (2017) note that an assessor must be an individual who is competent in understanding, administering, and recording the assessment of students. Assessors (lecturers) can use a variety of assessment activities such as quizzes found on the LMS (Moodle), to gather valid evidence about students' personal experiences, knowledge and skills. This concludes that this type of lecturer's role is influenced by user-centred experience. When lecturers are assessing, students become assessed as they undergo assessment tasks set by lecturers. They can also use their personal experiences and knowledge to perform assessment activities using chats and discussion forums on the LMS (Moodle).

2.8.5 Learning environment

The learning environment plays a crucial role in facilitating teaching and learning in any field. This refers to the diverse physical context, location, and culture in which students can learn. However, Brown, J. Dehoney, and N. Millichap (2015) point out that students can learn from a wide variety of contexts such as inside or outside the classroom as well as in an online environment. Learning can take place anywhere. On the other hand, Berkvens, Van den Akker, et al. (2014a) define environment as the context in which learning experience takes place in the most productive and effective manner. The learning environment helps in promoting and supporting a range of pedagogies, including delivering, applying, creating, communicating, and decision-making during a student's learning process (Deming, Goldin, Katz, & Yuchtman, 2015; Robertson et al., 2000). Additionally, scholars such as So and Brush (2008) McCutcheon, Lohan, Traynor, and Martin (2015) observed that a learning environment is characterised by an active interaction between students, lecturers and among students themselves. According to Berkvens, Van den Akker, et al. (2014a) and Brown et al. (2015), the learning environment is divided into a face-to-face learning environment, an online learning environment, and a blended learning environment.

2.8.5.1 Face-to-face learning environment (FTF)

Research reveals that the present times have observed the birth of a new paradigm for learning, namely, the face-to-face (FTF) learning environment (Johnson & Lester, 2016; Johnson., Rickel., & Lester., 2000; McCutcheon et al., 2015; Moore, Dickson-Deane, & Galyen, 2011). These studies further assert that the face-to-face (FTF) learning environment refers to

the interaction between lecturers and students, and among the students themselves in the traditional classroom context. “This kind of learning have certain characters that cohabits learning environment with students to develop rich, face-to-face interactions” (Johnson, Rickel, & Lester, 2000, p. 1). The FTF learning environment emphasises learning through the experiences of others, and thus, this kind of learning must be influenced by written-centred experience. Learning and teaching is formal and it is based on the accounting module outline. Other studies such as that of Crews and Butterfield (2014) similarly argued that that the most positive impact with face-to-face learning environment is interaction through class discussion, group projects and other various forms of activities, such as learning activities. However, many studies similarly pointed out that some students are not usually vocal in face-to-face learning contexts and tended to be more open in online learning environment.

2.8.5 .2 Online learning environment

The online learning environment is gaining an accumulative worldwide popularity. This is owing to the advantages associated with it. According to Bartley and Golek (2004), Moore et al. (2011), Clark and Mayer (2016) and Agudo-Peregrina, Iglesias-Pradas, Conde-González, and Hernández-García (2014), online learning may be described as a collection of learning resources collectively referred to as flexible learning. It comprises a collection of software resources supporting academic learning and research using the Internet, World Wide Web, and LMSs (LMSs) (Bakia, Means, & Murphy, 2014; Means, Toyama, Murphy, & Baki, 2013). This kind of learning may be influenced by interaction-centred experience since students can share ideas using discussion forum and chats on the LMS (Moodle).

Furthermore, an interpretive case study conducted by Bakia et al. (2014) on online learning titled “Learning online: What research tells us about whether, when and how” revealed that there are two crucial methods associated with online learning environments, that is the student-centred and experiential learning. Student-centred learning refers to the process of learning activities centred on student learning experiences. As Baeten et al. (2016, p. 163) “put it that student-centred learning encompasses negotiations between students and lecturers as to how learning proceeds in the classrooms”. Further, Bartley and Golek (2004), Baeten et al. (2013), Nguyen (2015) and Kim and Davies (2014) assert that this approach is based on the philosophy that students’ involvement and motivation will be greater if they can decide on how learning

activities are structured. Experiential learning enables students to demonstrate an amount of control over their own learning experiences. Both student-centred and experiential learning seek students to use Moodle effectively to perform their own given activities. For instance, they can use their experience effectively to complete quizzes using Moodle.

2.8.5 .3 Blended learning environment

Blended learning refers to the integration of various learning tools (technology, activities, and devices) with traditional classroom approaches. This form of learning is generally described as the combination of traditional classroom techniques with online learning activities (Graham, 2004; López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011; Macdonald, 2008; Park, Yu, & Jo, 2016). A qualitative case study conducted by McCutcheon et al. (2015) at the University of Belfast, UK, indicated the positive impact of blended learning. The study aim was to determine whether the use of an online or blended learning paradigm (LMS) has the potential to enhance student experiences on the use on LMS in undergraduate education. The study stated that blended learning is a current development in education, combining face-to-face learning with an online learning environment (e-learning modules). The study revealed that students usually prefer to use blended learning since this gives them options to choose between face-to-face and online learning. Similarly, the scholars Porter, Graham, Bodily, and Sandberg (2016) and Garrison and Kanuka (2004) argue that the recent trend to complement face-to-face environment with web-based resources is known as blended learning. Many studies have shown that blended learning may offer a number of advantages. For instance, it enhances students' academic progress. An interpretive study was conducted by López-Pérez et al. (2011) on blended learning in higher education. The objective of the study was to explore students' perceptions of the use of a LMS. The study demonstrated that the use of blended learning in higher education has a positive effect on exam marks and in reducing student dropout rates. This seems to suggest that blended learning is informed by a user-centred experience: students choose for themselves as to what learning environment to use when learning an accounting activities on the LMS (Moodle). McCutcheon et al. (2015) outlined that another primary objective for blended learning is the students' own experiences of the process of learning.

2.9.1 Accessibility

Education is widely described as the most powerful tool which may be used to transform peoples' lives. The concept of education originates from the Latin verb called *e-ducere*, meaning "to lead out" (Nyerere, 1967). However, in its technical sense, education is a process by which universities/schools and/or society deliberately transmit their accumulated knowledge, skills, and values from one generation to another in order to advance student experiences (Berkey, 2014; Gamoran, 2018; Salomon, 2016; Srinivasa Rao, Kumar, & Aithal, 2015; Taiwo, 2013). This process may be carried out in various ways, such as storytelling, discussions, training, teaching, and learning. Students need to have access to education irrespective of their gender, sex, socio-economic situation, among others. In the scholarly literature, these researchers (Berkvens, Van den Akker, et al., 2014a; DoE, 2011a), further outline that accessibility in education involves the process of designing courses and developing learning approaches to meet the diverse needs of students from different backgrounds, abilities, experiences, cultures and physical abilities. These studies note that accessibility in education is attained at various levels which include physical access, financial access, and cultural access.

2.9.1.1 Physical access to education

Physical access to education refers to the possibilities of reaching educational settings (Berkvens, Van den Akker, et al., 2014a). For instance, having the ways of reaching a school, university, or college in order to use Moodle may reflect accessibility in education settings according to a descriptive study conducted by König and Kramer (2016) on educational access, equity, and development. The purpose of the study was to make rights realities. The study noted that many efforts have been made to achieve education for all. However, among the conclusions drawn, one expresses that universal access to basic and higher education is very much an incomplete project, (and its significance in access, completion, and learning remain in many parts of the world (Berkvens et al., 2014). Physical access to education remains a challenge for many students to advance their learning experiences. As Duncan (2012) also states, research reveals that 25 million children will never reach primary school; and some 34 million leave school too early. Reasons for non-attendance at school are different and well known. Most are linked to the student's physical conditions and health, or to family poverty. These factors sometimes making it necessary for students to leave school and go to work. König and Kramer (2016) added that some reasons are linked to the universities themselves, which are located far away from the home, providing poor-quality education, and inadequate

facilities. However, students can use their devices such as cell phones and laptops to access learning materials on the LMS (Moodle). According to DoE (2011b) and Course outline (2018), it is the responsibility of the school/university to provide the resources to offer accounting as a module. Universities have made sure that all students have laptops so that they are able to access learning resources irrespective of wherever they are, which may be uploaded by lecturers on Moodle.

2.9.1.2 Financial access

Affordability remains a problem primarily for students from low-income families (Berkvens, Van den Akker, et al., 2014a; Clancy & Goastellec, 2007; König & Kramer, 2016). This simply means that the promise of free access to education has not yet been met by the government. As a result, financial access is informed by user-centred experience, because if students cannot afford education, their future development will be infringed. Therefore, they cannot advance their personal experiences, knowledge and skills which could come as a result of learning through the LMS (Moodle). Education has become very expensive, for some, unaffordable. König and Kramer (2016), Tilak (2015) and Basant and Sen (2014) note that some reasons for low financial access are related to schools themselves which are still too costly, making very difficult for indigent students to afford. Other reasons include misuse of funds and government low investment in education. Another factor that contributes immensely is state corruption, unstable and undemocratic and political leaders, who are not committed enough. However, many efforts have been made to address this challenge, such as provision of bursaries and study loans to students who cannot afford access to education owing to financial constraints (Irvine, Code, & Richards, 2013; Kwiek, 2013; Pinheiro & Antonowicz, 2015). Similarly, König and Kramer (2016) and John, Daun-Barnett, and Moronski-Chapman (2018) emphasis that various measures have been undertaken and implemented over the past 21 years, many of them concentrated on increasing and improving university supply, others such as cash transfers, intended to meet the demand for education. Once students have achieved access to education, universities must make sure that the learning programmes are culturally acceptable.

2.9.1.3 Cultural access

Cultural access is concerned with whether learning programmes/activities are socially acceptable in the teaching and learning space. McLoughlin and Oliver (2000) suggests that

flexible delivery of educational programmes should take into consideration the cultural variables, acknowledging the specific and diverse learning needs, preferences, and styles of students. On the other hand, Hollins (2015) notes that some of the limitations for current educationally designed programmes is that they are not fully contextualizing students' learning experiences. This can have a negative impact. Students' diverse cultures should be integrated into the educational programme. Olson (2015) and LeVine (2018) argue for cultural localization in educational programmes, which incorporates the local values, experiences, and styles of learning and cognitive preferences of the students so as to achieve culturally inclusive learning environments. Studies such as those of Mtika and Gates (2010) and Berkvens, Van den Akker, et al. (2014a) take cognisance of the increasing cultural diversity in educational institutions necessitating socially acceptable learning programmes designed for students. This aspect of accessibility may be used to integrate students' interaction-centred experiences, because students can appreciate accounting activities which involve and relate to their cultures in the LMS (Moodle); this may allow themselves to work with each other irrespective of their race, gender, and language. Hollins (2015) maintained that students should be engaged in any learning activities, tasks and any forms of online interactive activities that recognise diversity and different cultures. These studies by Berkvens, Van den Akker, et al. (2014a) conclude that cultural access to education require government and other stakeholders in the education sector to ensure that there are not any other aspects that block access to education.

2.10.1 Time (time for learning)

Time is important because it provides guidance on both students and lecturers when the content is supposed to be imparted to the students. In scholarly literature, researchers generally agree that time for learning focuses on when students have to learn the content delivered/taught by lecturers (Akker & Thijs, 2009; Berkvens, Van den Akker, et al., 2014a). Content and time are inextricably linked to each other. When the content is selected, time frames are also stipulated which specify when the selected content is supposed to be learnt. According to these studies (Akker & Thijs, 2009; Berkvens, Van den Akker, et al., 2014a; DoE, 2008a, 2011b), time is divided into weeks, days, and hours.

The week's component deals with how many weeks students will require to cover a specific content. As these studies such as (Berkvens, Van den Akker, et al., 2014a; Finkelstein, 2006; Xu, Wang, Wang, & Liu, 2015) argue, content and time are inextricably linked. It is also

stipulated on the CAPS, as well as on the accounting course outline (2018) that the teaching time for accounting is 4 hours per week, per grade, that is, for Grades 10, 11 and 12 (DoE, 2011b, p. 9). When students are learning accounting on Moodle they are influenced by written-centred activity. Students are required to complete a specific content which consists of written documents such as books, accounting course outline, accounting assessment policies, etc. This means that these content topics are assessed in each term. On the other hand, the course outline (2018) states that certain topics in financial accounting, managerial accounting, and managing resources are selected to be learnt by students according to different semesters, Assessment takes place at the end of each semester. For instance, financial accounting sub-topics are learnt in the first semester. Accounting periods are 1 hour and 30 minutes, which is 90 minutes per session. As a result, when students are learning an accounting module on Moodle they are guided by interaction-centred experience. Students are able to interact with one another on the LMS (Moodle) on three (3) days per week including tutorials. The aspect of days goes to how many days in a week students are learning an accounting module on Moodle (Berkvens, Van den Akker, et al., 2014a; Xu et al., 2015). When students are attending an accounting module three days per week, they are driven by a user-centred experience: students are required to be motivated to use their own experiences to complete all accounting activities on Moodle during tutorials.

2. 6 Chapter concluding statement

This chapter presents the literature in relation to first-students' experiences of using Moodle in learning an Accounting undergraduate module. The literature in this study have integrated various local and interactional studies that were focussing mainly on students experiences of learning Accounting module using Learning Management System such as Moodle. The literature have used principles of the Technological, Pedagogical and Content Knowledge (TPACK) theory as a theoretical framework in this study. These principles were integrated with its respective propositions. for instance, Pedagogical knowledge (resources), Contend knowledge (Accounting content) and pedagogical knowledge (goals, assessment. learning activities, roles, accessibility, location/learning context and time) in order to explore first-year students' experiences of using Moodle in learning an Accounting module on Moodle. The following chapter will be focusing on research design and methodology.

CHAPTER 3

Research Design and Methodology

3.1 Introduction

The previous chapter has reviewed literature related to first-year students' experiences of using Moodle in learning an undergraduate Accounting module. It has also discussed key curriculum concepts such as intended, implemented, and achieved curriculum; and instrumental, communicative, and artistic approaches. Chapter Two also discussed three principles of the technological, pedagogical, and content knowledge (TPACK) as the theoretical framework of this study. The main purpose of this chapter was to attain the following research objectives:

- To explore first-year students' experiences in the use of Moodle in learning an Accounting undergraduate module at a South African university.
- To understand how first-year students' experiences of using Moodle can improve the learning of Accounting undergraduate module?
- To understand the reasons that inform first-year students' experiences in the use of Moodle in learning an Accounting undergraduate module at a South African university.

These above research objectives were decided on by addressing the following key research questions:

- What are the first-year student's experiences of using Moodle in learning an undergraduate Accounting module at a South African University?
- How may first-year students' experiences of using Moodle improve the learning of the Accounting Module?
- Why are first-year student's experiences particular to the use of Moodle in learning an undergraduate Accounting module at a South African university?

Thus, for the purpose of achieving the three research objectives and their related key research questions on first-year students' experiences of using Moodle in learning an undergraduate Accounting module, this chapter intends to use a research paradigm, a research approach, a research style, sampling, and data-generation methods. Trustworthiness was next discussed, followed by data analysis. Lastly, the ethical issues explained were followed by limitations and possible solutions to the study.

3.2 Research paradigm

A research paradigm is defined as numerous ways of seeing and understanding the social world. According to Bertram and Christiansen (2014a) research paradigm refers to ways of perceiving and understanding social phenomena. Cresswell (2009, p. 6) defines the research paradigm as "worldviews which refers to general orientation about the world and the nature of research that the researcher holds", whereas Ramrathan et al. (2017) describe it as ways of knowing and sets of lenses one can engage when viewing the world around one in search of social reality. Paradigms consist of the following aspects: methodology, methods, ontology, and epistemology (Burrell & Morgan, 1979; Punch & Oancea, 2014; Scotland, 2012; Yilmaz, 2013).

Methodology is defined as a plan of action which lies behind the choice and use of particular research methods (Creswell & Creswell, 2017; Crotty, 1989; Scotland, 2012). Thus, it is concerned with what, why, from where, when, and how data is generated/collected and analyzed. Guba and Lincoln (1994b) maintain that methodology asks the question of how the researcher may go about finding out whatever they believe can be known. On the other hand, methods are described as specific procedures and techniques used to gather and analyse data (Bertram & Christiansen, 2014b; Crotty, 1989). Open-ended interviews, focus groups, open-ended observation, are a few such examples. Research collected may either be quantitative or qualitative.

Furthermore, Scotland (2012) learned that all research paradigms can use both qualitative and quantitative data (mixed methods). According to Crotty (1989), Blewett (2014) and Scotland (2012), ontological assumptions are concerned with what establishes social reality or the nature

of social reality being investigated. This suggests that researchers take a stand based on how they view and perceive various phenomenon and how they work (Scotland, 2012). According to Burrell and Morgan (1979), Cohen et al. (2007b) and Cohen et al. (2011a), epistemology refers to the ways of enquiring into forms of knowledge. Epistemological assumptions are concerned with how knowledge is constructed, created, and communicated to individual human beings. Scotland (2012) avers that various paradigms such as post-positivism, critical and interpretivism are based on their own epistemological viewpoint. Therefore, they all contain various assumptions of knowledge which substantiate their particular research approach. Furthermore, the ontological position of interpretive paradigm is relativism, which is defined as the view that reality is subjective and differs from individual to individual (Abraham, 2016; Ernest, 1994; Scotland, 2012). Reality is constructed by individuals, thus, persons' perceptions and experiences cannot be the same. The researcher cannot expect similar responses from research participants. This research paradigm was relevant to this study because the researcher intended to explore first-year students' experiences of Moodle in learning an undergraduate Accounting module at a South African university.

Furthermore, the epistemological view of interpretive paradigm is related to relativism which is also based on a real-world phenomenon. This study was conducted in an interpretive paradigm. According to Smith and Heshusius (1986), Bertram and Christiansen (2014a), Hussain (2015), Cohen et al. (2007a) and Cohen et al. (2013), researchers working in the interpretive paradigm requires to understand beliefs, values, behaviours, and reasons for people making meaning of their own social phenomenon (experiences); this extracts a vigorous understanding of social human experiences and activities. Thus, in this study, I used the interpretive paradigm in order to explore and understand beliefs, values, behaviour and experiences of first-year students when using Moodle in learning an undergraduate Accounting module. Epistemologically, I used the interpretive paradigm to socially construct knowledge from the participants (first-year students) by engaging them in their own social settings on the use of Moodle when learning an undergraduate Accounting module. Ontologically, I used this paradigm by seeking out each subjective idea and experience of participants on the use of Moodle. Methodologically, this study used a qualitative case study as a research methodology in order to gain great insight and understanding of first-year students' experiences of using Moodle in learning an Accounting modules, from their individual subjective perspectives. However, the findings of the interpretive paradigm cannot be generalised to the whole

population (Creswell & Creswell, 2017). As a result this study's findings were not generalised; but were there for others in a similar situation to refer to. Research gathered by researchers can either be qualitative, quantitative, or mixing both approaches. However, this study used qualitative data.

3.3 Research approach

This study used a qualitative research approach. Denzin and Lincoln (1994), Bertram and Christiansen (2014a) and Kozleski (2017) describe qualitative research as an approach for exploring and understanding the meaning individuals or groups assign to a social or human phenomenon; this also involves verbal, textual, and visual data. These studies further distinguish different kinds of approach to research, such as the quantitative, qualitative and mixed methods approaches. Qualitatively, this approach focuses on exploring and understanding human behaviour and experiences. Further, Creswell and Poth (2018) outline that the main purpose of this approach is to establish the nature of socially constructed reality. The qualitative research approach comprises feelings, opinions, and experiences and subjective data that are produced by the minds of the participants related to the assumptions and ideology of the interpretive paradigm (Wellington, 2015). This demonstrates an interconnectedness between data generation, data analysis, key research questions, and conclusions.

In line with the above, I used a qualitative research approach in order to generate more textual data from first-year students' experiences of using an LMS (Moodle) when learning an Accounting module. The phenomenon under exploration aims to study first-year students' experiences and knowledge of using Moodle in learning an Accounting modules. I also used this approach to make sense, explain, and interpret their experiences of using Moodle in learning an undergraduate Accounting modules according to the subjective meaning which they attached to them. Similarly, Hancock (2002), Lewis (2015) and Bernard (2017) assert that the qualitative research approach is primarily concerned with developing accounts of a social phenomenon that informs understandings about the world in which people live, and why things exist the way they do. One of the limitations of this approach is that it does not use numerical data (Bertram & Christiansen, 2014a). As a result, I used written words instead of numbers or figures in order to overcome this shortcoming.

3.4 Research design: Case Study

This study was situated within a case study research design. According to Rule and John (2011) and Bertram and Christiansen (2014a) case studies refer to a systematic and in-depth study of one particular case in its context. Cohen et al. (2013), and Ramrathan et al. (2017) accord with the above studies and describe case-study methodology as the process of exploring a phenomenon within a bounded system of operation, such as school, person, organisation or country. On the other hand, Cohen et al. (2013) and Yazan (2015) describe case study research methodology as a specific instance that is often designed to illustrate a more general principle. It can be regarded as a study of instance in action. Case-study methodology takes a particular situation as given and tries to find out what it means in particular to the participants. Further to this, case-study research methodology is aimed at gaining greater insight and understanding of a specific situation (Ary, Jacobs, Irvine, & Walker, 2018; Maree, 2007).

There are different types of case studies, such as idiographic case studies, inductive case studies, theory-guided case studies, hypothesis-generating case studies (Levy, 2008; Meyer, 2015). However, this study used descriptive case study of six first-year students on an Accounting module at a South African university. Cresswell (2009) and (Yin, 2003, 2017), remark that descriptive case studies (provides narrative account) are more suitable for studies that are undertaken in order to understand the particular case in question. Similarly, Ramrathan et al. (2017) argue that this research methodology helps in understanding the phenomenon as it exists and is influenced by context and social realities wherein it is found. Thus, a descriptive case study was relevant to this study because the study was intended to explore and understand first-year students' experiences of using Moodle to learn an Accounting undergraduate module. Thus, this research style helped the researcher to gain an in-depth understanding of experiences, whether user-centred, interaction-centred, or written-centred are driving the use of Moodle during the learning process. As Yin (2018, p. 237) stresses, "the main purpose of this research style is to investigate a contemporary phenomenon (experiences) in depth and in its real-world context." One of the shortcomings of this research methodology is that it may contain bias towards verifications, and lack of rigor (Ledford & Gast, 2018). To overcome this limitation, this study used multiple sources of data, such as one-on-one, semi-structured interviews, reflective activity, and document analysis.

3.5 Sampling

Sampling involves the process of making decisions about which people, events, settings or behaviours to include in the research study (Bertram & Christiansen, 2014a; Maree, 2007; Yin, 2003). Similarly, Ramrathan et al. (2017, p. 428) describe "sampling as the process of selecting subgroups from a population the researcher wishes to do research on." Sampling enables researchers to select a specific portion from the population to participates in the research study. Cohen et al (2011) describe sampling as a particular number of people (individual or groups) that the researcher selects for the research study. This study used sampling in order to make decisions on how many individuals, groups, or objects (students) would participate in this study. Examples of the sampling processes include, among others, probability samples which comprises simple random samples, stratified random samples, cluster samples, stage samples and multi-phase samples. Non-probability sampling consists of purposive samples, such as quota sampling, dimensional sampling, snowball sampling, and convenient sampling (Cohen, Manion, & Morrison, 2011b; Ramrathan et al., 2017). This study used purposive and convenience sampling because it targeted six first-year students from one particular university in South Africa at the social science cluster, based on their experiences of using Moodle in learning an undergraduate Accounting module.

3.5.1 Purposive sampling

In this study purposive sampling, also known as judgment sampling, was adopted as non-probability sampling. Purposive sampling refers to the process whereby participants are selected based on some defining qualities that make them the holder of data needed to answer key research questions (Bertram & Christiansen, 2014a; Maree, 2007; Ramrathan et al., 2017). Etikan, Musa, Alkassim, and Statistics (2016) maintained that purposive sampling involves the identification and selection of individuals or groups of individuals that are proficient and well-informed with a phenomenon of interest (experiences). The main idea behind this sampling strategy is to focus on individual people with particular qualities who are better able to assist with the relevant research. Thus, in this study six first-year Accounting students were purposively selected because they were learning an Accounting undergraduate module at the university in which the study was conducted. They were easily reachable because they were residing in the university residences. The first-year Accounting students were selected deliberately because they simply represented themselves and the researcher was not aiming to generalize the results beyond the group sampled. The sampling of Six-first year Accounting

students was based on their experiences of using Moodle in learning their undergraduate modules including an Accounting module. Students' performance in Accounting modules in terms of their grades, revealed that they had various experiences when using Moodle in learning an undergraduate Accounting module. In this sampling strategy, the researcher aims to target a certain group, knowing that the group is not representative of the larger population (Collis & Hussey, 2013; Etikan, Musa, Alkassim, et al., 2016; Palinkas et al., 2015). This means that the researcher cannot generalise the outcomes beyond the sampled group. The six first-year accounting students were able to expose their various experiences of using Moodle when learning an undergraduate Accounting module. As a result their experiences were categorised into user-centred, interaction-centred, and written-centred experiences.

3.5.2 Convenience sampling

This study also adopted convenience sampling, According to Bertram and Christiansen (2014a), Cohen et al. (2011b) and Etikan, Musa, and Alkassim (2016), convenience sampling, also known as (Haphazard Sampling or Accidental Sampling), refers to the type of sampling in which participants are selected because of their convenient accessibility and closeness to the researcher. Furthermore, Etikan, Musa, Alkassim, et al. (2016, p. 2) accord with the above studies and describe "convenience sampling as the type of non-random or non-probability sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity and availability at a given time, or the willingness to participate are included for the purpose of the study." This type of sampling strategy may be regarded as studying the subjects of the population that are easily accessible to the researcher. Thus, I used convenience sampling; because participants were first-year students at the university in which this study was conducted and were close to the researcher. I approached ten first-year students per email, who were under my mentorship, as potential participants in this study. I explained to them the purpose of the study and its importance, and requested these students to voluntarily participate in the study. I conveniently selected six first-year students out of ten who were easy accessible to me, and who were relevant to this study because they were using Moodle in learning Accounting on an undergraduate module. Cohen et al. (2007a) states that factors such as expenses, time, and accessibility, frequently prevent the researcher from using the whole population to obtain more data needed to answer the key research questions. To overcome this limitation, I tried to use a smaller group and sub-set of the population in such a way that the data generated would be representative of the entire group.

3.6 Data generation methods

Three data generation methods were adopted in this study, namely, reflective activity, documentary analysis, and one-on-one semi-structured interviews.

3.6.1 Reflective activity (open-ended interviews)

This study adopted reflective activity as the first method of data generation/production from the participants (first-year students). Reflective activity may be described as an activity that requires participants to complete a short series of questions about the phenomenon (experiences) under exploration (Cohen et al., 2011d; Khusainova et al., 2015). Biktagirova and Valeeva (2013) and (Menke, 2018) define reflective activity as the fundamental mechanism for self-reflection and critical evaluation of the individual's own experiences and actions. Reflective activity may be regarded as a fundamental technique for organising educational activities for a research study. Simpson et al. (2004) and Cushion (2018) maintain that one of its distinct characteristics is that it provides deeper and richer data than any other data production methods. Thus, this study used reflective activity in order to allow participants (first-year students) to critically reflect, understand, and evaluate their own experiences of using Moodle in learning an undergraduate Accounting module. Similarly, Robins et al. (2003) argues that reflective activity allows participants (first-year students) to understand themselves, their personal experiences, and the dynamics of using an LMS (Moodle) in learning an undergraduate Accounting module more deeply. I designed reflective activity that was in line with principles of technological, pedagogical and content knowledge (TPACK) as the theoretical framework adopted in this study (see Chapter Two). The activity required first-year students to reflect on the set questions below as depicted in Table 1:-

Table 1. Reflective activity

Concepts	**Questions**	**First-year students were expected to reflect and respond on these categories**

1.1.Rationale	Why do you have an interest in learning Accounting Module through Moodle? (Reasons)	A. Personal reasons B. Societal reasons C. Professional reasons

Technological Knowledge

1.2.Resources	What resources do you use when learning Accounting module using Moodle? (resources)	A. Hard-ware B. Soft-ware C. Ideological-ware

Content knowledge

1.3.Content	What content are you learning in Accounting module using Moodle? (content)	A. Financial Accounting B. Managerial Accounting C. Managing Resources

Pedagogical Knowledge

1.4.Goals	Towards which goals are you intending to achieve when using Moodle in learning Accounting module? (goals to be achieved)	A. Aims, B. Objectives C. Outcomes

1.5.Assessment	How assessment is done in Accounting Module through Moodle? (assessment)	A. Assessment for learning B. Assessment of learning C. Assessment as learning
1.6.Learning activities	What teaching and learning activities do you use on Moodle in learning Accounting module? (activities)	A. Teacher-centred activity B. Learner-centred activity C. Content-centred activity
1.7.Learning roles	How do you perceive your role when using Moodle in learning Accounting module? (students' role)	A. Passive B. Active C. Assessed
1.8.Location	Where do you learn Accounting module using Moodle? (location/environment)	A. Face-to-face B. Online C. Blended
1.9.Accessibility	With whom are you learning Accounting module, in terms of financial, cultural and physical aspects? (accessibility)	A. Physical B. Financial C. Cultural
1.10. Time	What is the time allocation for learning each content in Aaccounting module using Moodle? (Time)	A. Weeks B. Days C. Hours

Question 1.11: Why do you have an interest in learning an Accounting module through Moodle? (Rationale). This question was focusing on the reasons for first-year students to learning an Accounting module through Moodle. First-year students were expected to indicate their experiences of learning an Accounting module through Moodle using personal, societal, and content reasons. Under these categories, personal reasons occur when first-year students indicated their interest of learning an Accounting module through Moodle. Societal reasons indicate societal benefit in learning an Accounting module; and content/professional reasons indicate their experiences of learning an Accounting content though an LMS (Moodle).

a) Technological Knowledge

Question 1.12: What resources do you use when learning an Accounting module using Moodle? (Resources) In this question, first-year students were expected to indicate their experiences of the Moodle resource in learning an undergraduate Accounting module. This concept focused on the following categories of resources, namely, hardware, software and ideological-ware resources. First-year students were expected to indicate specific resources which they use when learning an Accounting module on Moodle LMS. Resources may be defined as any tool/material that facilitates learning (Berkvens, Van den Akker, et al., 2014a; Khoza, 2012).

b) Content Knowledge

Question 1.13: What content are you learning on the Accounting module using Moodle? (Content). First-year students were expected to indicate their experiences of using Moodle in learning accounting content, by focusing on financial accounting, managerial accounting and managing resources, as the categories of the accounting content.

c) Pedagogical Knowledge

Question 1.14: Which goals are they intending to achieve when using Moodle in learning an accounting module? (**Goals)**This question required first-year students to reflect on their experiences of using Moodle in learning an undergraduate Accounting module based on the following categories: aims, objectives, and learning outcomes. Aims may be defined as long-term-goals, whereas, objectives are short-term goals that the students are expected to achieve

in a block of learning. Outcomes are described as specific statements which students are expected to achieve at the end of the lesson (Kennedy, 2006; Khoza, 2015b). First-year students were expected to indicate their aims, objectives, and learning outcomes of learning an accounting module through Moodle.

Question 1.15: How is assessment performed on the Accounting module, through Moodle? (Assessment). In this question, first-year students reflected on their experiences of assessment strategies and activities, which they used on Moodle when learning an undergraduate Accounting module. This focuses on the following categories: assessment for learning, assessment of learning, and assessment as learning. First-year students were expected to indicate their knowledge and experiences on assessment for learning and assessment as learning (class activities and tutorials) and assessment of teaching (assignment, tests and examination).

Question 1.16: What teaching and learning activities do you use on Moodle in learning an Accounting module? (Activities). The purpose of this question was to gain first-year students' experiences of how learning activities are designed when learning an Accounting module on Moodle. In this question first-year students were reflecting on the following activities: teacher-centred, learner-centred and content-centred, as categories of learning activities.

Question 1.17: How do you perceive your role when using Moodle in learning an Accounting module? (Students' role). First-years students were expected to indicate their experiences on the way in which learning is facilitated in accounting, using various roles such as instructor, facilitator, and assessor. They were expected to indicate the role they play when learning an accounting module on Moodle. The following categories are suggested for the role played by students when learning an accounting module on the LMS (Moodle): assessed, passive, and active role. First-years were also expected to indicate which role they perceived when learning an Accounting module on Moodle.

Question 1.18: Where do you learn the Accounting module using Moodle? (Location/environment). First-year students were expected to indicate their experiences while learning an Accounting module using Moodle in various learning contexts such as face-to-face, online and blended learning. These concepts are based on the following categories: face-to-face, online, and blended learning (V. d. Akker & A. Thijs, 2009; Berkvens, Van den Akker, et al., 2014a).

Question 1.19: With whom are you learningthe accounting module, in terms of financial, cultural, and physical aspects? (Accessibility) First-year students were expected to indicate their experiences based on the following categories: physical accessibility, financial accessibility, and cultural accessibility to the university at which they are studying. Physical access (refers to the physically accessibility of the University) relates to campus accessibility. Financial accessibility (refers to the affordability of education) and cultural accessibility (refers to whether learning programmes are socially acceptable and accommodating of students). Thus, first-year students were expected to indicate their experiences on how they gain access to the campus to take the accounting course through Moodle, divulging how they financially access accounting learning. Students were asked how this affects their participation in the accounting module on Moodle.

Question 1.20: What is the time allocation for learning each content in the accounting module using Moodle? (Time). This question was based on first-year students' experiences of the learning time stipulated in the accounting course outline. Students were expected to respond based on the following categories: hours, days, and weeks specified for learning the accounting content on the LMS (Moodle).

This study adopted reflective activity as one of its data-generation methods. This method was appropriate for this study because it gave first-year students an opportunity to reflect on their own experiences of using Moodle to take the accounting module without any interference or pressure from the researcher. It also allowed them to freely recall and write down the experiences and challenges they face when learning an accounting module on the LMS (Moodle). However, one of the shortcomings of this data generation method is that participants

may be uncertain as to which situations/experiences to reflect upon (Farrell, 2015; Gould & Taylor, 2017). To overcome this shortcoming, I made sure that during one-on-one interviews, questions were explained clearly so that participants were sure about which experiences to reflect on. First-year students were also given the opportunity of asking questions when they needed clarity.

3.6.2 Document analysis

This study used document analysis as the second method of data generation. According to Bowen (2009), Love (2013), Bertram and Christiansen (2014a), and J. Xu and Croft (2017), document analysis research methods refer to systematic procedures for evaluating and viewing documents, be they electronic or printed resources. On the other hand, Nieuwenhuis (2007), G. A. Bowen (2009) and Menke (2018) regard documents analysis as a supplemental data-generation tool which is frequently used in case-studies research design in order to supplement data from interviews and reflective activity. Consequently, document analysis complemented other instruments, such as one-on-one semi-structured interviews and reflective activity in ensuring resilience and coherence in the data-generation process. Documents analysis consists of information that is collected by other people or derived from existing data. This study used document analysis in order to generate data from existing documents that contain data needed to answer key research questions. Document analysis also involves an analysis of documents that contain information about the phenomenon that researchers wish to explore; and may be used to categorise, interpret, investigate, and identify physical sources such as written documents, whether in the public or private domain (Bailey, 1994; Payne & Payne, 2004; J. Xu & Croft, 2017; Zhao et al., 2018). Thus, in this study, documents such as higher education policy documents, accounting module outline, module policy documents, and accounting text books were used to categorise, interpret, and investigate the phenomena (experiences) under exploration. This method of data generation was relevant to this study because it allowed me to generate more data from existing sources in order to explore first-year students' experiences of using Moodle in learning an undergraduate Accounting module. This method of data generation was beneficial and more cost effective than any other method of data generation such as questionnaires, focus groups discussions and participants' observation (Bowen, 2009; Gaborone, 2006; Straubhaar, 2015). However, documents are sometimes not accessible or not retrievable. As Yin (2017) argues, sometimes documents may be deliberately blocked. Thus,

to overcome this shortcoming, I used the gatekeeper's letter and ethical clearance to retrieve and access all relevant documents for this research study.

3.6.3 One-on-one semi-structured interviews

This study used one-on-one semi-structured interviews as a third method of data generation. An interview may be defined as pre-planned formal oral conversations between interviewee (participant) and a panel of interviewers (researchers). However, semi-structured interviews may be defined as formal conversations between the researcher and the respondents, in which the interviewer asks the participant questions to collect data needed, and to learn about ideas, opinions, experiences, views, beliefs, and behaviours of the participants. Bertram & Christiansen posit: "it also refers to structured and focused conversation where the researcher has in mind a particular information that he/she wants from the participants, and has designed particular questions to be answered by participants" (Bertram & Christiansen, 2014a, p. 81).

Furthermore, in this study, one-on-one semi-structured interviews were used. This method of data generation enabled me to ask questions to obtain more detailed information about first year-students' experiences of using Moodle in learning an accounting module. Cohen et al. (2011a) and Paine (2015) maintain that interviews enable participants to discuss their experiences of the worlds in which they live, and to express how they regard the situations from their own point of view. Thus, this method of data generation was most suitable and relevant to this study, this study exploring first-year students' experiences of using Moodle in learning an accounting module. Students should be able express their own point of view on the use of Moodle when learning an undergraduate Accounting module. In this study, one-on-one semi-structured interviews were used in the following ways. An interview schedule was planned and sent to the participants; questions were set in a predetermined order. Fifteen-minute interviews were held at the university in which participants are studying. I used recording devices to record all interviews. This allowed me to ask more questions to obtain accurate and detailed information. I allowed students to talk freely about their experiences, and this allowed me to generate much detailed and descriptive data. This study consisted of six first-year accounting students. This method of data generation allowed me to gain more in-depth data from a small number of participants. However, the limitations of this method of data generation is that participants may give information that does not accurately represent what is

related to the study (Bertram & Christiansen, 2014a). To overcome this limitation, if participants gave data not related to the study, I would use that data to formulate new themes, deploying deductive reasoning.

3.7 Data analysis

This study used a thematic qualitative data analysis. Literature from studies such as Christiansen, Bertram, and Land (2010), Bertram and Christiansen (2014b) and Lodico, Spaulding, and Voegtle (2010) outline that, once the data-generation process has been completed, the next step is data analysis. Thematic analysis may be defined as the process of making sense of data in terms of the participants' definitions of their experiences, and noting patterns, themes, categories and regularities (Brannen, 2017; Cohen et al., 2011a; Mayan, 2016). Similarly, Maree (2007) and Gibbs (2018) maintain that thematic analysis tries to establish how participants make meanings of specific phenomena (experiences) by analysing their perceptions, experiences, knowledge and understanding in an attempt to approximate their construction of the phenomena. Once the data-generation process has been completed, the researcher has to read and make meaning of raw data that has been gathered.

According to Miles and Huberman (1994), and Bertram and Christiansen (2014a), thematic data analysis comprises three main activities, namely, data reduction (sorting and cleaning it up); data display (presentation in an orderly manner); and conclusion drawings and verification (what the data says to you/interprets). Data reduction may be defined as the act of picking up, concentrating, transforming and constructing the data that emerges from transcription or field notes. Data reduction usually takes place throughout the process of a research project. For instance, before data are actually recorded, the researcher resolves which particulars/details of data must be gathered, generating data within the margins of a theoretical framework and the key research questions. Data display is "concerned with an organised, compressed assembly of data that allow the researcher to take actions and draw conclusions" (Bertram & Christiansen, 2014b, p. 116). The display for qualitative data is often performed through extended text such as verbatim quotes from interviews. Lastly, conclusions drawings and verifications. This is regarded as the third stream of data-analysis activity. In this activity, the researcher begins by drawings conclusions from the start of the data-generation process by noting patterns and possible explanations. However, these conclusions should be finalised once data analysis is completed (Bertram & Christiansen, 2014b). Therefore, the data generated in this study was

reduced, displayed, and concluded, based on what the participants (first-year students) had stated about their experiences of using Moodle in learning an undergraduate Accounting module at a South African university.

According to Christiansen et al. (2010), Bertram and Christiansen (2014a) and McMillan and Schumacher (2014), thematic qualitative data analysis consists of two main reasoning's namely, inductive and deductive reasoning. Inductive reasoning works from specific to broader generalizations. Deductive reasoning starts from general to specific theories and categories that emerge from data that are fitted into specific patterns. Themes emerging from generated data may be coded using inductive reasoning. This study used thematic data analysis to analyse the data. Thematic qualitative data analysis allowed me to suggest a three-structured themes ─ technological, pedagogical and content knowledge (TPACK). Other themes emerging from the data helped me to modify the themes that I already had. As Znaniecki (1934), LeCompte et al. (1993), and Gilgun (2015) comment, in thematic qualitative analysis, data generated are scanned to generate categories of phenomena, and relationships between these categories are sought. Maree (2007) and Bernard (2017) further state that the main purpose of this approach is to allow research findings to emerge from the dominant and significant themes inherent in the raw data. Therefore, other themes emerging from the data were structured according to the principles of the technological, pedagogical and content knowledge (TPACK) as the theoretical framework in this study, using deductive reasoning. "Deductive reasoning works from general to the more specific" (Bertram & Christiansen, 2014a, p. 116). In the study, data generated was framed around three types of experiences: user-centred experience, interaction-centred experience, and written-centred experience. Therefore, data were organised into categories, and patterns were identified among these categories. Inductive and deductive reasoning helped me as the researcher to categorise participants' responses from interviews, document analysis, and reflective activity. I tried thus to reveal the purpose of this study, which is to explore first-year students' experiences of using Moodle in learning an undergraduate Accounting module.

One of the limitations of thematic qualitative data analysis is the matter of data transcription. Data analysis through transcriptions may be time consuming and sometimes more expensive (Cohen, Manion, & Morrison, 2011c). To overcome this, I decided to transcribe the data myself directly from the recording device in order to avoid losing meaning within the data, and altering

the participants' meaning of their experiences. This enabled me to select appropriate data I needed from the data collected. Gibbs (2007) and Silverman (2015) stress that the researcher must be aware that qualitative data are highly individual and personal. Thus, to address this issue, I ensured that I first gave details of the process and requirements of the study to the participants, so that they would make informed decisions about their involvement in the study. Thereafter, participants agreed to the use of an audio-recording device to record their interviews. The audio recorder was used to ensure that their words were not misinterpreted during the data-analysis process. While in the process of analysing data, ethical issues were taken into account. Confidentiality was also upheld through participants' consent forms, the gatekeeper's letter, and ethical clearance.

3.8 Ethical Issues

Ethics refers to behaviour that is considered either right or wrong in the research study (Bertram & Christiansen, 2014a; Christiansen et al., 2010; Glesne, 2015; Merriam & Tisdell, 2015). Blanche et al. (2006) and Walliman (2017) assert that the main purpose of research ethics is to protect the welfare of the research participants. Therefore, in order to ensure ethics in this research study, Blanche et al. (2006) and Bertram and Christiansen (2014a) identified four ethical principles which may be used to ensure research ethics, namely, autonomy, non-maleficence, anonymity, and beneficence.

According to Blanche et al. (2006), autonomy refers to respect for the dignity of the research participants. , Bertram and Christiansen (2014a), Stevens (2013) and Grove (2011) stated that researchers must obtain an agreement from every person who consents to participate in the research study. Participants should voluntarily participate in the research study and they must also be allowed to withdraw from participating in the research study at any time, should they so wish. Therefore, to ensure autonomy in this study, I started by obtaining a gatekeeper's letter (see Appendix 1) from the university research office. I also submitted the application letter to ask for ethical clearance from the School of Higher Degrees Committee at the university. All participants were given a consent form to read and sign, in which they agreed to take part in the study (refer to Appendix 2). Detailed information about the purpose of the study was also given to the participants so that they could make an informed choice to participate voluntarily

in this research study. Participants were also given the freedom to withdraw from participating in this study at any time they chose, without any repercussions.

Non-maleficence implies that the researcher must ensure that the research does no harm to the research participants or to any other individuals (Bertram & Christiansen, 2014a). Blanche et al. (2006) concludes that research must try to avoid and minimise wrongs and harms. Thus, to ensure non-maleficence in this study, I made sure that the research would offer no harm to the research participants either physically, emotionally, socially, or in any other way. Participants were given the assurance that their names would be kept confidential during the publication of the research report; and pseudonyms were created to ensure their safety.

"Beneficence means that the research study must be beneficial, either directly to those involved or more broadly to other researchers or the community at large" (Bertram & Christiansen, 2014a, p. 43). On the other hand, Blanche et al. (2006) and Bryman (2016) recommend that researchers make the attempt to increase the benefits that the research study will afford to the research participants. Therefore, this study may be beneficial to the university, lecturers, and students. The university may be able to provide sufficient training on the LMS (Moodle) to both staff and students. Lecturers may be able to modify and enhance curriculum delivery through the use of the LMS (Moodle). Students may be able to enhance their learning experience through Moodle in learning an undergraduate Accounting module.

According to Eriksson and Kovalainen (2015), Bertram and Christiansen (2014b) and Denzin (2017), the issue of confidentiality and anonymity is closely related to the rights and respect for the dignity and fidelity of the research participants. In support of this, Leino-Kilpi and Tuomaala (1989), Noble and Smith (2015), and Graneheim and Lundman (2004) maintain that anonymity is protected when the participant's identity cannot be linked to their personal responses. Consequently, to strengthen anonymity in this study, participants were assured that their confidentiality was guaranteed; and that their contributions were not going to be attributed to them in person, but reported only as a population member opinion. Furthermore, participants' real names were not used in the research report; instead, they were given pseudonyms. Brannen (2017) explains that, if the researcher is not able to promise anonymity,

he/she has to address confidentiality, which is the management of private information by the researcher in order to protect the participants' identity. Thus, to maintain anonymity in this study, participants were assured that any information given by them would not be used against them ─ data were used for expressly for the purpose of this research.

According to McMillan and Schumacher (2014), one of the limitations of ethical issues is that the researcher might fail to take care of the research participants, by asking questions that may require personal responses or confidential information from participants. Which sometimes participants may not be comfortable with it. To address this limitation, questions that could lead participants to lose trust or to feel humiliation were avoided. Deception may be regarded as another shortcoming of ethical issues. According to Cohen et al. (2011c), deceptions sometimes infringe participants' privacy when the researcher does not disclose the full truth of the purpose of the research. Therefore, to overcome this shortcoming I approached my participants through emails, and explained to them the purpose of the research, and that in this study they would be treated as subjects of the research.

3.9 Research Evaluation: Trustworthiness of the Study

Trustworthiness refers to the extent to which we can trust the research study (Bernard, 2017; Bertram & Christiansen, 2014a; Gibbs, 2018; Merriam & Tisdell, 2015). To develop trustworthiness in a qualitative research study, Guba and Lincoln (1994b), Denzin and Lincoln (2011), Klenke (2016) and Cohen et al. (2011b) presented four criteria: credibility, dependability, confirmability, and transferability, that may be used to ensure trustworthiness in qualitative research. These tools were applied in this study, since this study was intended to understand human experiences of individuals. This study was aimed at exploring first-year students' experiences of using Moodle in learning an accounting module. Thus, this study had adopted these four evaluation criteria in order to ensure trustworthiness in this study.

3.9.1 **Credibility**

Credibility refers to the extent to which the research findings reflect the realities or lived experiences of the research participants (Anney, 2014; Bertram & Christiansen, 2014a;

Hussein, 2015). Polit and Beck (2012) and Mayan (2016) define credibility as the truth of the research findings or participant views, and the interpretation and representation of them by the researcher. According to Merriam (1998, p. 63) credibility deals with question of "How congruent the research findings are with reality?" Bernard (2017), Cope (2014a), Guba (1981) and Shenton (2004) maintain that ensuring credibility is one of the most important aspects in establishing trustworthiness in research. Therefore, to enhance credibility in this study, I used an audio-recording device to record the interviews verbatim. Further, Anney (2014) notes that there are other ways of ensuring credibility in qualitative data, such as triangulation, member checking, and peer examination, as well as prolonged engagement in the research space. Thus, in this study, triangulation was applied in order to enhance credibility. According to Bertram and Christiansen (2014a), Casey and Murphy (2009) and Shenton (2004), triangulation refers to the process of generating data from various numbers of sources. Therefore, in this study, data were gathered using various methods of data generation, such as reflective activity, one-on-one semi-structured interviews, and document research analysis (such as modules outlines and university policies) in order to ensure credibility in this study.

3.9.2 Confirmability

Confirmability is defined as making sure that the research process is transparent, affording detailed information for readers to ascertain whether they would have reached the same or a similar conclusion (Anney, 2014; Bertram & Christiansen, 2014a; El Hussein, Jakubec, & Osuji, 2015). Thus, to maintain confirmability in this study, the study was sent to the research participants for confirmation purposes before it was submitted for examination. Lincoln and Guba (1985), Bertram and Christiansen (2014a), and Polit and Beck (2012) intimate that confirmability also refers to the researcher's ability to demonstrate that the data presented represents the participants' responses and not that of the researcher's biases or views. To ensure confirmability in this study, I demonstrated how conclusions and interpretations of the generated data were established; and this was exemplified by showing that the findings were derived directly from the data. Further to this, I provided rich quotations from the participants' responses that illustrated each emerging theme. Issues of ethics were also taken into account during the trustworthiness process.

3.9.3 Dependability

Dependability (also known as reliability) refers to the constancy of the data over similar settings (Graneheim & Lundman, 2004; Polit & Beck, 2012; Tobin & Begley, 2004). Similarly, Merriam (1998, p. 205) maintains that "dependability refers to the extent to which research findings can be replicated with similar subjects (participants) in a similar environment". Dependability illustrates whether the research findings may be transferred to other environment should the same subjects be used. According to Budden (2017), dependability assents to participants' examining the research findings, interpretations, and recommendations, to ensure that it connects with what was actually said and means, in accordance with the phenomenon under exploration. Thus, to maintain dependability in this study, the study was given to research participants to read through themselves, deciding whether what was reflected in data reports and discussion of research findings was in fact their responses during the data-collection process. To strengthen reliability in this study, I also used recording devices to record one-on-one- semi-structured interviews, in order to ensure that data generated was accurate. Lodico et al. (2010) offer that videotapes and audio devices are some of the tools which may be used in qualitative research to enhance dependability.

3.9.4 Transferability-external validity

Transferability refers to findings that may be applied by the readers to other contexts or groups (Casey & Murphy, 2009; Eriksson & Kovalainen, 2015; Graneheim & Lundman, 2004; Polit & Beck, 2012). According to Guba and Lincoln (1994a), Cope (2014a), and Bertram and Christiansen (2014a), transferability refers to the extent to which the research findings may be transferred to another environment or generalized to the population at large. To maintain transferability in this study, sufficient clarity and explanations were made regarding data generation, the focus of the study, and data analysis, in order to enable readers to draw conclusions if data may be replicated to other contexts. Furthermore, this study used a qualitative research approach. According to Koch (2006), a qualitative study has met this criterion if the results have meaning to individuals not involved in the study; and if readers can associate the results with their own experiences. Thus, I enhanced transferability in this study through detailed and explicit research findings of first-year students' experiences of using Moodle in learning an undergraduate Accounting module. The researchers provided sufficient information and the research context to enable the readers to assess the findings' capability of being transferable.

3.10 Limitations and possible solutions

Because participants may become confused about which situation/experiences to reflect on during the data-generation process on the reflective activity, I ensured that questions were explained clearly during one-on-one interviews, before participants gave their responses. Further to this, the data-generating process may be time consuming (Cohen et al., 2011c). To overcome this limitation, I made early arrangements with participants through emails and documents and persuaded them to avail themselves for the data-generation process. The main limitations of this study arise from its qualitative and interpretive nature. The study was limited in the ways listed above, mainly because of the inherent features of qualitative case studies: case studies do not lead to statistical generalizations because of small samples that may prove misleading and give biased results (Bailey, 2011). Another limitation of this study was that participants could give information that does not accurately represent what the interviewer requires. To overcome this limitation, document analysis and reflective activity was also used as other methods of data generation to supplement the one-on-one semi-structured interviews.

3.11 Conclusion

This chapter set out to explores how this research study intended to answer key research questions and relevant objectives. It also described the research paradigm, research methods, data-generation methods, sampling, and population, trustworthiness, data analysis, ethical issues, and possible limitations of the study. These provided clear and fair images of how the study was undertaken, to respond to key research questions. Thus, these methodologies were integrated in order to explore first-year students' experiences of using Moodle when on an Accounting module. Consequently, this study has described three major experiences that inform students learning on the LMS (Moodle). The next chapter will analyse data generated. The aim is to provide meaning for the research findings, by following a data-analysis procedure, as discussed in this chapter (Chapter Three).

Chapter 4
Research findings and discussions

4.1 Introduction

Chapter Three outlined the research design and methodology that has been adopted in this study. This chapter aims to go deeper in order to disclose the outcomes of the data generated. Thus, data generated in this study will be presented according to the principles of the TPACK theory as a theoretical framework used in this study. The principles of the TPACK theory will help in analysing, displaying, and synthesising data generated from first-year students' experiences of using Moodle in learning an undergraduate module. Six research participants were selected based on their experiences and expertise of learning an accounting module on Moodle. In presenting the findings, I ensured that participants' views were not lost, by making direct quotations of their responses.

Theme 1: Rationale

4.1.1 Why do you have an interest in learning an Accounting Module through Moodle? (Reasons)

P1: "It because Moodle make it easier to get slides without having to take notes from the lecturer during the lecture time. I enjoy learning Accounting and Mathematics module through Moodle because it deals with numbers. I think Accounting could also help me to make informed financial decision… I also use Moodle to learn Accounting because I want to be a good teacher as there is a shortage of Accounting teachers in my community…"

P2: *"I use Moodle because it makes things easy for me to find extra activities, it is better than having a book, because some of us cannot afford Accounting text books due to lack of funding… I also find Moodle very useful because it allows me to communicate with my lecturers and I can also use it anywhere on my phone unlike carrying a textbook as long as I have a network or connection."*

P3: "*I do have an interest in using Moodle to learn Accounting module but when I started it was very difficult to use it because I could not even know how to access Moodle even though the training was provided to us regarding the use of Moodle but when I was alone I find it*

challenging to use it… I find Moodle very useful in learning Accounting module because it saves my learning time… I use Moodle because it is a good communication platform between students and the lecturer."

P4: "*Moodle is the best source of information because it provides the summary of what was taught in the lecture room. It also makes things easy since Accounting is a practical subject and Accounting class have many students. I use it because it guides me to work with Accounting activities and organize the Accounting content. Moodle also make it easy to communicate with my lecturer*."

P5: "*I do enjoy using Moodle now but at the beginning I find it difficult to use it because I did not use computer before but due to training which was provided to us during orientation now I am able to use it… I use Moodle because it creates good and quick communication between students and lecturers. Therefore, it makes it easy to understand certain Accounting content that you have missed during the lecture…"*

From the findings, it seems that the majority of participants are being driven by societal rationale on the use of Moodle in learning an undergraduate Accounting module. See P2, P3 and P4 who were in line with P5 when she stated: *'… I use Moodle to learn Accounting because it creates a good and quick communication platform between students and the lecturers.'* Furthermore, the findings show that only two students out of five were driven by professional rationale with regard to the use of Moodle when on the accounting module. Consequently, most participants were driven by the societal rationale in using Moodle; but only a few of them were driven by the professional rationale. For instance, P3 was in line with P5 who stated his professional rationale: '*I enjoy using Moodle because … the training was provided to us*' *regarding the use of Moodle.*' These findings suggest that these students were driven by both interaction-centred and written-centred experiences when they were using Moodle on their undergraduate Accounting module. Their reasons for using Moodle were mostly for communication, to share ideas. Moodle trained them for their profession. The training that was provided, allowed them to go on Moodle to learn accounting activities for learning, reading documents and communicating with their lecturers. Other reasons were personal rationale. Some students were also guided by a personal rationale. Most students were driven by love and passion in the use of Moodle. For instance, P2, P3 and P4 accord with P1 who outlined: "*I enjoy learning Accounting and Mathematics module through Moodle because it deals with*

numbers.' These findings indicate that students were much influenced by personal and societal rationale, followed by professional rationale in the use of Moodle for learning. The majority of students were driven mostly by user-centred and interaction-centred experiences, and less influenced by written-centred experiences.

Curriculum rationale is imperative for learning: it forms the basis for lecturers to understand why they are teaching their modules. According to V. d. Akker and A. Thijs (2009) and Berkvens, Van den Akker, et al. (2014a), curriculum rationale is divided into personal, societal, and professional rationale. Personal rationale focuses on the curriculum visions that are intended to develop individual students. Societal rationale is concerned with opinions: lecturers teach students because they want to meet the needs of the society or country. This kind of rationale places the needs of the community at the centre of the learning context. Professional rationale/content occurs when lecturers follow a professional way of implementing the curriculum.

Recent studies outlined that when students are learning an accounting module through Moodle, they are mostly driven by societal rationale. Learning on an online management system such as (Moodle) is related to constructivism, particularly social constructivism. This epistemological position assumes that knowledge is seen to reside in a repository of linguistic artefacts such as written texts, documents, and manuals, and to be communicated through lectures, discussions forums, overhead projections ,and chats on the LMS (Moodle) (Horvat, Dobrota, Krsmanovic, & Cudanov, 2015; Limongelli et al., 2016; Mwalumbwe & Mtebe, 2017). Thus, when students are learning accounting through Moodle they are guided by interaction-centred experience, rather than user-centred and written-centred. This allows them to construct their own knowledge and share ideas with one another on the LMS, as mentioned above.

The accounting module course outline (2018) indicates that students must go on Moodle to access accounting learning materials, such as assignment tasks, and class activities. It further reveals that tutorials are compulsory. Tutorial exercises must be completed using Moodle. All these documents, such as (assignment tasks documents, class activities documents, and tutorial exercises documents) are written documents reflecting various accounting activities to be

completed by students, using Moodle. Students should follow what is stipulated in the document. This requires students to be driven by professional rationale. Provision of the LMS encourages students to do accounting tasks downloaded on the LMS (Moodle). Consequently, students' actions are driven by written-centred experience, because students have to use written documents to perform Accounting activities when they are learning an accounting module through Moodle.

4.2 Technological knowledge

Theme 2: Resources

4.2.2 What resources do you use when learning an Accounting module using Moodle? (Resources)

P1: "When I am learning Accounting module through Moodle, I use a calculator, Accounting textbook, slides to do tutorials and past question papers…, I get other materials from tutors such as Accounting study guides. I also use the learning site app, laptop and my phone…and go to the LAN to get a Computers. I also get Emails to access Accounting learning materials."

P2: "Moodle is an app not a hard copy so when I am learning Accounting through Moodle I need a computer, laptop and most of the time cellphone because that what I carry every day. I also apply Accounting principles when learning Accounting module on Moodle but it depends on which section we are doing. For instance, when I am doing financial statements I apply what I have been taught in high school like historical cost concepts and prudence principles."

P3: "When I am learning Accounting module on Moodle I need a calculator, an Accounting Book, a laptop, study guides, Module outline, computer, and cell phone. I also use the learning site access Moodle. I also use video for tutorials..."

P4: "when I am learning Accounting using Moodle I use stationary, for examples, pen, pencil, eraser, Accounting journal books, prescribed Accounting textbooks and other Accounting sources and Accounting books from grade 11 and 12 because these books help me to recall all the important information…, the scientific calculator…., cell phone, computer and laptop, highlighters, chat, newspaper as additional resources. I also go to library home page to download previous question papers, I use YouTube videos, and also visit google scholar to get Accounting study guides. When I am learning Accounting on Moodle I also guided by Accounting principles such as Company act and GAAP principles…"

P5: “when I am learning Accounting module on Moodle usually, I use laptop, Wi-Fi, computer and Accounting prescribed books.”

From the findings, it was discovered that most students placed considerably more emphasis on hardware resources when learning an accounting module through Moodle. For example, P1, P2 agreed with P3 who said ‘…When I am learning Accounting module on Moodle I need a calculator, an Accounting text book, a laptop, computer and a cell phone.’ These students were driven mostly by written-centred experience when learning an accounting module on Moodle. They had to follow step-by-step procedures, which are written documents such as the module outline, textbook, and study guides, which helped them to complete accounting activities on the LMS (Moodle). These students also used software resources when learning an accounting module through Moodle. For instance, P1, P3 accords with P4 ‘… when I am learning Accounting on Moodle, I use newspapers as additional resources. I also go to library home page to download previous question papers, YouTube videos, and also visit google scholar to get e-Books and Accounting study guides.’ Students’ actions were guided by interaction-centred experience because software resources enabled them to interact with one another in order to share information on the LMS (Moodle). Only a few students articulated their thoughts on ideological-ware, For instance, P2 agreed with P4 ‘…When I am learning Accounting module on Moodle I am also guided by Accounting principles such as Company act and GAAP principles…’ These accounts seem to indicate that some students were driven by user-centred experience. They also applied learning strategies and accounting principles when learning an accounting module through Moodle.

Resources are defined by Criticos et al. (2002, p. 206) “as anything which helps students to learn.” Resources are used in supporting students’ learning on the LMS (Moodle). According to Criticos et al. (2002) and Khoza (2015b), resources are divided into hard-ware, soft-ware and ideological-ware resources (See Chapter Two). Hardware resources refer to any equipment or mechanism used in learning, such as textbooks, computers, cell phones, calculators, laptop etc. Software resources refer to any material or tools used to display information,, such as computer application soft-wares, Microsoft Word, newspapers, e-books, videos and OHP transparencies, etc. (Khoza, 2011b; F. Percival, 1988). Ideological-ware may be defined as any learning tools that a person cannot see and touch, but which drive the learning process (.

Amory, 2010; Khoza, 2012; Percival, 1988). For example, learning theories, learning strategies, accounting principles, and subject content knowledge. Recent studies outlined that when students are learning an accounting on Moodle, they are driven by hardware and software. The Moodle environment is dominated by hardware and software resources (Patel & Patel, 2017; Piguillem Poch et al., 2012). Consequently, students' actions are mostly driven by both written-centred and interaction-centred experiences, and less by user-centred experiences.

Findings from the accounting module course outline (2018) reflect that students must have resources when learning an accounting module on Moodle. Students must have a prescribed accounting textbook: "Prescribed textbook: Haiden Malcom, 2011, 7th Edition. Accounting Makes Cents - A Conceptual Approach. Durban." Students are also required to bring a calculator for all accounting contact sessions: "Calculators must be brought to each lecturers, tutorials and examination." (Course outline, 2018, p.5). The module outline places considerably more emphasis on hardware and software resources. As a result, student are driven by written-centred experience and interaction-centred experience, and less by ideological-ware when learning an accounting Module through Moodle.

4.3 Content Knowledge

Theme 3: Content

4.3.1 What content are you learning in your Accounting module using Moodle?

P1: "in Accounting we are doing financial statements of a sole trader such as income statement, final Accounts and balance sheet. Ratios, and also inventories, Assets disposal and depreciation."

P2 said: "firstly, in the first semester we did financial statement of a Sole trader, Accounting equation, final accounts, closing transfers account, we also did analysis and interpretation of financial statements. But in the second semester, we are focusing on bank reconciliation statements, calculation of depreciation…. unit formulas."

P3: “I am doing financial statement and ratios of a Sole trader, assets, Accounting equation, ledges, Accounting concepts and depreciation.”

P4: “There are many content topics in Accounting that I have learn using Moodle but I will mention the one which we did in the first semester and second semester. For examples, my basic Accounting content is ledge accounts, Accounting equation, financial statements of a Sole Trader, bank reconciliation, inventory, stock valuation, ratios. I also apply GAAP principles and double entry principles when preparing financial statements, Accounting theory, and Accounting concepts.”

P5: “In Accounting I am doing business entity, final accounts, business calculations, Bookkeeping, depreciations, Asset disposals, inventory and Accounting equation.” All participants indicated that financial accounting (accounting equation, accounting concepts, GAAP principles, bookkeeping, final accounts and financial statements, etc.) are the major content learnt in the accounting discipline when learning an accounting module on the LMS (Moodle). P1, P2, P3 agree with what P4 said on the content learned in the accounting module ‘…my basic Accounting content are ledger accounts, Accounting equation, financial statements of a Sole Trader, bank reconciliation… GAAP principles, Double entry principles, and Accounting concepts and theory.’ P3 agreed with P2 ‘in the first semester we did financial statement of a sole trader and Accounting equation…’ (Use double inverted commas throughout when quoting remarks.)Students are driven by written-centred experience when learning an accounting module on Moodle. Students have to follow written policies, procedures, and accounting principles such as the companies act, the double-entry principle and GAAP principle when preparing financial statements on the LMS. In line with this, P4 said: ‘He also apply GAAP principles and double-entry principles when preparing financial statements…’ Participants also managed resources.P5, P4 also agree with what P1 said when she mentioned some of the major content that she did in accounting: ‘I also did inventories, Assets and depreciation, ethics and internal control in Accounting.’ When students are performing managerial accounting on Moodle they are driven by user-centred experiences. Students are required to manage stock, develop ethics and internal control in the business environment.

Studies from the literature such as (Berkvens, Van den Akker, et al., 2014a; DoE, 2011b; Hoadley & Jansen, 2013; Ward et al., 2015) define content as subject matter that students are

expected to acquire, or the actual subject matter that is to be learned in a particular module. These above studies further outline that the accounting content consists of knowledge, skills and values that focus on three main categories, namely, financial accounting, managerial accounting and managing resources. These studies referred to financial accounting as analysing, recording, and reporting financial information through financial statements such as a statement of comprehensive income, a statement of financial position and cash flow statements. This accounting content requires first-year students to be driven by written-centred experience when learning an accounting module on Moodle. They usually use written documents, such as written accounting policies, following written procedures and principles which are written down to prepare financial statements of a sole trader (DoE, 2011b). Managerial accounting is concerned with costs and budgeting. This content necessitates first-year students to be driven by interaction-centred experience in learning an accounting module on Moodle because they have to develop managerial, financial, and communication skills to interpret financial and managerial information. They may thereafter make informed decisions and communicate these decisions to one another and to the relevant stakeholders through chats and discussions forums on Moodle (Czerniewicz & Brown, 2014). Managing resources was said to be influenced by user-centred experience, because it requires students to manage an inventory, developing ethics and internal control in the business environment. Furthermore, recent studies such as (Henderson, Peirson, Herbohn, & Howieson, 2015; Nobes, 2014), have shown that financial accounting is the most dominant topic in accounting, consisting of 50% to 60 % weighting averages.

Findings from the accounting module course outlined (2018, P.1) reveal that students should complete these lists of content when learning an accounting module on Moodle: “GAAP principles, Accounting Concepts, Business cycle or Accounting cycle, starting a Business, Ledgers, Basic calculations, Accounting equation Source documents, subsidiary books, auditing, posting to the ledge, trial balance, year-end adjustments, final accounts and financial statements.” The weighting of accounting content in policy comprise 50 % to 60% of the financial accounting content. The module outline places much more emphasis on financial accounting content. As a result, students are driven by written-centred experience when learning an accounting content on Moodle, placing less emphasis on other types of experiences such as interaction-centred and user-centred experiences.

Theme 4: Goals

4.4 Pedagogical Knowledge

4.4.1 Which goals are you intending to achieve when using Moodle in learning an Accounting module? (Goals to be achieved)

P1: “my long-term goal is to get more Accounting knowledge and to become an expert in Accounting teaching… I also want to be able to manipulate any Accounting transactions. To achieve my long-term goals, I use multiple sources of Accounting information such as Books, study guides and articles and use consultation times when I don’t understand something in Accounting. Accounting module to produce students who are able to apply Accounting principles when dealing with Accounting transactions.”

P2: “firstly, I will start by long term goals, my long-term goal is to have more knowledge of Accounting so that I can share with learners because in schools Accounting is regarded as one of the difficult subjects. I also use Moodle for extra activities and get more understanding of Accounting and to get excellent results.” my goal is to understand how to use Accounting in my life and also to learn how to prepare financial statements and what sections should be included on the financial statements. Moreover, at the end of the class I want to understand the reasons for preparing financial statements.”

P3: “I want to be a top Accounting student because my main goal is to be good Accounting teacher. To achieve my long-term goals, I make sure to use all available resources for such as Books, articles, attending tutorials, Accounting study materials and watch Accounting Videos Accounting and consults the lecturers if I don’t understand…”

P4: “I want to pass Accounting through using many Accounting Books, past question papers and also visit the internet for research in Accounting, my goals are to be a good teacher and to be an expert in Accounting. Accounting also help me to make informed financial decision.”

P5: “I want to pass Accounting module with higher marks. I want to start my own business to assist those who are vulnerable in my community and familiarize myself with financial Accounting.”

From the above findings, most participants indicated that their aims in learning an accounting through Moodle are to gain more knowledge and to become expert in the accounting discipline. P1 agreed with P2 who asserted (Check quotation marks) '*…my long-term goal is to have more knowledge of Accounting so that I can share with learners because in most Universities Accounting module is regarded as one of the difficult module'*. In line with this, 'P3 also accords with what P2 is saying when he asserts that *'my goals are to be a good Accounting teacher and to be an expert in Accounting module.'* P4 agrees with P2 and P3: '*my main goal is to be good Accounting teacher*.' Participants (students) were drawing much from the aims when using Moodle for learning. Thus, their experiences of learning an accounting module are related to user-centred experience. Students are expected to acquire certain skills and knowledge, such as problem solving and critical skills, in order to be able to use Moodle in dealing with accounting content (managerial accounting). Students seem to be familiar with how they will achieve their goals by stating their objectives. P3 agreed with what P1 articulated '*…to achieve my long-term goals, I use multiple sources of Accounting information such as Books, course outline and study guides.'* P4 agreed with P1: '*I want to pass Accounting module through using different learning materials such as Accounting Books, past question papers and'*. When students are learning an accounting module on Moodle they are driven by the educational objectives of the module. Consequently they are guided by written-centred experience: they use content from various written accounting materials such as accounting text books, written articles, written study guides, and written research learning materials on the Internet. However, these findings show that less emphasis is placed on learning outcomes. Only two participants out of five articulated that they were learning on outcomes. P1 asserted: "*Accounting module aim to produce students who are able to apply Accounting principles when dealing with Accounting transactions on Moodle*." Similarly, *P2* stated that *'at the end of the class I want to understand the reasons for preparing financial statements.' Most students are lacking interaction-centred experience as only few of them articulated on learning outcomes.*

Educational goals are defined by these studies (Latham & Locke, 2007; Locke & Latham, 2006; Suskie, 2018b; Valle et al., 2003; Waage et al., 2010) as broad statements of purpose and intention for the course or module. Goals refer to what students are expected to attain at the end of the course. These studies further stated that educational goals are divided into aims, objectives and learning outcomes. First, these studies refer to aims as long-term goals. They describe aims as broad general statements of learning intentions. These educational goals seek

first-year students to be driven by user-centred experience when learning an accounting Module through Moodle (Suskie, 2018b). Second, these studies describe objectives as short-term goals, which are specific statements of learning intentions. These learning objectives requires first-year students to be driven by written-centred experience when learning an accounting module through Moodle because they depend on the accounting content knowledge drawn from written documents such as accounting books, written course outline, written previous question papers, written articles, written accounting study guides and more, when learning an accounting module on Moodle (Rieckmann, 2017). Learning outcomes are defined by these above studies as statements of what students are expected to know, and/or be able to demonstrate at the end of the learning process. These learning goals require first-year students to be driven by interaction-centred experience when learning an accounting module on Moodle. This allows students to interact with one another and with their lecturers; to share knowledge and ideas through chats and discussion forums on the LMS (Moodle). Furthermore, recent studies such as those of (Henderson et al., 2017a; Singh, 2015; Stainbank & Gurr, 2016), outlined that most students are driven mostly by written-centred experience in the learning on the accounting Module because they draw much from the content when learning accounting.

Findings from the accounting course outline (2018, p.1) reveal that students are expected to achieve the various aims, such as, “To develop knowledge and skills required for Accounting for Sole Trader.” Students are also expected to accomplish the following learning outcomes when learning an accounting on Moodle. For example, “Students should be able to; analyses transaction, recognize and fill in the correct source document for each transaction, record transactions in the relevant subsidiary books, post to the ledger, journalize adjustments, prepare financial statements and, analyze and interpret financial data.”

The module outline is placing more importance on aims and learning outcomes for the module, and less emphasis on the objectives for the module when students are learning an accounting module on Moodle. The findings above place more importance on aims and objectives. The course outline demonstrates that students are driven by user-centred and interaction-centred experiences. Less emphasis is placed on written-centred experiences which are related to the content of the module.

Theme 5: Assessment

4.4.2 How is assessment conducted in the accounting module through Moodle?

P1: "*The lecturer sends us tutorials activities on Moodle such as class activities, group work, and projects. We also do class activities in groups and individuals, in Accounting we write assignment, two formal tests for duly performed (DP) and we also write one main examination."*

P2: "*Most of the time we are given exercises after each lecture to complete. Activities are posted on Moodle and come back to class to do correction. These activities are not recorded but lecturers are checking our understanding. In Accounting we write two formal tests and examination. Some activities are done in groups…"*

P3: "*The lecturer gives us tutorials to be done in class such as class activities, group activities and projects. I also write assignment and two formal Accounting tests and group work activities."*

P4: "*my lecturer upload assessment activities on Moodle such as Accounting activities, projects and tutorials, these activities marked in the following contact sessions but not recorded. These activities are helpful to prepare for test and examinations, some activities are done in groups."*

P5: "the lecturer sends us Accounting activities and tasks on Moodle after the class. In Accounting we also assignment and write two formal tests and examination."

From the findings above, students are using assessment for learning when learning an accounting module through Moodle. P3 and P2 agree with what P1 articulated on the assessment for learning, stating that Italics and quotation marks' lecturers send us tutorial activities on Moodle such as class activities, assignment, projects and group activities …' P4 accords with P3, P2 and P1 in asserting: '*my lecturer upload assessment activities on Moodle such as Accounting activities, projects, assignment and tutorials and these activities are marked in the following contact sessions but not recorded…'* , P5 agrees with P4 who affirmed '*the lecturer sends us Accounting activities and tasks on Moodle after the lecture*.' This shows that lecturers use these assessment activities and tutorials to monitor and evaluate how students

are progressing in their learning. Assessment for learning is closely related to user-centred experience. Students have to apply their understanding and what they have learnt in class when learning an accounting module on Moodle. Furthermore, these findings indicate that students also used assessment as learning. Some activities were conducted individually or in groups. P1, P2 and P3 agree with P4 who said '… *some Accounting activities are done in groups*.' When students are performing assessment activities in groups on Moodle, they are driven by interaction-centred experience. This type of experience enables them to exchange ideas and assess one another through discussion forums and chats on the LMS (Moodle). Almost all participants indicated that their conceptualization assessment of learning is strongly linked to tests and examinations. P1 agreed with P2: '*In Accounting we write assignment, two formal tests and examination.*' P3, P4 and P5 accords with P2 and P3: '*In Accounting We also write two formal tests, assignment and examination.'* When students are learning an accounting on Moodle they are driven by the assessment of learning. Consequently they are guided by written-centred experience. Students are required to write two written formal tests and written examination.

Furthermore, assessment may be defined as the systematic act of gathering, collecting, and recording information on students' progress in their learning (P. Black & D. Wiliam, 2009; Godfrey et al., 2015; Ramrathan et al., 2017). These studies further outlined that assessment is divided into assessment for learning, assessment as learning, and assessment for learning. These studies refer to assessment for learning as day-to-day observations of how students are performing in their learning. This form of assessment requires first-year students to be driven by user-centred experience when learning an accounting module on Moodle: students are required to apply what they have learned during the learning process. These studies further stated that assessment as learning refers to the assessment of students' work by their peers. Thus, students are driven by interaction-centred experience. Such experience allows students to share knowledge and ideas when learning an accounting module through Moodle. These studies further asserted that assessment of learning refers to the recording of the overall achievement of students in systematic ways at the end of the learning process. This requires first-year students to be guided by written-centred experience. Students are required to write two written formal tests and to sit for a written examination at the end of the learning process. Recent literature from studies, such as (Chisholm & Wildeman, 2013; Conde, Colomo-Palacios, García-Peñalvo, & Larrucea, 2018; Griffiths, McVey, & Finlay, 2012; Valverde-

Berrocoso & Coca-Pérez, 2014), outlined that, when students are drawing much from assessment of learning they are driven by written-centred experience. Their conceptualization of assessment is strongly driven by written tests and examinations.

Findings from the accounting course outline (2018, p.) offer that students are expected to complete and submit all assignments by the due date. The course work consists of 50% of assessment activities performed in class. This mark will include assignments and tests. The final examination is also 50%. The course places a great deal of emphasis on assessment of learning, and less emphasis on other two forms of assessment, namely, assessment for learning and assessment as learning. The course outline demonstrates that, when students are learning an Accounting module on Moodle they are driven mostly by written-centred experience. The outline is silent on the other forms of assessment ─ assessment for learning and assessment as learning.

Theme 6: Learning activities

4.4.3 What learning activities do you use on Moodle in learning an Accounting module?

P1: "*The lecturer teaches and also gives us an opportunity to share our views with one another. The lecturer also uses other students to clarify certain things in Accounting in our language as some students use English as their second language. The lecturers also engage us in the lessons by allowing us to use our Accounting background knowledge*."

P2: "*Accounting is a practical subject, usually lecturers ask questions regarding the section that we are doing and those that do not understand are given support. But most of the time lecturers are involves us as students in the lesson."*

P3: "*The lecturer engages us in the lesson by allowing us to ask questions. The lecturers also allow students to discuss Accounting activities in class. In some cases, lecturers instruct us to do activities on Moodle"*

P4: "*when I am learning Accounting Module using Moodle learning activities are conducted in a learner-centred approach whereby as students we are allowed to bring our knowledge and*

skills about what certain Accounting content we are given, and some activities are teacher-centred. Whereby the lecturer instructs us on how to do the given question papers and content."

P5: *"learning activities are learner-centred because the lecturer involves us in the lesson. For examples, our lecturers provide information orally supported by slides on the PowerPoint and ask students to respond to a related question. After students have responded she ask other students to summarise the entire lesson for the class. Accounting is practical subject lecturers allow students to interact and engage us in the lesson's. Lecturers sometimes give instruction to us but it depends on which topic we are doing."*

Almost all the participants indicated that in the accounting discipline student-centred activity is the major learning activity used. P1, P2, P4, and P5 agree with what P3 articulated on the learning activities used in the accounting module: Use double inverted commas '*The lecturer engages us in the lesson by allowing us to ask questions. The lecturers also allow students to discuss Accounting activities in class.*' Similarly, P5 accords with P3: '*learning activities are learner-centred because the lecturer involves us in the lesson.*' P2 agrees with P3: '*Accounting is a practical subject, usually lecturers ask questions regarding the section that we are doing and those that do not understand are given support*. Students are driven by user-centred experience when learning an accounting module on Moodle. Students are required to use their personal experiences, knowledge and skills to complete accounting activities on the LMS (Moodle). Furthermore, few students articulated on teacher-centred activity. For instance, P5 and P3 agrees with what P3 stated '…*some activities are lecturer-centred activities, whereby the lecturer instruct us on how to do the given question papers and Accounting activities on Moodle.*' Lecturer activity is guided by written-centred experience because lecturers assume a dominant position in selecting accounting content to be learned by students, such as written text, written assessments, written policies and written theories. However, these findings are silent when it comes to content-centered activity. Thus, none of the participants commented on content-centred activity these students are lacking interaction-centred experience to share ideas during teaching and learning. Students were not actively participating on chat platforms and discussion forums created by lecturers.

Learning activities may be defined as those activities that involve students' interaction and the ways in which these activities are conducted to enhance students' learning experiences (Berkvens, Van den Akker, et al., 2014a; Johnson & Van Wyk, 2016; Ramani et al., 2015; Villalobos, 2014). According to these studies, learning activities are divided into student-centred, lecturer-centred and content-centred activities. These studies further define student-centred activity, also known as outcomes-based activity, as the process of organising all classroom activities around student learning experiences. It encourages students' autonomy in their own learning. This learning activity requires first-year students to be driven by user-centred experience. Students are required to use their own learning experiences, knowledge and skills to drive learning and construct their own knowledge. These studies regard lecturer-centred activity as referring to learning in which activities are planned and controlled by lecturers. Lecturers are in the position of authority. In this type of activity lecturers are regarded as a source of knowledge both in terms of content choice and learning methodology. Such learning activity requires first-year students to be driven by written-centred experience because lecturers are the ones who assume a dominant position in terms of choosing how students' learning may be conducted. Lecturers decide on written theories, written policies and written course outline, inter alia, during the learning process. The above studies further outline that content-centred activity refers to the act of learning organised around the content. This learning activity require first-year students to be guided by interaction-centred experience because this allows students to interact with one another in groups through discussion forums and chats on Moodle when learning the accounting module. The findings above demonstrate that students place less emphasis on content-centred activity. As a result they are lacking interaction-centred activity.

Furthermore, the course outline 2018 is silent on learning activities. Students are therefore not aware of all learning activities when learning the accounting module through Moodle. The findings emphasise student-centred and lecturer-centred activity, not so for content-centred activity, which is more important in driving students' learning. Villalobos (2014, p. 73) maintains that "it involves students actively in all phases of the learning process". It allows students to play a more active role in the LMS, creating and participating actively in the construction of knowledge. Students are lacking interaction-centred experiences, which would give them a learning platform on which to exchange ideas and exchange content knowledge when learning an accounting module.

Theme 7: Roles

4.4.4 How do you perceive your role when using Moodle in learning an Accounting module? (Students' role).

P1: "when I am learning Accounting module on Moodle the lecturers explain Accounting activities to us and also clarify by making examples."
P2 said: "*my role is to be participative in class when the activities are done so that I don't get myself behind. Lecturers use to give us activities after each lecture in order to test our understanding of the content.''*

P3: "*the lecturers send us emails and instruct us just do Accounting activities on my own and come to discuss it in class. Lecturers sometimes give us assignment based on class activities"*

P4: "*I think it is my duty to go to Moodle so that I can see what activities or information is provided on Moodle. This gives me an active role in my learning Accounting using Moodle…. It is also my role to go through all the given activities and also follow some activities. Our lecturers also facilitate out learning by giving more clarity and examples on a given activity."*

P5: "*the lecturers are able to help us during teaching and learning process, the lecturer ask us if we understood the content if we do not understand she explain and instruct us to download Accounting activities on Moodle. Lecturers also conduct assessment in the classroom, such as class activities and project which are done in groups."*

Most participants have indicated that in the accounting module, the learning facilitator is the major role used in learning an accounting. P4 and P5 agree with P1: Italics and inverted commas'when I am learning Accounting module on Moodle the lecturers explain Accounting activities to us and clarify by making examples.' Similarly, P2 seems to be familiar with her role when lecturers are facilitating learning: '*my role is to be participative in class when the activities are done so that I don't get myself behind.'* Students are guided by interaction-centred experience when learning an accounting module on Moodle. This level of experience allows students to be active participants in the learning process. The findings also indicated that students have been assessed during the learning process. P2 accords with P5: *'…Lecturers also*

conduct assessment in the classroom, such as class activities and project which are done in groups.' In line with this, P3 also agreed with P5: '*Lecturers sometimes give us assignment tasks based on the class activities.'* Students are driven by user-centred experience when learning an accounting module through Moodle. When lecturers are assessing, students become the assessed. They are the ones who undergo assessment tasks sets by lecturers. However, the above participants seem to be placing less importance on learning instructors because only two participants who articulated on the learning instructor role. P3 agreed with P5: '*the lecturer ask us if we understood the content if we do not understand she explain and instruct us to download Accounting activities on Moodle.'* The minority of students are driven by written-centred experience when learning an accounting module on Moodle. Students use written accounting text books, and written study guides to perform accounting activities on Moodle.

Studies from the literature imply that the lecturer's role may be defined as the process of ensuring that lecturers perform a variety of roles within the classroom context (DoE, 2011b; Harley, Barasa, Bertram, Mattson, & Pillay, 2000; Sherbino et al., 2014; Vázquez & Ellison, 2018). Lecturers are expected to produce student teachers who are competent educators. According to these studies, the lecturers' role is divided into learning instructor, facilitator, and assessor. These studies assert that a learning instructor is defined as an individual who is accountable for providing guidance; and is able to interpret learning materials for individual student needs through Moodle. This learning role requires students to be driven by written-centred experience. Students are regarded as passive recipients of information: lecturers give instructions regarding written accounting activities, such as written assignments, written class activities, and projects. A learning facilitator is defined by these studies as one who provides guidance in order to help students to achieve learning goals. Learning goals require students to be driven by interaction-centred experience. Students are active participants in the learning process and share knowledge with one another on the LMS (Moodle). On the other hand, these studies define an assessor as someone who is able to conduct assessment activities of students, and who understands the importance of assessment in students' learning. This learning role requires first-year students to be driven by user-centred experience. Students are required to apply their knowledge and experience to perform accounting activities on Moodle. This implies that the literature places more stress on assessor and facilitator and less emphasis on the instructor role. Interaction-centred and user-centred experience are more dominant in

accounting than the instructor role which is less dominant. Students seem to be lacking written-centred experience which is imperative for them to learn accounting content.

The Accounting course outline (2018) is not specific when it comes to learning roles. It gives instructions to students on what to do: "students must complete and submit all assignment by the due dates". It also encourages students to consult with their lecturers if they seek further clarity on what they are learning: "should you require further assistance, please do not hesitate to make an appointment to see the lecturer at a time that suit both of you" (Course outline, 2018, p.5). The course outline seems to be driven by written-centred experience. It provides instructions to students on what is expected of them but it is silent when it comes to other roles, such as learning facilitator and assessor. Some students are lacking interaction-centred and user-centred experiences.

Theme 8: Learning context

4.4.5 Where do you take the Accounting module using Moodle? (Location).

P1: "*I learn Accounting module in lecture venues and I also retrieve all Accounting activities online. Even if I am at the residence I can assess Moodle provided I have a connection."*

P2: "P1 said: "*I can access Moodle anywhere for example, lecture venues, I also learn Accounting through Moodle even if I am in the residence. I also access Accounting module online through the learning site on Moodle."*

P3: "*I learn Accounting module in lecture halls and sometimes in the residence, I also learn Accounting online in the learning site because lecturers upload all Accounting activities on Moodle and we do corrections in the classroom."*

P4: "*Moodle is an App, it need connection if you want to use it. I am learning Accounting in the lecture venues, sometimes at the library and at my residence provided there is a network."*

P5: "*I can access Moodle anywhere for example, lecture venues, LAN, library I also learn Accounting through Moodle even if I am in the residence. I also access Accounting module online through the learning site."*

The findings above, reveal that all participants indicated that face-to-face learning is the dominant learning environment in the accounting learning process. P1 and P2 agree with P3: '*I learn Accounting module in lecture venues.*' P5 also agrees with P3: '*I can access Moodle anywhere for example, lecture venues, LAN, library, I also learn Accounting through Moodle even if I am in the residence.'* P4 agrees with P3: "*Moodle is an App, it need connection if you want to use it and therefore, I learn Accounting module in the lecture venues."* When students are learning the accounting module on Moodle they are guided by a face-to-face learning environment (LANs, laboratory and lecturer venues) thus they are driven by written-centred experience. In this context, learning is formal and structured around a module course outline, written assessments activities, written accounting module policies, and others. Almost all participants indicated that the face-to-face learning environment is inextricably linked with the online learning context. P5 accords with P3: '*…I also learn Accounting online in the learning site because lecturers upload all Accounting activities on Moodle and do corrections in the classroom.'* P1 agrees with P3: *'I also retrieve all Accounting activities online. Even if I am at the residence I can assess Moodle provided I am connected to the network.'* When students are learning accounting module on Moodle they are driven by the online learning context, and consequently guided by interaction-centred experience. Students share ideas and exchange knowledge using discussion forum and chats platforms on Moodle. The findings above have shown that participants have integrated the face-to-face and online learning environments. They were using a blended learning environment when learning an accounting module on Moodle. P2 agrees with P1: '*I learn Accounting module in lecture venues and I also retrieve all Accounting activities online.'* When students are learning an accounting module on Moodle they are driven by user-centred experience. Students have to apply their experience and knowledge to complete all accounting activities on the LMS (Moodle).

A learning environment is defined by these studies (Berkvens, Van den Akker, et al., 2014a; Brown, Dehoney, & Millichap, 2015; Clark & Mayer, 2016; Halverson, Graham, Spring, Drysdale, & Henrie, 2014; Park et al., 2016), as the diverse, physical and online learning contexts in which students may learn. Students may learn from a variety of contexts, such as inside or outside the classroom or an online environment. These studies further outlined that learning environment may be categorized into three, namely, a face-to-face learning environment, an online learning environment, and a blended learning environment. These

studies define a face-to-face learning environment as an interaction between students and lecturers and students among themselves in the traditional classroom context. This learning context requires students to be guided by written-centred experience. Students are guided by written documents such as course outlines, accounting text books, written-module policies, and more, when learning an accounting module using Moodle in the lecture venues. These studies further describe the online learning context as referring to learning that takes place using Moodle on the LMS. This type of learning context allows students to be influenced by interaction-centred experience. Students share accounting information with one another using various online platforms such as chats and discussion forums when learning an accounting Module on the LMS (Moodle). These studies outlined that blended learning refers to integration of the traditional classroom environment with an online learning context when learning an accounting module on Moodle. This type of learning context requires students to be driven by user-centred experience. Students are required to use their knowledge of accounting to perform all accounting activities on Moodle. Therefore when students are learning an accounting module on Moodle they are driven by blended learning since all participants place more emphasis on both face-to-face and online learning contexts. Thus, they are driven by all types of experiences, such as written-centred, interaction-centred, and user-centred experience when learning an accounting module on Moodle.

In the accounting course outline (2018, p.4) it is stipulated that "attendance of lecturers and tutorials are mandatory, and students are expected to download all Accounting activities on the Learning Management System (Moodle)." The course outline places more importance on face-to-face and online learning environment, and less importance on blended learning. As a result the course outline reflects that when students are learning an accounting module on Moodle they are guided mostly by written-centred and interaction-centred experience, because the Accounting course outline is silent on user-centred experiences.

Theme 9: Accessibility4.4.6 With whom are you learning an Accounting module, in terms of financial, cultural, and physical aspects?

P1: "*Accounting class consists of different race groups such as Indians, White, Coloured and Blacks. Students are required to pay registration fees, but I don't pay directly because I am*

using funding. Which pays for our tuition fees and residence fees. I use University Buses to reach campus which transport students from campus to residence and from residence to campus."

P2: "*for me I use NSFAS funding, so it pays for everything. However, students attend lectures even if they have not paid because NSFAS only respond to them during the year. The lecturer only records their marks once they are registered."*

P3: **"***We are required to pay for modules but for me I use NSFAS pay all fees required. Transport is provided for all students who are residing in Universities residents which are outside campus in order to reach campus."*

P4: "*I learn Accounting on Moodle with my classmate during lecture time in the lecture Hall. There are University Buses which transport students from residence to the campus and from Campus to residence. I also learn Accounting with my personal mentor. Students are required to pay fees but for myself NSFAS pays for me at the required tuition. Out class is diverse because it consists of Indians, white and blacks"*

P5: "*I learn Accounting in the lecture venue, the university provides us with free transport which transport us to reach campus from residence to campus and from campus to residents. Our class comprises of various race groups such as blacks, Indians, coloured etc..."*

From the findings above, almost the majority of participants have indicated that physical accessibility is the most dominant in the learning of accounting. P1 agrees with P3: '*…Transport is provided for all students who are residing in Universities residents which are outside campus in order to reach campus*." In line with this, P5 agrees with P3: '*the university provides us with free transport which transports us to the campus from residence to campus and from campus to residents.'* This shows that when students want to reach campus to take the accounting module they are driven by written-centred experience. Students are required to take buses to campus in order to access the teaching and learning of the accounting module. Participants seem to be using financial accessibility when learning an accounting module on Moodle. P3 agrees withP1: '*Students are required to pay registration fees, but I don't pay directly because I am using funding. Which pays for our tuition and residence fees.'* P2 and P5 agree with P1: '*Students are required to pay fees but for myself NSFAS pays for me at the*

required tuition. Our class is diverse because it consists of Indians, white and blacks.' When students use financial means to access Moodle to take the accounting module on Moodle they are influenced by user-centred experience. If students cannot afford to pay for their studies, this has a negative impact on their future. These findings place less importance on cultural accessibility to education. Only a few participants articulated on cultural access to education. P5 agreed with P1: '*Accounting class consists of different race groups such as Indians, White, Coloured and Blacks.*' This demonstrates that when students are learning an accounting module on Moodle they are driven by interaction-centred experience, Students of different race groups can interact with one another and share accounting information when learning an accounting Module on Moodle.

Accessibility in education is defined by these studies (Basant & Sen, 2014; Berkvens, Van den Akker, et al., 2014a; Gamoran, 2018; Hollins, 2015; Salomon, 2016), as referring to the act of designing courses and developing learning approaches that meet various learning needs of students irrespective of their financial background, experiences, culture, and abilities. These studies outline that accessibility to education is divided into physical, financial, and cultural accessibility. These studies further outline that physical accessibility refers to the possibility of students reaching educational settings. This type of accessibility requires students to be driven by written-centred experience when learning their studies on the LMS (Moodle). They are required to use written documents uploaded by their lecturers on Moodle to perform accounting activities such as accounting course outline, prescribed written textbooks, and accounting study guides. These studies further state that financial accessibility refers to the affordability of education. When students have access to education because of financial accessibility they are influenced by user-centred experience. When students are struggling to access education they will not achieve their educational goals. These studies above further describe cultural accessibility as referring to whether educational programmes are acceptable. This accessibility allows students to be guided by interaction-centred experience because it assumes that when students of different race groups appreciate what they are learning they will be able to share ideas, exchanging information on the LMS (Moodle) when learning an accounting module on Moodle. The literature emphasises physical and financial accessibility, placing less emphasis on cultural accessibility. When students are learning an accounting module on Moodle they are driven mostly by written-centred and user-centred experience. Thus they are lacking

interaction-centred experience which is crucial to ensuring that learning programmes are culturally inclusive and are responsive to learning needs of all students.

According to the accounting course outline (2018, p.4), students are required to physically attend lectures in the lecture venues ─ "Attendance is compulsory." From the course outline it seems as if the learning programme is socially acceptable in terms of culture ─"This module is an introduction to the language of Accounting which equips students to be able to communicate financial information" (Accounting course outline, 2018, p.4). This module also teaches students about a set of acceptable rules and norms which govern the principles that should be followed when reporting accounting information. The course outline stresses that when students are learning an accounting module through Moodle, physical and cultural accessibility are more dominant than financial accessibility. This suggests that the accounting course outline is placing great significance on written-centred and interaction-centred experience, and less importance on user-centred experience which is crucial for individual students' personal development.

Theme 10: Time

4.4.7 What is the time allocation for learning each content on the Accounting module using Moodle? (Time).

P1: "*I learn Accounting module three times a week and one separate day for tutorials and in Accounting each period last for one and half hour (90) minutes. Sometimes lecturers take between two to three weeks to cover Accounting content…… then we to write two tests, after that I get a study week which help us to prepare for exams after 3 Months."*

P2: "*In Accounting tests after written after 8 weeks (2 months) which make up a duly performed (DP). Exams are written after five months and two lecturers per week and one tutorial. Lectures a conducted for one and half and tutorials for one hour."*

P3: "*I learn Accounting the whole semester, in Accounting one period is one and half hour, we attend Accounting three times per week including tutorials. After finishing a chapter, we write a test which determine the duly performance."*

P4: "*In Accounting we have two lecturers per week and one tutorial. In accounting each period last for 90 minutes per session. It takes two weeks to finish Accounting content and in the third week after we finish the content we write two tests for duly performance. The examination is written after five months."*

P5: "*We learn Accounting three times per week including tutorial period. ` When we finish the content we write two tests because in Accounting we don't have an assignment then after we get a duly performed (DP) which allow us to sit for examination after five months."*

From the findings above, almost all participants have indicated that weeks are dominant in accounting learning especially when students have to complete the syllabus (prescribed module content). P1 accords with P3: '*we attend Accounting three times per week including tutorials.'* P4 agrees withP3: '*In Accounting we have two lecturers per week and one tutorial.'* P5 agreed with P3, P4 and P1: '*We learn Accounting three times per week including tutorial period.'* When students are learning an accounting module they are driven by written-centred experience. Students are required to complete specific content which comprises written documents such accounting assessment guidelines, accounting course outline, and study guides. Participants have also indicated that when they learn accounting content on Moodle they are also guided by time stipulations which guide them on how long they are expected to take to complete each lecture. P2 agrees withP1: '*in Accounting each period last for one and half hour (90) minutes.'* P3 also agreed with P1: '*in Accounting one period is one and half hour.'* Similarly, P4 also accords with what P1: *'In Accounting each period last for 90 minutes per session.'* If students are learning an accounting on Moodle they are guided by interaction-centred experience. Students interact with one another to exchange accounting ideas on the LMS (Moodle). These findings are silent when it comes to days: none of the participants mentioned the number of days on which they learn the accounting module.

Time for learning is described by these studies (Akker & A. Thijs, 2009; Berkvens, Van den Akker, & Brugman, 2014b; Xu et al., 2015), as referring to when students are learning specific content. Further to this, these studies state that time is divided into weeks, days, and hours. These studies outline that week's refer to how many weeks students are expected to take to cover specific content. This time for learning requires students to be driven by written-centred experience: students use written materials such as accounting outlines, written accounting assessment guidelines, accounting text books, inter alia, when learning an accounting module through Moodle. Hours imply how long it will take for students to complete a specific learning content. This time for learning requires students to be guided by interaction-centred experience when learning an accounting module on Moodle because students interact with their lecturers and among one another when learning an accounting module during contact session on the LMS (Moodle). Days go to the number of days it will take for students to finish specific accounting content. This time for learning requires students to be guided by user-centred experience, since students use their own experience and knowledge to do all accounting activities on Moodle. The findings above have demonstrated that weeks and hours are more dominant in the learning of accounting, whereas days are less dominant. The literature is placing more significance on written-centred and interaction-centred experience and less emphasis on user-centred experiences. This therefore, reflects that students are lacking user-centred experience when learning an accounting module through Moodle. This is very important for students to apply their own experience and knowledge of accounting.

Furthermore, the accounting course outline (2018) is silent on time for learning. When students are learning an accounting module on Moodle they are not guided by any time for learning propositions, whether weeks, hours, or days. The course outline does not stipulate time for learning by which all students must complete accounting activities. Students therefore lack all types of experiences, such as written-centred, interaction-centred, and user-centred experiences crucial in informing when students are supposed to complete their accounting content.

4.4.8 Conclusion

This chapter focused on the findings and discussion from the data generation. The data generated was framed using the principles of the Technological Pedagogical and Content Knowledge theory as the theoretical framework in this study. The data was generated, transcribed, and discussed.

CHAPTER 5

Summary, Conclusions and Recommendations

5.1 Introduction

The main aim of the study was to explore first-year students' experiences of using Moodle in learning an undergraduate Accounting module at a South African university. This study addressed the following research objectives in order to answer key research questions. Objectives are as follows: to explore first-year students' experiences in the use of Moodle in learning an undergraduate Accounting module at a South African University; to understand the reasons that inform first-year students' experiences on the use of Moodle in learning an undergraduate Accounting module at a South African university; to understand how first-year students' experiences of using Moodle can improve the learning of the accounting module. To achieve these objectives, three key research questions were formulated: 1) what are the first-year student's experiences of using Moodle in learning an undergraduate Accounting module at a South African university? 2). How can first-year students' experiences of using Moodle improve the learning of an Accounting module? 3).Why are first-year students' experiences are in particular ways on the use of Moodle in learning an undergraduate Accounting module at a South African university? This section of the study will revisit the key research questions above, summarise the research findings from participants, summarise the literature and policies, and offer possible solutions based on the research findings. The previous chapter has presented, analysed, and discussed the data generated from the research findings. Thus, this chapter aims to present the summary, draw the main conclusions, and offer recommendations based on data analysis and discussions.

5.2 Summary of Chapters

The study focused on first-year students' experiences of using Moodle in learning an accounting undergraduate module. The study explored various experiences when using Moodle to learn accounting, such as user-centred experiences, interaction-centred and written-centred experiences.

5.2.1 Chapter One (Initial chapter)

Chapter one explicates the rationale for the study. The main focus of the study was on exploring first-year students' experiences of using Moodle to learn an accounting module. The study focused on three types of experiences that inform students' learning on the LMS (Moodle). This chapter discussed the focus and the purpose of the study, followed by key research questions and the related objectives, literature review, research design and methodology, trustworthiness, data analysis, ethical issues, and lastly, limitations of the study.

5.2.2 Chapter Two (Review of the Literature and Theoretical Framework)

Chapter Two covered the literature review, focusing on first-year students' experiences of using Moodle in learning an undergraduate Accounting module. It started with defining the concept 'curriculum' ─ curriculum approaches, curriculum presentation, the TPACK (technological, pedagogical and content knowledge) theory as a theoretical framework for this study were discussed. The literature was guided by the integration of the TPACK theory and the concepts of the curriculum spider web which comprises 10 curriculum concepts: technological knowledge (resources), content knowledge (content) and pedagogical knowledge (rationale, goals, assessment, lecturer's roles, learning activities, learning environment, accessibility, and time for learning).

5.2.3 Chapter Three (Research Design and Methodology)

This chapter focused on research design and methodology which included the research paradigm (interpretive paradigm). The case study was used as a research approach/style in this study. Two sampling (convenient and purposive) approaches were used. The study adopted three multiple-data-generation methods ─ (reflective activity, one-on-one semi-structured interviews, and document analysis). Five participants (first-year students) were selected for the study. Data analysis (thematic qualitative data analysis) was used to analyse data. Trustworthiness was strengthened in this study through credibility, confirmability, dependability, and transferability. Ethical issues and limitations of the study were also considered.

5.2.4 Chapter four (Discussions and Findings)

This chapter focused on presentation and discussion of data generated. The major findings in this study were driven by principles of the TPACK theoretical framework. Thematic qualitative data analysis was used to analyse data generated. The principles of the TPACK theoretical framework were used to explore first-year students' experiences of using Moodle when learning an undergraduate accounting module.

5.3 Summary of Findings and Conclusion

5.3.1 Theme 1: Rationale

The findings from the participants have indicated that of three rationales, namely, personal, societal, and professional, students are driven much more by personal and societal rationale. Students have placed passion (personal rationale) as the most catalytic drive for learning an accounting module on Moodle. Moodle has facilitated their interaction (societal rationale) with lecturers and with one another. These findings have indicated that students are lacking professional rationale when they are learning an accounting module on Moodle. They do not read written documents, written manuals and written accounting policies. Students are therefore lacking written-centred experience. Most students were driven largely by user-centred and interaction-centred experiences, and were less influenced by written-centred experiences when learning an accounting module on Moodle. Thus, these findings provide answers to the first key research question: What are first-year students' experiences of using Moodle in learning an undergraduate Accounting module at a South African university?, and its respective objective which is to explore first-year students' experiences of using Moodle to learn accounting on an undergraduate module at a South African university.

On the contrary, the literature only favours one part of the rationale that drives students on the use of Moodle. It is outlined that when students are learning an accounting module on Moodle they are guided by societal rationale; thus, they are driven by interaction-centred experience (Horvat et al., 2015; Limongelli et al., 2016; Mwalumbwe & Mtebe, 2017). The use of Moodle is mainly based on the constructivism theory of learning. This type of experience enables students to construct their own ideas, exchange and share accounting knowledge with their peers on Moodle, using various platforms such as chats and discussion forums. The literature is also in line with the findings. It is not very vocal when it comes to the professional rationale.

The policy document is not in line with findings and the literature. It has indicated that when students are learning an accounting module on Moodle they must draw much from the professional rationale. Thus, the accounting policy documents indicate that students are driven by written-centred experiences.

5.4 Technological knowledge

5.4.1 Theme 2: Resources

The findings have revealed that when students are learning an accounting module on Moodle they are drawing much from hardware and software resources. In most cases students use computers, laptops, prescribed text books, smartphones and other digital devices (hardware resources) and other software resources that display Accounting information such as e-books, you-tube videos, Moodle App etc. (soft-ware resources) to access Accounting activities on Moodle. These findings have also indicated that students are lacking ideological-ware resources. Students are not aware of theories, approaches, and learning strategies that underpin their learning of an accounting module on Moodle. Students were drawing much from hardware and software resources when they are learning an accounting module on Moodle. Thus, students were driven by written-centred and interaction-centred experiences. They were, however, lacking ideological-ware resources and therefore, they were missing user-centred experiences. These findings provide answers to the second key research question: How can first-year students' experiences of using Moodle improve the learning on the Accounting module? The objective is to understand how first-year students' experiences of using Moodle can improve learning on the accounting module.

The literature is in line with the research findings when it comes to dominant resources that drive the learning on the accounting module on Moodle, namely, hardware and software resources. These studies (Patel & Patel, 2017; Piguillem Poch et al., 2012), outlined that the Moodle LMS is mostly dominated by hardware and software resources; and thus, when students are learning an accounting module on Moodle they are driven by written-centred and interaction-centred experience. The literature also accords with research findings in that it is not vocal when it comes ideological-ware. The policy document only favours one resource that drive students on the use of Moodle. It outlines that, when students are learning an accounting

module they are drawing much from hardware resources, and consequently, they are driven by written-centred experiences.

5.5 Content knowledge

5.5.1 Theme 3: Content

Findings have shown that, of three main propositions on the accounting content (financial accounting, managerial accounting, and managing resources), financial accounting and managing resources are key content compared with managerial accounting that drives students' learning on the LMS (Moodle). This because students have outlined that the accounting equation, GAAP principles, bookkeeping, final accounts, and financial statements (financial accounting), inventory systems, assets disposals, ethics and internal control (managing resources) are major content which is learnt on the accounting module. Students seem to be lacking managerial accounting. When students were learning the accounting module on Moodle they were driven by these two types of experience ─ written-centred and user-centred experiences. They were lacking interaction-centred experiences. These findings give responses to the first key research question: "What are the first-year students' experiences of using Moodle in learningthe accounting module at a South African university? and its relevant objectives, which is to explore first-year students' experiences of using Moodle to take an undergraduate accounting module at a South African university.

The literature only favours one part of the accounting content on the use of Moodle. It states that when students are learning an accounting module on Moodle they are drawing much from financial accounting since financial accounting is the most dominant content in the accounting module. Thus, students are driven much by written-centred experiences (Henderson, Selwyn, & Aston, 2017b; Henderson et al., 2015; Nobes, 2014). These studies further stated that this experience is crucial to accounting because it allows students to develop expertise in the accounting content, for instance, analysing, recording, and reporting skills. This type of experience requires students to follow written manuals, such as prescribed accounting text books, accounting principles and procedures in order to perform all accounting activities on Moodle. The literature also accords with the research findings because it is not spoken about managerial accounting.

Similarly, the policies accord with the literature in stating which content topics students are expected to learn on the LMS (Moodle) such as (GAAP principles, accounting concepts, business cycle or accounting cycle, starting a business, ledgers, basic calculations, accounting equation source documents, subsidiary books, auditing, posting to the ledger, trial balance, year-end adjustments, final accounts, and financial statements). These topics are part of financial accounting which is a dominant content in accounting and which also drives students' learning on Moodle. The accounting policy documents indicated that when students are learning an accounting module they are driven much by written-centred experiences and less driven by other types of experience, such as interaction-centred and written-centred experiences.

5.6 Pedagogical Knowledge

5.6.1 theme 4: Goals

From the findings above (see Chapter Four), participants have demonstrated that, of the three educational goals of aims, objectives, and learning outcomes of the module, students are drawing much from aims and objectives when they are learning an accounting on Moodle, compared with learning outcomes which are less dominant. Students have placed more emphasis on their passion of being an expert in the module (aims) as the number one long-term goal when learning an accounting module on Moodle. Thus, participants seem to be driven more by user-centred experience and written-centred experiences (objectives). They are lacking interaction-centred experience. These findings have provided answers to the first research question: ''what are first-year students' experiences of using Moodle in learning an undergraduate Accounting module at a South African university?, and its respective objective which is to explore first-year students' experiences of using Moodle to take an undergraduate accounting module at a South African university.

The literature is not in line with the findings when it comes to educational goals that drive students on the use of Moodle. It has outlined that when students are learning an accounting on Moodle they are driven by learning outcomes; consequently drawing much from interaction-centred experiences (Henderson et al., 2017b; Wang et al., 2016). These studies further outlined

that learning outcomes are very important in driving students' learning as they allow students to interact with each other to share and exchange accounting information.

The accounting policy is twofold. On the other hand, it accords with the literature because it stipulates what students are expected to attain when they are learning an accounting on Moodle: "students are expected to develop knowledge and skills required for accounting for Sole proprietorship" (Course outline, 2018, p.18). On the contrary, the policy is not in line with the literature because it is pointed out that students are expected to achieve specific learning outcomes when they are learning an accounting module on Moodle: "students should be able to analyse and record transactions in the relevant subsidiary books" (Course outline, 2018, p.1). Thus, the accounting policy documents show that user-centred and written-centred experiences are more dominant when students are learning an accounting module, compared with interaction-centred experiences, which is less dominant.

5.6.2 theme 5: Assessment

The findings have also demonstrated that, of three forms of assessment ─ assessment for learning, assessment as learning, and assessment of learning, students are drawing considerably from the assessment of learning and assessment for learning. Students place more significance on class activities, tutorials (assessment for learning), tests and examinations (assessment of learning). When students are learningan accounting module on Moodle they are drawing much from written-centred and user-centred experiences. Students are lacking assessment as learning as only a few students gave views on assessment as learning when learningthe accounting module on Moodle. This is because their main focus is on individual class activities, assignments, tests, and examinations. Students are lacking interaction-centred experience because students cannot assess other students' work and exchange accounting knowledge on Moodle using various platforms such as discussion forums and chat designed by lecturers for students to learn. These findings have also provided answers to the third research question:"Why do first-year students' experience the use of Moodle in learningan undergraduate Accounting module at a South African university in particular ways? and its respective objective:"to understand the reasons that inform first-year students' experiences in the use of Moodle in learningan undergraduate Accounting module at a South African university."

The literature only accords with one part of the assessment that drives students' assessment on the use of Moodle. It outlined that, when students are learningan accounting module on Moodle they are drawing too much from assessment of learning, consequently they are driven by written-centred experiences (Chisholm & Wildeman, 2013; Conde et al., 2018; Griffiths et al., 2012). These studies further outline that this is because students' and lecturers' strong conceptualization of assessment is strongly linked to tests and examinations. This type of experience enables students to be guided mostly by written documents such as assessment guidelines, course outlines, examination or tests scope, written assignment rubrics, and more, when they are conducting assessment activities through Moodle. Similarly, the accounting policies are in line with the literature because they place more importance on assessment of learning and less significance on other forms of assessment such as assessment for learning and assessment as learning. Thus, the Accounting policies indicate that, when students are learningan accounting module on Moodle, they are drawing much from written-centred experiences, and seemingly, they are lacking other types of experiences such as user-centred and interaction-centred experiences.

5.6.3 Theme 6: Learning activities

The findings also have shown that, when students are learning an accounting module on Moodle, three learning activities in the learning of accounting learning are student-centred activity, lecturer-centred, and content-centred activities. Student-centred and lecturer-centred activities are the most dominant because students have placed autonomy (student-centred) as the most catalytic drive for their learning on Moodle; while other activities are facilitated by lecturers (lecturer-centred) when they are learning an accounting module on Moodle compared with the content-centred activity which is less emphasised when students are learning an accounting Module on Moodle. Thus, students are drawing much from both written-centred and user-centred experiences when they are learning an accounting module on Moodle. They are lacking interaction-centred experiences because they cannot share ideas and exchange accounting knowledge during teaching and learning. Students are not active participants on discussion forums and chat platforms which are created to be utilised by students for learning purposes. Therefore, these findings respond to the first key research question: "What are the first-year student's experiences of using Moodle in learning an undergraduate Accounting module at a South African university? The respective objective which is to explore first-year students' experiences of using Moodle when on an undergraduate accounting module at a South African university.

The literature is in line with the findings when it comes to learning activities that drive students' learning on Moodle. Students are drawing much from student-centred activity and lecturer-centred activities. These students are driven by user-centred and written-centred experiences when on the accounting module on Moodle (Berkvens, Van den Akker, et al., 2014a; Johnson & Van Wyk, 2016; Ramani et al., 2015; Villalobos, 2014). These studies further outline that students' autonomy is most crucial to their learning because it enables students to drive the lesson and construct their own knowledge. The literature is also in line with the findings which have little to offer on content-centred activities.

Accounting policies are silent on learning activities that guide students' learning on the LMS (Moodle). However, the findings have shown that students seem to be lacking content-centred activities, which is linked to interaction-centred experiences. This type of experience is important in giving students a platform on which to exchange ideas and knowledge on Moodle when learning an accounting module.

5.6.4 Theme 7: Roles

Findings have indicated that learning roles are divided into facilitator, assessor, and instructor. As a result, when students are learning an accounting module on Moodle they are relying more on the facilitator and assessor role as the major roles that drive their learning on Moodle. Students have emphasised that lecturers design learning programmes for them which are student-centred (facilitator) and these learning programmes are facilitated and assessed well by lecturers (assessors) when they are learning an accounting module on Moodle. Thus, students seem to be lacking an instructor role. When students are learning an accounting on Moodle they are drawing much from interaction-centred and user-centred experiences. Students seem to be lacking written-centred experiences as only a few students have articulated on this learning role. Therefore, these findings have provided answers to the first research question"Why first-year student's experiences are in particular ways in the use of Moodle in learning an undergraduate Accounting module at a South African university? The respective objective is: "To understand the reasons that inform first-year students' experiences in the use of Moodle in learning an undergraduate accounting module at a South African university."

The study is in line with the literature in terms of learning roles that drive students' learning on the use of Moodle. It outlines that, when students are learning an accounting module on Moodle they are more driven by facilitator and assessor roles and less guided by the instructor role. Interaction-centred and user-centred experiences are more dominant roles when students are learning an accounting module on Moodle. On the contrary, students seem to be lacking written-centred experiences crucial to students for learning accounting content. The policies are not in line with research findings and literature which outlines that, when students are learning an accounting module on Moodle they are driven by the instructor role. The policies instruct students on what to do: "students must complete and submits all Accounting activities on Moodle" (Accounting course outline, 2018, p.1) The Accounting policies are stressing that written-centred experiences are more dominant in the use of Moodle compared with other types of experience, such as user-centred and interaction-centred experiences which are less dominant.

5.6.5 Theme 8: Learning context

The findings have shown that participants have used the learning environment interchangeably. They have integrated face-to-face learning and online learning environment, giving blended learning as more effective in their learning of an accounting module on Moodle. Students have indicated that, when they were learning an accounting module they were learning accounting in the face-to-face learning environment. Some activities were downloaded on the LMS (Moodle) (online learning environment). When students were learning an accounting module on Moodle they were driven by all types of experiences, such as written-centred experience, interaction-centred experiences, and user-centred experiences. These findings give answers to the second question: "How can first-year students' experiences of using Moodle improve the learning of Accounting module? The respective objective is to understand how first-year students' experiences of using Moodle can improve the learning on an accounting module.

Additionally, the literature is in line with the findings when it comes to the learning environment that drives students' learning on the use of Moodle. It outlines that when students are learning an accounting on Moodle they are driven by blended learning. All participants placed considerable importance on both face-to-face and online learning contexts. Thus, students are driven by all types of experiences when they are learning an accounting module on Moodle. These include user-centred experiences, written-centred and interaction-centred

experiences (Berkvens, Van den Akker, et al., 2014a; Brown et al., 2015; Clark & Mayer, 2016). These studies further outline that blended learning is a current development in education. It gives a number of learning advantages to students. For instance, it provides them with options to choose between face-to-face and online learning. It also has the potential of enhancing students' academic progress and reducing student dropout rates.

On the other hand, the policies only favour two parts of the findings and the literature. When students are learning an accounting module on Moodle they are drawing much from face-to-face learning and online learning. The policy document says nothing about blended learning. In accounting policies, students are driven by written-centred and interaction-centred experiences when learning an accounting module on Moodle.

5.6.6 Theme 9: Accessibility

The findings have pointed out three types of accessibility in education ─ physical, financial, and cultural accessibility. The majority of students are drawing much from both physical and financial accessibility when they are learning an accounting module on Moodle. Students have mentioned various means of reaching the campus to access education, such as transport being provided to them (physical accessibility) and affordability ─ funding from various sponsors as the main source for paying for their education (financial accessibility). These findings indicate that students seem to be lacking cultural accessibility. When students are learning an accounting module on Moodle they are mostly guided by written-centred and user-centred experiences. Thus, students seem to be missing interaction-centred experiences: students are not interacting with one another and exchanging ideas using various online platforms, such as chat and discussion forums on Moodle. These findings seem to be providing answers to the first key research question: What are first-year students' experiences of using Moodle in learning an undergraduate Accounting module at a South African university? Its respective objective is to explore first-year students' experiences on the use of Moodle in learning an undergraduate Accounting module at a South African university.

Likewise, the literature accords with the research findings when it comes to accessibility that drives students on the use on Moodle. When students are learning an accounting module on Moodle they are mostly guided by physical and financial accessibility, they are lacking cultural

accessibility. When students are learning an accounting module on Moodle they are driven mostly by written-centred and user-centred experience, They are lacking in interaction-centred experience (Akker & A. Thijs, 2009; Berkvens, Van den Akker, et al., 2014a) crucial to ensuring that learning programmes are culturally inclusive and are responsive to learning needs of all students.

Similarly, the policies are in line with the literature, only favouring one part of accessibility that drives students on the use of Moodle. Policies are highlighted in students being guided by physical accessibility when they are learning an accounting module on Moodle. The policy is also not in line with the literature which states that when students are learning an accounting module, cultural accessibility is more dominant than financial accessibility. This suggests that the accounting policies are placing more significance on written-centred and interaction-centred experience and less importance on user-centred experience which is crucial to individual students' personal development.

5.6.7 Theme 10: Time

From the participants, the (findings have indicated that out of three propositions of times for learning in Accounting module such as weeks, hours and days) Weeks and hours are more dominant when students are learning an accounting module on Moodle, compared with days which are less dominant. This is because students have outlined that weeks and hours are very important factors that guide their time for learning on the accounting module. These findings indicated that when students are learning an accounting module on Moodle they are driven by written-centred and interaction-centred experiences; students are lacking user-centred experiences. These findings provide answers to the first key research question: "What are first-year students' experiences of using Moodle in learning an undergraduate Accounting module at a South African university? The respective objective is to explore first-year students' experiences of using Moodle to take an undergraduate accounting module at a South African university.

Additionally, the literature is in line with the findings when it comes to time for learning on the use of Moodle by students who take an accounting module on Moodle. The literature outlined that weeks and hours are more dominant on Moodle when students are learning an accounting

module on Moodle, whereas, days are less dominant. The literature places considerable importance on both written-centred and interaction-centred experiences. Students seem to be lacking user-centred experiences when learning an accounting module on Moodle. The accounting policy is silent on time for learning such as weeks, hours, and days that drive students' learning on Moodle. The policies are also not specific about which experiences, whether user-centred, interaction centred, or written-centred experiences should guide students' learning on an accounting module on Moodle.

5.7 Recommendations

5.7.1 Rationale

The findings indicates that professional rationale is a less dominant rationale in the use of Moodle when students are learning an accounting module on Moodle. Thus, this study recommends that the accounting course outline be reviewed in order to redefine the accounting module rationale. This can allow both lecturers and students to enjoy and appreciate the accounting curriculum learning on the LMS (Moodle). Curriculum rationale is significant in informing the foundation for why lecturers are teaching their modules) (Khoza, 2016). This study recommends that the rationale should be explicit in order to ensure curriculum attainment. If the curriculum rationale is clear, students can use their experience in learning accounting on the module on Moodle.

5.7.2 Resources

The findings have pointed out that when students are learning an accounting module on Moodle they are drawing much from hardware and software resources (technology in education), the Moodle LMS being a technological resource. This study recommends that students also be taught so that they become aware of ideological-ware resources (technology of education) (refers to activities which are not tangible and which we cannot visualise in education, such as learning strategies/approaches, principles and theories, etc.) Such resources underpin the learning of an accounting module on Moodle. This is because learning is not about technology (hardware and software) but about ideology (ideological-ware) (Amory, 2014; Khoza, 2015). This study further recommends that, when students understand theories or activities that

underpin their learning of accounting on Moodle, they may enjoy their learning, and have more potential to achieve desired educational goals for the module.

5.7.3 Goals

Educational goals comprise of aims, objectives and learning outcomes. The Accounting course outline should not only address aims and objectives but also learning outcomes because learning outcome is concern with what students should achieve at the end of a learning session (Hyland et al., 2006; Khoza, 2015b). Thus, this study recommends that learning outcomes should be clearly stated and it must be demonstrated how they are linked to the module content. When students are not clear about the outcomes of the module, the learning of Accounting module on Moodle might be inaccurate. Aims, objectives and learning outcomes should all be stated in the module outline in order to make sure that students are familiar with them. As a result, if learning outcomes are not specific, observable and achievable, aims and objectives may not be constant (Berkvens, Van den Akker, et al., 2014a).

5.7.4 Assessment and content

Assessment activities and content should be linked in order to ensure great attainment of educational goals. In this study, it is also recommended that students should also be assessed based on peer assessment (Assessment as learning) in order to monitor their progress in learning Accounting module on the Learning Management System (Moodle). This suggests that the assessment will not only be based on tests, class activities and examination but also to group's activities. This may also allow student's effective interaction with their lecturers through Chart and discussion forums on the Learning Management System (Moodle).

5.7.5 Learning activities and roles

The learning activities and roles should be clearly outlined in the Accounting course outline so that students can be aware of any learning activities and roles used by lecturers to teach Accounting module on the Learning Management System (Moodle). This study also recommends that learning activities should be explicit in order to allow the student's autonomy in the lesson. Lecturers should also allow students to be role players in planning their learning programmes.

5.7.6 Accessibility

Accessibility in education consists of physical, financial and cultural accessibility. The findings indicated that students are lacking cultural accessibility when they are learning Accounting module on Moodle. Thus, this study recommends that all learning programmes must be culturally inclusive in order to accommodate all the diverse learning needs of students. This can allow students of various races, background and age to interact with each other to share and exchange Accounting knowledge using Learning Management Systems (Moodle).

5.7.7 Conclusion

The major aim of this study was to explore first-year students' experiences of using Moodle in learning Accounting undergraduate module, to understand the reasons that informs first-year students' experiences in the use of Moodle in learning accounting module and to understand how first-year students' experiences of using Moodle can improve the learning of an accounting module through Moodle. To attain these objectives, three key research questions were formulated such as: (A). What are the first-year student's experiences of using Moodle in learning accounting undergraduate module at a South African University?, (B). How are first-year student's experiences of using Moodle can improve the learning of accounting module?, and (C). Why first-year student's experiences are in particular ways in the use of Moodle in learning accounting undergraduate module at a South African University? To respond to the first key research question, based on the findings from the literature, student's experiences are based on user-centred, interaction-centred and written-centred experiences (Dewey, 1934; Forlizzi & Battarbee, 2004). These experiences are professional (content), societal (social preparation) and personal rationale (personal development) (Akker & Thijs, 2009; Berkvens, Van den Akker, et al., 2014a). To move to the second research question, the answer to this question indicate that first-year student's experiences can improve the learning of Accounting module on Moodle through adequate training programme of first-year students to use Moodle. Students can be empowered and be confident when they possess technical skills and knowledge of using technological resources based on the principles of the Technological, Content and Pedagogical Knowledge (TPACK). Moreover, based on the third key research question, student's learning of Accounting module is based on whether students possess informal technological or formal technological knowledge which allows them to use their experiences to integrate technology in their own learning of Accounting module on the Learning Management System (Moodle) (written-centred, user-centred and interaction-centred

experiences) as demonstrated in the research findings. This chapter concluded with a summary of this study and the findings from the literature and accounting policies. Moreover, recommendations were articulated based on each principle of the TPACK theory.

References

Abraham, E. (2016). Ontological and epistemological discourse (s) on sustainable development: Perspective on Sierra Leone in the aftermath of a decade of civil unrest. *Management of Sustainable Development, 8*(1), 35-43.

Adams, N. E. (2015). Bloom's taxonomy of cognitive learning objectives. *Journal of the Medical Library Association: JMLA, 103*(3), 152.

Adler, R. W., & Milne, M. J. (1997). Improving the quality of accounting students' learning through action-oriented learning tasks. *Accounting education, 6*(3), 191-215.

Afflerbach, P. (2017). *Understanding and using reading assessment, K–12*: ASCD.

Agudo-Peregrina, Á. F., Iglesias-Pradas, S., Conde-González, M. Á., & Hernández-García, Á. (2014). Can we predict success from log data in VLEs? Classification of interactions for learning analytics and their relation with performance in VLE-supported F2F and online learning. *Computers in human behavior, 31*, 542-550.

Akker, V. d., & Thijs, A. (2009). Curriculum in development. *Netherlands institute for curriculum development, 25*(3), 49-58.

Alben, L. (1996). Defining the criteria for effective interaction design. *Interactions, 3*(3), 11-15.

Alben, L. (2011). Quality of Experirnce: Defining the Criteria for Effective Interaction Design, Interactions. *Massachusetts, 3*(1), 255-268.

Alvarez, C., Alarcon, R., & Nussbaum, M. (2011). Implementing collaborative learning activities in the classroom supported by one-to-one mobile computing: A design-based process. *Journal of Systems and Software, 84*(11), 1961-1976.

Amory. A. (2012). Tool-mediated authentic learning in an educational technology course: a designed-based innovation. *Interactive Learning Environments, 2*, 1-17.

Amory. A (2014). Tool-mediated authentic learning in an educational technology course: a designed-based innovation. *22*(4), 497-513.

Amory, A. (2010). Education technology and hidden ideological contradictions. *Journal of Educational Technology & Society, 13*(1), 69.

Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Wittrock, M. C. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives, abridged edition. *White Plains, NY: Longman, 5*(1).

Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. . *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS), 5*(2), 272-281.

Araujo, M. C., Carneiro, P., Cruz-Aguayo, Y., & Schady, N. (2016). Teacher quality and learning outcomes in kindergarten. *The Quarterly Journal of Economics, 131*(3), 1415-1453.

Arshad, A. (2017). Exploring Inquiry-Based Approaches to Teaching and Learning: Educators' Perspectives on the Implications of Inquiry Pedagogy in Ontario Elementary Classrooms.

Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). *Introduction to research in education*. London: Cengage Learning.

Baeten, M., Dochy, F., Struyven, K., Parmentier, E., & Vanderbruggen, A. (2016). Student-centred learning environments: an investigation into student teachers' instructional preferences and approaches to learning. *Learning Environments Research, 19*(1), 43-62.

Baeten, M., Struyven, K., & Dochy, F. (2013). Student-centred teaching methods: Can they optimise students' approaches to learning in professional higher education? *Studies in Educational Evaluation, 39*(1), 14-22.

Bailey, K. (1994). *Methods of social science 4th edition*. New York: The Free press.

Bakia, M., Means, B., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how*. New York: Routledge.

Bartley, S. J., & Golek, J. H. (2004). Evaluating the cost effectiveness of online and face-to-face instruction. *Journal of Educational Technology & Society, 7*(4), 412-416.

Basant, R., & Sen, G. (2014). *Access to higher education in India: An exploration of its antecedents*. London: Sage Publishers.

Battarbee, K. (2004). *Co-experience: understanding user experiences in interaction*. Helsinki: Aalto University.

Berkey, J. P. (2014). *The transmission of knowledge in medieval Cairo: a social history of Islamic education* (Vol. 183): Princeton University Press.

Berkvens, J., Van den Akker, J., & Brugman, M. (2014a). Addressing the quality challenge: Reflections on the Post-2015 UNESCO Education Agenda. *Netherlands National Commission for UNESCO, 5*(2), 18-28.

Bernard, H. R. (2017). *Research methods in anthropology: Qualitative and quantitative approaches*. New York: Rowman & Littlefield.

Bernstein, B. (1999). Vertical and Horizontal_discourse. *British Journal of Sociology of Education*, *20*(2), 157.

Bertram, C., & Christiansen, I. (2014b). *Understanding research: An introduction to reading research*. Pretoria: Van Schaik Publishers.

Bickerdike, A. L. (2014). Integrating the Cross-Curriculum Content Aboriginal & Torres Straight Islander Histories & Cultures into Learning Areas: The Secondary Pre-Service Teacher Perspective.

Biggs, J. B. (1989). Approaches to the enhancement of tertiary teaching. *Higher education research and development*, *8*(1), 7-25.

Biktagirova, G. F., & Valeeva, R. A. (2013). *Technological approach to the reflection development of future engineers.* Paper presented at the Interactive Collaborative Learning (ICL), 2013 International Conference on.

Black, P., & Wiliam. D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, *5*(1), 7-74.

Black, P., & Wiliam. D. (2009b). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability (formerly: Journal of Personnel Evaluation in Education)*, *21*(1), 5.

Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability (formerly: Journal of Personnel Evaluation in Education)*, *21*(1), 5.

Blanchard, J. (2009). *Teaching, learning and assessment*. London: McGraw-Hill Education (UK).

Blanche, M. T., Blanche, M. J. T., Durrheim, K., & Painter, D. (2006). *Research in practice: Applied methods for the social sciences*. Cape Town: UCT Press.

Blewett, C. (2014). *Learning in a Facebook environment: The writing is on the wall.* University of KwaZulu-Natal, Durban,

Boehm, B., & Hansen, W. J. (2000). *Spiral development: Experience, principles, and refinements*. Retrieved from

Bostock, S. (2000). Student peer assessment. *Learning Technology*, *5*(1), 245-249.

Bound, D. (1995). *Enhancing learning through self-assessment*. London: Kogan page.

Bourrier, Y., Jambon, F., Garbay, C., & Luengo, V. (2016). *An Interaction Centred Approach to the teaching of Non-technical Skills in a Virtual Environment.* Laboratoire d'Informatique de Paris 6; Laboratoire d'Informatique de Grenoble, Paris.

Bowen, H. R., & Fincher, C. (2018). Goals: The intended outcomes of higher education. In *Investment in learning*. London: Routledge.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative research journal*, *9*(2), 27-40.

Brainard, M. (1997). *Assessment as a way of seeing, in Assessment for Equity and Inclusion: Embracing all our Learners, edited by A Goodwin*. New York: Routledge.

Brandl, K. (2005). Are you ready to "Moodle". *Language Learning & Technology, 9*(2), 16-23.

Brannen, J. (2017). Combining qualitative and quantitative approaches: an overview. In *Mixing methods: Qualitative and quantitative research* (pp. 3-37): Routledge.

Broadfoot, & Black. (2004a). Redefining assessment? The first ten years of assessment in education. *Assessment in Education: Principles, Policy & Practice, 11*(1), 7-26.

Brown. G. (2015). *Self and peer assessment. Paper presented at the Assessment & Grading Seminar Series*.

Brown, G., Dehoney, J., & Millichap, N. (2015). The next generation digital learning environment. *A Report on Research. ELI Paper. Louisville, CO: Educause April, 5*(1), 1-13.

Brown, S., & Knight, P. (2012). *Assessing learners in higher education*. London: Routledge.

Brown, S., Rust, C. & Gibbs, G. (1994). *Strategies for diversifying assessment in higher education*. New York: Oxford Centre for Staff Development.

Brown, M., Dehoney, J., & Millichap, N. (2015). The next generation digital learning environment. *A Report on Research. ELI Paper. Louisville, CO: Educause April*.

Bryman, A. (2016). *Social research methods*. London: Oxford university press.

Budden, R. (2017). *Exploration of factors that inform curriculum studies students to use e-resources in conducting Masters of Education dissertations at a South African university.* (Doctor of Philosophy Full research), University of KwaZulu-Natal, Durban.

Burrell, G., & Morgan, G. (1979). Sociology paradigm and organisational analysis: Elements of the Sociology of Corporate Life. In: Portsmouth: Heinemann.

Burston, J. (2015). Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL, 27*(1), 4-20.

Carrington, V., & Robinson, M. (2009). *Digital literacies: Social learning and classroom practices*. London: sage.

Casey, & Murphy. (2009). Issues in using methodological triangulation in research. *Nurse Researcher, 16*(4), 40–55.

Casquero, O., Ovelar, R., Romo, J., Benito, M., & Alberdi, M. (2016). Students' personal networks in virtual and personal learning environments: a case study in higher education using learning analytics approach. *Interactive Learning Environments, 24*(1), 49-67.

Cenoz, J. (2015). Content-based instruction and content and language integrated learning: The same or different? *Language, Culture and Curriculum, 28*(1), 8-24.

Chai, C. S., Koh, J. H. L., Tsai, C.-C., & Tan, L. L. W. (2011). Modeling primary school pre-service teachers' Technological Pedagogical Content Knowledge (TPACK) for meaningful learning with information and communication technology (ICT). *Computers & Education, 57*(1), 1184-1193.

Chi, M. T. H. (2009). Active-constructive-interactive: A con ceptual framework for differ-entiating learning activities. *Topics in Cognitive Science, 1*(1), 73–105.

Chipman, S. F., Segal, J. W., & Glaser, R. (2013). Higher cognitive goals for education: An introduction. In *Thinking and learning skills*. New York: Routledge.

Chisholm, L., & Wildeman, R. (2013). The politics of testing in South Africa. *Journal of Curriculum Studies, 45*(1), 89-100.

Christiansen, I., Bertram, C., & Land, S. (2010). *Understanding research*. Pietermaritzburg: UKZN Faculty of Education.

Clancy, P., & Goastellec, G. (2007). Exploring access and equity in higher education: Policy and performance in a comparative perspective. *Higher Education Quarterly, 61*(2), 136-154.

Clark, D. J., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*: John Wiley & Sons.

Clark, D. J., Crowe, J. A., Martin, J. L., Morgan, S. P., & Murphy, E. (2012). A user-centred approach to requirements elicitation in medical device development: a case study from an industry perspective. *Applied ergonomics, 43*(1), 184-190.

Clark, R. C., & Mayer, R. E. (2016). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*: John Wiley & Sons.

Cohen, L., Manion,L., & Morrison, K. (2007a). *Research methods in education*. New York: Routledge.

Cohen, L., Manion, L., & Morrison, K. (2007b). *Research methods in education (6th Ed)*. London: Routledge.

Cohen, L., Manion, L., & Morrison, K. (2011a). *Research methods in education*. London; New York: Routledge.

Cohen, L., Manion, L., & Morrison, K. (2011c). *Research methods in education (7 Ed.).* London: Routledge.

Cohen, L., Manion, L., & Morrison, K. (2013). *Research Methods in Education.* . Milton Park: Routledge.

Collis, J., & Hussey, R. (2013). *Business research: A practical guide for undergraduate and postgraduate students*: Macmillan International Higher Education.

Conde, M. A., Colomo-Palacios, R., García-Peñalvo, F. J., & Larrucea, X. (2018). Teamwork assessment in the educational web of data: A learning analytics approach towards ISO 10018. *Telematics and Informatics, 35*(3), 551-563.

Cooper, H. (1984). *The integrative research review: A systematic approach.* . Beverly Hills, CA: Sage.

Cope, D. G. (2014a). Methods and meaning: credibility and trustworthiness of qualitative research. *In oncology nursing forum, 41*(12), 247-252.

Cope, D. G. (2014b). *Methods and meanings: credibility and trustworthiness of qualitative research.* Paper presented at the Oncology nursing forum.

Crandall, J. J. (1992). Content-centered learning in the US. *Annual Review of Applied Linguistics, 13*, 110-126.

Cresswell, J. W. (2009). *Research Design: Qualitaative, Quantitative, and Mixed Methods Approach (3 Ed.).* London: Sage.

Creswell. J. W. (2013). Standards of validation and evaluation. *Qualitative inquiry and research design: choosing among five approaches, 2*, 201-221.

Creswell. J. W. (2014). *A concise introduction to mixed methods research*: Sage Publications.

Creswell, & Creswell. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles: Sage publications.

Creswell, J. W. & Poth, T. (2018). *Qualitative inquiry & research design : choosing among five approaches*. housand Oaks, CA SAGE.

Crews, T., & Butterfield, J. B. (2014). Data for flipped classroom design: Using student feedback to identify the best components from online and face-to-face classes. *Higher Education Studies, 4*(3), 38.

Criticos, C., Long, L., Moletsane, R., & Mthiyane, N. (2002). *Getting practical about outcomes based teaching*. Cape Town: Oxford University Press.

Criticos, C., Long, L., Moletsane, R., & Mthiyane, N. (2005). *Getting Practical: about Outcomes Based Teaching. A learning guide*. Cape Town: Oxford University press.

Crotty, M. (1989). *The foundations of social research*. London: Sage Publishers.

Cushion, C. J. (2018). Reflection and reflective practice discourses in coaching: a critical analysis. *Sport, education and Society, 23*(1), 82-94.

Czerniewicz, L., & Brown, C. (2014). The habitual practices of rural students: A case study. *South African Journal of Education, 34*(1), 10-15.

Davids, M. N. (2013). '"Can Foucalt come to the rescue?"--From dogma to discourse: decostructing the History of education for democratic education'. *TYesterday and Today*, 108-124.

De Wet, & Van Niekerk. (2001). An innovative approach to accounting education at the first-year level. *Meditari Accountancy Research, 9*, 93-108.

del Mar Sánchez-Vera, M., & Prendes-Espinosa, M. P. (2015). Beyond objective testing and peer assessment: alternative ways of assessment in MOOCs. *International Journal of Educational Technology in Higher Education, 12*(1), 119-130.

Dell'Era, C., & Landoni, P. (2014). Living Lab: A methodology between user-centred design and participatory design. *Creativity and Innovation Management, 23*(2), 137-154.

Deming, D. J., Goldin, C., Katz, L. F., & Yuchtman, N. (2015). Can online learning bend the higher education cost curve? *American Economic Review, 105*(5), 496-501.

Denzin, N. K. (2017). *The research act: A theoretical introduction to sociological methods*. London: Routledge.

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. London: Sage publications, inc.

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research*. London: Sage.

Dewey, J. (1934). *Art as Experience*. New York: Perigree.

Dewey. J. (1958). *Nature and Experience*. New Delhi: Oxford Book Company.

Dewey, J., & Vygotskij, L. S. (1929). *Experience and nature*. UK: George Allen & Unwin.

Dewey, J. (1934). Having an experience. *Art as experience*, 36-59.

DOE. (2000). *Nosrms and Standard for Educators*. Pretoria: Government Press

DoE. (2008a). *Subject Assessment Guidelines ‚Accounting Grade 10-12*. Pretoria: Government Printers

DoE. (2008b). *Learning Programme Guidelines, Accounting Grade 10-12*. Pretoria: Government Printers

DoE. (2011a). *Curriculum and Assessment Policy Statement grade 10-12: Accounting*. Pretoria: Government Press

DoE. (2011b). *Curriculum and Assessment Policy Statement Grades 10-12, Accounting*. Pretoria: Government Press

DoE. (2011c). *Curriculum and assessment policy statement grades 10-12: Accounting*. Pretoria: Government Press

Dougiamas, M., & Taylor, P. (2003). Moodle: Using learning communities to create an open source course management system.

Dourish, P. (2004). *Where the action is: the foundations of embodied interaction*. London: MIT press.

Duncan, N. (2012). Beyond testing: towards a theory of educational assessment. In. London: Taylor & Francis.

Dunekacke, S., Jenßen, L., & Blömeke, S. (2015). Effects of mathematics content knowledge on pre-school teachers' performance: A video-based assessment of perception and planning abilities in informal learning situations. *International Journal of Science and Mathematics Education, 13*(2), 267-286.

Education, D. o., & Science, L. (1987). *National Curriculum: Task Group on Assessment and Testing. A Report*. London: ERIC Clearinghouse.

El Hussein, M., Jakubec, S. L., & Osuji, J. (2015). Assessing the FACTS: A mnemonic for teaching and learning the rapid assessment of rigor in qualitative research studies. *The Qualitative Report, 20*(8), 1182-1184.

Ellis, A. K. (2017). *Teaching, learning, and assessment together: Reflective assessments for elementary classrooms*. New York: Routledge.

Engel, M., Claessens, A., & Finch, M. A. (2013). Teaching students what they already know? The (mis) alignment between mathematics instructional content and student knowledge in kindergarten. *Educational Evaluation and Policy Analysis, 35*(2), 157-178.

Entwistle, N., & Ramsden, P. (2015). *Understanding student learning (Routledge revivals)*. London: Routledge.

Eom, S. B., Wen, H. J., & Ashill, N. (2006). The determinants of students' perceived learning outcomes and satisfaction in university online education: An empirical investigation. *Decision Sciences Journal of Innovative Education, 4*(2), 215-235.

Eriksson, P., & Kovalainen, A. (2015). *Qualitative methods in business research: A practical guide to social research*: Sage.

Ernest, P. (1994). *An Introduction to research methodology and paradigms*. RSU, School of Education: University of Exeter.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4.

Etikan, I., Musa, S. A., Alkassim, R. S., & Statistics, A. (2016). Comparison of convenience sampling and purposive sampling. *5*(1), 1-4.

Ewing, G. (2015). A comparison of the aims and objectives of the human brain project with Grakov's mathematical model of the autonomic nervous system (Strannik Technology). *Enliven: Neurol Neurotech, 1*(002).

Falchikov, N. (2001). *Learning together*. New York: Routledge Falmer.

Fallman, D. (2003). *Design-oriented human-computer interaction.* Paper presented at the Proceedings of the SIGCHI conference on Human factors in computing systems, New York, NY, USA.

Farrell, T. S. (2015). *Reflective language teaching: From research to practice*. London: Bloomsbury Publishing.

Finkelstein, J. (2006). *Learning in real time: Synchronous teaching and learning online* (Vol. 5): Jossey-Bass San Francisco, CA.

Fitzpatrick, C., & Pagani, L. S. (2013). Task-oriented kindergarten behavior pays off in later childhood. *Journal of developmental & behavioral pediatrics, 34*(2), 94-101.

Forlizzi, S., & Battarbee, K. (2004). *Understanding experience in interactive systems.* Paper presented at the Proceedings of the 5th conference on Designing interactive systems: processes, practices, methods, and techniques.

Forlizzi, S., & Ford, S. (2000). The Building Blocks of Experience: An Early Framework for Interaction Designers. *Interactions, 2*(1), 419-423.

Frailich, M., Kotzer, S., Elran, Y., & Scherz, Z. (2011). A mediated visual-based computerized environment for investigation-based learning about solubility. *The 4th knowledge cities world Summit Proceedings KCWS p, 5*(3), 105-111.

Gaborone, B. (2006). The use of documentary research methods in social research. *African sociological review, 10*(1), 221-230.

Gahwaji, N. M. (2016). The Effects of Two Different Instructional Programmes on Literacy Skills of Kindergarten Children. *Journal of International Education Research, 12*(1), 13-26.

Gamoran, A. (2018). Educational stratification and individual careers. In *Generating Social Stratification* (pp. 59-74): Routledge.

Garrison, B., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education, 7*(2), 95-105.

Gašević, D., Dawson, S., Rogers, T., & Gasevic, D. (2016). Learning analytics should not promote one size fits all: The effects of instructional conditions in predicting academic success. *The Internet and Higher Education, 28*, 68-84.

Gibbs, G. R. (2018). *Analyzing qualitative data*. New York: Sage.

Gilgun, J. F. (2015). Deductive Qualitative Analysis as Middle Ground: Theory Guided Qualitative Research. *Academia: Deductive Qualitative Analysis as Middle Ground, 6*(1), 2-29.

Glesne, C. (2015). *Becoming qualitative researchers: An introduction*: Pearson.

Godfrey, A., Lara, J., Del Din, S., Hickey, A., Munro, C., Wiuff, C., . . . Rochester, L. (2015). iCap: Instrumented assessment of physical capability. *Maturitas, 82*(1), 116-122.

Goodwin-Jones, B. (2003). E-books and the Tablet PC. *Language Learning & Technology, 7*(1), 4-8.

Gosling, D., & Moon, J. (2001). *How to use learning outcomes and assessment criteria*. London: SEEC Office.

Gould, N., & Taylor, I. (2017). *Reflective learning for social work: research, theory and practice*: Routledge.

Govender, N., & Khoza, S. B. (2017). Techology in Education for Teachers. In i. L. Ramrathan, L. L. Grange, & e. P. Higgs (Eds.), *Eduaction Studies for Initial Teacher Development*. Cape Town: Juta & Company (PTY) Limited.

Graham, C. R. (2004). Blended learning Systems: Definitions, Current Trends, and Future Directions" chapter to appear in Bonk, CJ & Graham, CR (Eds.) Handbook of blended learning: Global perspectives, local designs. In: San Francisco, CA: Pfeiffer Publishing (Copyright 2004 by John Wiley & Sons, Inc.

Graham. C. R. (2011). Theoretical considerations for understanding technological pedagogical content knowledge (TPACK). *Computers & Education, 57*(3), 1953-1960.

Graham, C. R., Hebert, M., & Harris, K. R. (2015). Formative assessment and writing: A meta-analysis. *The Elementary School Journal, 115*(4), 523-547.

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse education today, 24*(2), 105-112.

Griffiths, M., McVey, M., & Finlay, C. (2012). Developing e-assessment using the Quiz Activity within Moodle: Empowering student learning.

Grove, C. E. (2011). Qualitative Research in Education: A User's Guide by LICHTMAN, MARILYN. *The Modern Language Journal, 95*(3), 470-471.

Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *ECTJ, 29*(2), 75.

Guba, E. G. & Lincoln, Y. S. (1994a). *Competing paradigm in qualitative research. Handbook of qualitative research*, (Vol. 12(3)).

Guba, E. G., & Lincoln, Y. S. (1994b). Competing paradigms in qualitative research. *Handbook of qualitative research, 2*(163-194), 105.

Guthrie, G. (2010). *Basic research methods: An entry to social science research*. New Delhi: SAGE Publications India.

Gutiérrez, E., Trenas, M. A., Ramos, J., Corbera, F., & Romero, S. (2010). A new Moodle module supporting automatic verification of VHDL-based assignments. *Computers & Education, 54*(2), 562-577.

Hall, M., Hanna, L.-A., Hanna, A., & Hall, K. (2015). Associations between achievement goal orientations and academic performance among students at a UK pharmacy school. *American journal of pharmaceutical education, 79*(5), 64.

Halverson, L. R., Graham, C. R., Spring, K. J., Drysdale, J. S., & Henrie, C. R. (2014). A thematic analysis of the most highly cited scholarship in the first decade of blended learning research. *The internet and higher education, 20*, 20-34.

Harlen, W., & James, M. (2006). Assessment and Learning: differences and relationships between formative and summative assessment. *Assessment in Education: Principles, Policy & Practice, 4*(3), 365-379. doi:10.1080/0969594970040304

Harley, K., Barasa, F., Bertram, C., Mattson, E., & Pillay, S. (2000). "The real and the ideal": teacher roles and competences in South African policy and practice. *International Journal of Educational Development, 20*(4), 287-304.

Hartel, R., & Foegeding, E. (2004). Learning: Objectives, Competencies, or Outcomes? *Journal of Food Science Education, 3*(4), 69-70.

Harvey, S., Cushion, C., & Sammon, P. (2015). Dilemmas faced by pre-service teachers when learning about and implementing a game-centred approach. *European Physical Education Review, 21*(2), 238-256.

Hashemi, M., & Herbert, J. (2016). *User interaction monitoring and analysis framework.* Paper presented at the Proceedings of the International Conference on Mobile Software Engineering and Systems.

Hassenzahl, M. (2003). The thing and I: understanding the relationship between user and product. In *Funology* (pp. 31-42): Springer.

Haßler, B., Major, L., & Hennessy, S. (2016). Tablet use in schools: A critical review of the evidence for learning outcomes. *Journal of Computer Assisted Learning, 32*(2), 139-156.

Henderson, S., Selwyn, & Aston, R. J. (2017a). What works and why? Student perceptions of 'useful'digital technology in university teaching and learning. *42*(8), 1567-1579.

Henderson, S., Peirson, G., Herbohn, K., & Howieson, B. (2015). *Issues in financial accounting*: Pearson Higher Education AU.

Herring, M. C., Koehler, M. J., & Mishra, P. (2016). *Handbook of technological pedagogical content knowledge (TPACK) for educators*: Routledge.

Hoadley, U., & Jansen, J. D. (2013). *Curriculum: Organizing knowledge for the classroom*. Cape Town: Oxford University Press Southern Africa.

Hohr, H. (2013). The concepts of experience by John Dewey revisited: conceiving, feeling and "enliving". *Studies in Philosophy and Education, 32*(1), 25-38.

Hollins, E. R. (2015). *Culture in school learning: Revealing the deep meaning*. New York: Routledge.

Hopkins, D. (2015). *Improving the quality of education for all: A handbook of staff development activities*. New York: Routledge.

Horvat, A., Dobrota, M., Krsmanovic, M., & Cudanov, M. J. I. L. E. (2015). Student perception of Moodle learning management system: a satisfaction and significance analysis. *23*(4), 515-527.

Hussain, M. A. (2015). In the Labyrinth of Research: Critiquing Research Studies Conducted in Contrasting Paradigms. *Journal of Language Teaching and Research, 6*(5), 956-962.

Hussein, A. (2015). The use of triangulation in social sciences research: Can qualitative and quantitative methods be combined? *Journal of comparative social work, 4*(1).

Hutchings, P., & National Institute for Learning Outcomes, A. (2016). *Aligning Educational Outcomes and Practices. Occasional Paper 26*. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED567005&site=ehost-live

Hutchison, A., & Woodward, L. (2014). A planning cycle for integrating digital technology into literacy instruction. *The Reading Teacher, 67*(6), 455-464.

Hwang, G.-J., Lai, C.-L., & Wang, S.-Y. (2015). Seamless flipped learning: a mobile technology-enhanced flipped classroom with effective learning strategies. *Journal of Computers in Education, 2*(4), 449-473.

Hyland, A., Kennedy, D., & Ryan, N. (2006). *Writing and using learning outcomes: A practical guide*. Bologna: European Higher Education Area (EHEA).

Ingram, J. B. (2014). *Curriculum integration and lifelong education: A contribution to the improvement of school curricula* (Vol. 6): Elsevier.

Irvine, V., Code, J., & Richards, L. (2013). Realigning higher education for the 21st century learner through multi-access learning. *Journal of Online Learning and Teaching, 9*(2), 172.

Jang, H., Reeve, J., & Deci, E. L. (2010). Engaging students in learning activities: It is not autonomy support or structure but autonomy support and structure. *Journal of educational psychology, 102*(3), 588.

Jenkins, A., & Unwin, D. (2001). *How to write learning outcomes*. London: Oxford Brookes University.

John, E. P. S., Daun-Barnett, N., & Moronski-Chapman, K. M. (2018). *Public policy and higher education: Reframing strategies for preparation, access, and college success*: Routledge.

Johnson, W. L., & Lester, J. C. (2016). Face-to-face interaction with pedagogical agents, twenty years later. *International Journal of Artificial intelligence in education, 26*(1), 25-36.

Johnson, W. L., Rickel, J. W., & Lester, J. C. (2000). Animated pedagogical agents: Face-to-face interaction in interactive learning environments. *International Journal of Artificial intelligence in education, 11*(1), 47-78.

Johnson, L., & Van Wyk, M. (2016). Approaches to teaching EMS: The teacher-centred approach. In: Oxford University Press.

Johnson, W. L., Rickel, J. W. & Lester, J. C. (2000). Animated pedagogical agents: Face-to-face interaction in interactive learning environments. *International Journal of Artificial intelligence in education, 11*(1), 47-78.

Jones, A. (2010). Generic attributes in accounting: the significance of the disciplinary context. *Accounting Education: an international journal, 19*(1-2), 5-21.

Karat, J., Vanderdonckt, J., Abowd, G., Calvary, G., Carroll, J., Cockton, G., Höök, K. (2005). *Human-computer interaction series, 3*(1), 315-323.

Kennedy, D. (2006). *Writing and using learning outcomes: a practical guide*: University College Cork.

Kennedy, D., Hyland, A., & Ryan, N. (2009a). Learning outcomes and competences. 2.3-3.

Kennedy, D., Hyland, A., & Ryan. N. (2009b). Learning outcomes and competences. *Introducing Bologna Objectives and Tools*, 2.3-3.

Kennedy, D. (2006). *Writing and using learning outcomes: a practical guide*. New York: University College Cork.

Khoza, S. B. (2011a). Who promotes web-based teaching and learning in higher education? *Progressio, 33*(1), 155-170.

Khoza, S. B. (2012). Who helps an online facilitator to learn with students in a day. *Mevlana International Journal of Education, 2*(2), 75-84.

Khoza, S. B. (2013a). Can they change from being digital immigrants to digital natives? *Progressio, 35*(1), 54-71.

Khoza, S. B. (2015). Using a curricular spider web to explore a research facilitator's and students' experiences. *South African Journal of Higher Education, 29*(2), 122-143.

Khoza, S. B. (2015b). Student teachers' reflections on their practices of Curriculum and Assessment Policy Statement. *South African Journal of Higher Education, 29*(4), 179–197.

Khoza, S. B. (2016). Can curriculum managers' reflections produce new strategies through Moodlei visions and resources? *South African Journal of Education, 36*(4), 1-9.

Khoza, S. B. (2016). Is teaching without understanding curriculum visions and goals a high risk? *South African Journal of Higher Education, 30*(5), 104-119.

Khusainova, R. M., Chirkina, S. E., & Gabdrakhmanova, R. G. J. R. o. E. s. (2015). The role of the reflective activity of students in individual educational trajectory. *7*(5), 146.

Killen, R. (2007). *Teaching strategies for outcomes-based education*. Cape Town: Juta and Company Ltd.

Kim, A. K., & Davies, J. (2014). A teacher's perspective on student centred learning: Towards the development of best practice in an undergraduate tourism course. *Journal of Hospitality, Leisure, Sport & Tourism Education, 14*, 6-14.

Kingston, N., & Nash, B. (2011). Formative assessment: A meta-analysis and a call for research. *Educational measurement: Issues and practice, 30*(4), 28-37.

Kiresuk, T. J., Smith, A., & Cardillo, J. E. (2014). *Goal attainment scaling: Applications, theory, and measurement*: Psychology Press.

Klenke, K. (2016). *Qualitative research in the study of leadership*. New York: Emerald Group Publishing Limited.

Koch, T. (2006). Establishing rigour in qualitative research: the decision trail. *Journal of advanced nursing, 53*(1), 91-100.

Koehler, M. J., Mishra, P., Kereluik, Shin, T. S., & Graham, C. R. (2014). The technological pedagogical content knowledge framework. In *Handbook of research on educational communications and technology*. New York: Springer.

Koh, J. H. L., Chai, C. S., Benjamin, W., & Hong, H.-Y. (2015). Technological Pedagogical Content Knowledge (TPACK) and design thinking: A framework to support ICT lesson design for 21st century learning. *The Asia-Pacific Education Researcher, 24*(3), 535-543.

König, J., & Kramer, C. (2016). Teacher professional knowledge and classroom management: On the relation of general pedagogical knowledge (GPK) and classroom management expertise (CME). *ZDM, 48*(1-2), 139-151.

Kop, R., & Carroll, F. (2011). Cloud computing and creativity: Learning on a massive open online course. *European Journal of Open, Distance and E-learning, 14*(2).

Kotzer, S., & Elran, Y. (2012). Learning and teaching with Moodle-based E-learning environments, combining learning skills and content in the fields of Math and Science & Technology. *Davidson Institute of Science Education, 14*(3), 14-15.

Kozleski, E. B. (2017). The uses of qualitative research: Powerful methods to inform evidence-based practice in education. *Research and Practice for Persons with Severe Disabilities, 42*(1), 19-32.

Kwiek, M. (2013). From system expansion to system contraction: Access to higher education in Poland. *Comparative Education Review, 57*(3), 553-576.

Latham, G. P., & Locke, E. A. (2007). New developments in and directions for goal-setting research. *European Psychologist, 12*(4), 290-300.

LeCompte, M., Preissle, J., & Tesch, R. (1993). Analysis and interpretation of qualitative data. *Ethnography and qualitative design in educational research, 2*, 234-278.

Ledford, J. R., & Gast, D. L. (2018). *Single case research methodology: Applications in special education and behavioral sciences*: Routledge.

Lee, Y.-S., & Lembke, E. (2016). Developing and evaluating a kindergarten to third grade CBM mathematics assessment. *ZDM, 48*(7), 1019-1030.

Leino-Kilpi, H., & Tuomaala, U. (1989). Research ethics and nursing science: an empirical example. *Journal of advanced nursing, 14*(6), 451-458.

LeVine, R. A. (2018). *Culture, behavior, and personality: An introduction to the comparative study of psychosocial adaptation*: Routledge.

Levy, J. S. (2008). Case studies: Types, designs, and logics of inference. *Conflict management and peace science, 25*(1), 1-18.

Lewis, S. (2015). Qualitative inquiry and research design: Choosing among five approaches. *Health promotion practice, 16*(4), 473-475.

Limongelli, C., Lombardi, M., Marani, A., Sciarrone, F., Temperini, M. J. N. R. o. H., & Multimedia. (2016). A recommendation module to help teachers build courses through the Moodle Learning Management System. *22*(1-2), 58-82.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.

Liu, Y. (2012). *Self-regulated Learning in an Online Learning Environment: A Design Research Study*. (Doctor of Philosophy), University of Georgia,

Liu, Y., & Carless, D. (2006). Peer feedback: the learning element of peer assessment. *Teaching in Higher education, 11*(3), 279-290.

Locke, E. A., & Latham, G. P. (2006). New directions in goal-setting theory. *Current directions in psychological science, 15*(5), 265-268.

Lodico, M., Spaulding, D., & Voegtle, K. (2010). *Methods in educational research from theory to practice (2nd Ed.)*. San Francisco: Jossey-Bass Publishers.

Loewenberg Ball, D., Thames, M., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of teacher education, 59*(5), 389-407.

Looney, A., Cumming, J., van Der Kleij, F., & Harris, K. (2017). Reconceptualising the role of teachers as assessors: teacher assessment identity. *Assessment in Education: Principles, Policy & Practice*, 1-26.

López-Pérez, M. V., Pérez-López, M. C., & Rodríguez-Ariza, L. (2011). Blended learning in higher education: Students' perceptions and their relation to outcomes. *Computers & Education, 56*(3), 818-826.

Love, P. (2013). Document analysis. In *Research in the college context* (pp. 99-112): Routledge.

Macdonald, J. (2008). *Blended learning and online tutoring (2nd ed.)*. Hampshire, UK: Gower.

Maree, K. (2007). *First steps in research*. Pretoria: Van Schaik Publishers.

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*: Sage publications.

Martin, A., & Madigan, D. (2006). *Digital literacies for learning*: Facet Publishing.

Maxwell, J. A. (2012). *Qualitative research design: An interactive approach*. London: Sage publications.

Mayan, M. J. (2016). *Essentials of qualitative inquiry*. New York: Routledge.

McCormack, B. (2017). *Negotiating Partnerships with Older People: A Person Centred Approach: A Person Centred Approach*: Routledge.

McCutcheon, K., Lohan, M., Traynor, M., & Martin, D. (2015). A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. *Journal of advanced nursing, 71*(2), 255-270.

McDowell, L., & Mowl, G. (1996). Innovative assessment: its impact on students. *Improving student learning through assessment and evaluation*, 131-147.

McLoughlin, C., & Oliver, R. (2000). Designing learning environments for cultural inclusivity: A case study of indigenous online learning at tertiary level. *Australasian Journal of Educational Technology, 16*(1).

McMillan, J. H., & Schumacher, S. (2014). *Research in education: Evidence-based inquiry*. London: Pearson Higher Ed.

McNeil, J. D. (2014). *Contemporary curriculum: In thought and action*. Los Engeles: John Wiley & Sons.

Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record, 115*(3), 1-47.

Menke, W. (2018). *Geophysical data analysis: Discrete inverse theory*: Academic press.

Mento, A. J., Steel, R. P., & Karren, R. J. (2017). A meta-analytic study of the effects of goal setting on task performance: 1966–1984. *Organizational behavior and human decision processes, 39*(1), 52-83.

Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from" Case Study Research in Education."*: ERIC.

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. London: John Wiley & Sons.

Meyer, B. (2015). Case studies. In *Researching Translation and Interpreting* (pp. 195-202): Routledge.

Meymandpour, R., & Davis, J. G. (2016). A semantic similarity measure for linked data: An information content-based approach. *Knowledge-Based Systems, 109*, 276-293.

Miles, M., & Huberman, A. M. (1994). *Qualitative Data Analysis*. Thousands Oaks, CA: Sage Publications.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers college record, 108*(6), 1017.

Moon, J. (2002). *The module and programme development handbook: A practical guide to linking levels, learning outcomes and assessment*. London: Kogan Page

Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). e-Learning, online learning, and distance learning environments: Are they the same? *The internet and higher education, 14*(2), 129-135.

Mpungose, C. B. (2018). *Exploring Lecturers' Reflections on the Use of Moodle to Teach Physical Science Modules at a South African university.* (Doctor of Philosophy Full research), University of KwaZulu-Natal, Durban.

Mtika, P., & Gates, P. (2010). Developing learner-centred education among secondary trainee teachers in Malawi: The dilemma of appropriation and application. *International Journal of Educational Development, 30*(4), 396-404.

Mwalumbwe, I., & Mtebe, J. S. J. T. E. J. o. I. S. i. D. C. (2017). Using learning analytics to predict students' performance in moodle learning management system: a case of mbeya university of science and technology. *79*(1), 1-13.

National Institute for Learning Outcomes, A. (2016). *Higher Education Quality: Why Documenting Learning Matters. A Policy Statement from the National Institute for Learning Outcomes Assessment*.

http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED567116&site=ehost-live

Neuendorf, K. A. (2016). *The content analysis guidebook*. London: Sage.

Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *MERLOT Journal of Online Learning and Teaching, 11*(2), 309-319.

Nieuwenhuis, J. (2007). Qualitative research designs and data gathering techniques. *First steps in research*, 69-97.

Nisbet, J., & Watt, J. (1984). *Case Study. In J. Bell, T. Bush, A. Fox, J. Goodey and S. Goulding (eds.). Conducting small scale investigations in Educational Management*. London: Harper & Row.

Nobes, C. (2014). *International classification of financial reporting*: Routledge.

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-Based Nursing*, ebnurs-2015-102054.

Norcini, J. J. (2003). Peer assessment of competence. *Medical education, 37*(6), 539-543.

Nyerere, J. K. (1967). Education for self-reliance. *The Ecumenical Review, 19*(4), 382-403.

O'Brien, L. M. (2002). A response to 'Dewey and Vygotsky: society, experience and inquiry in education practice". *Educational researcher, 31*(5), 21-23.

Okubo, F., Shimada, A., Yin, C., & Ogata, H. (2015). *Visualization and prediction of learning activities by using discrete graphs.* Paper presented at the 23rd International Conference on Computers in Education, ICCE 2015.

Oliva, P. F., & Gordon, W. (1988). *Developing the curriculum*: Scott, Foresman/Little, Brown College Division.

Olson, K. (2015). *Wounded by school: Recapturing the joy in learning and standing up to old school culture*: Teachers College Press.

Overman, M., Vermunt, J. D., Meijer, P. C., Bulte, A. M., & Brekelmans, M. (2014). Students' perceptions of teaching in context-based and traditional chemistry classrooms: Comparing content, learning activities, and interpersonal perspectives. *International Journal of Science Education, 36*(11), 1871-1901.

Paine, G. (2015). A pattern-generating tool for use in semi-structured interviews. *The Qualitative Report, 20*(4), 468-481.

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., Hoagwood, K. J. A., . . . Research, M. H. S. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *42*(5), 533-544.

Park, Y., Yu, J. H., & Jo, I.-H. (2016). Clustering blended learning courses by online behavior data: A case study in a Korean higher education institute. *The internet and higher education, 29*, 1-11.

Patel, D., & Patel, H. I. (2017). Blended Learning in Higher Education using MOODLE Open Source Learning Management Tool. *International Journal of Advanced Research in Computer Science, 8*(5).

Payne, G., & Payne, J. (2004). *Key concepts in social research*. London: Sage.

Peeck, J. (1994). Enhancing graphic-effects in instructional texts: Influencing learning activities. In *Advances in psychology* (Vol. 108, pp. 291-301): Elsevier.

Percival, & Elington. (1988). *A handbook of educational technology 2nd ed.* London:: Kogan Page.

Percival, F. (1988). *A handbook of educational technology*. New York: Nichols Publishing Company.

Pervival, F., & ellington, H. (1988). *A handbook of educational technology. (2nd ed.)*. London: Kogan Page.

Phenix, P. H. (1962). The use of the disciplines as curriculum content. *The Educational Forum, 26*(3), 273-280.

Piguillem Poch, J., Alier Forment, M., Casany Guerrero, M. J., Mayol Sarroca, E., Galanis, N., García Peñalvo, F. J., & Conde García, M. Á. (2012). *Moodbile: a Moodle web services extension for mobile applications.* Paper presented at the 1st Moodle Research Conference: Heraklion, Crete-Greece, September 14-15, 2012: conference proceedings.

Pinar, W. F. (2012). *What is curriculum theory?* New York: Routledge.

Pinar, W. F. (2013). *International handbook of curriculum research*. London: Routledge.

Pinheiro, R., & Antonowicz, D. (2015). Opening the gates or coping with the flow? Governing access to higher education in Northern and Central Europe. *Higher Education, 70*(3), 299-313.

Polit, & Beck. (2012). *Nursingresearch: Generating and assessing evidence for nursing practice.* . Philadelphia, PA: Lippincott Williams and Wilkins.

Porter, W. W., Graham, C. R., Bodily, R. G., & Sandberg, D. S. (2016). A qualitative analysis of institutional drivers and barriers to blended learning adoption in higher education. *The internet and higher education, 28*, 17-27.

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the horizon, 9*(5), 1-6.

Prensky, M., & Berry, B. D. (2001). Do they really think differently. *On the horizon, 9*(6), 1-9.

Punch, K. F., & Oancea, A. (2014). *Introduction to research methods in education*: Sage.

Pyle, A., & DeLuca, C. (2013). Assessment in the kindergarten classroom: An empirical study of teachers' assessment approaches. *Early Childhood Education Journal, 41*(5), 373-380.

Ralph, T. W. (1949). *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press.

Ramani, G. B., Rowe, M. L., Eason, S. H., & Leech, K. A. (2015). Math talk during informal learning activities in Head Start families. *Cognitive Development, 35*, 15-33.

Ramrathan, Grange, L., & Higgs. (2017). *Education Studies for Initial Teacher Education*. Cape Town: Juta and Co. (Pty) Ltd.

Ramrathan, L. (2017). *Educational research: Key Concepts. In L. Ramrathan, L. Grange, H. Philiph. Education Studies: for initial Teacher Educator*. Cape Town: Juta and Company (Pty) Ltd.

Reddy, C., & Le Grange, L. (2017). *Assessment and Curriculum. In L. Ramrathan, L. Le Grange, P. Higgs (Ed.), Education studies for Initial Teacher Development*. Cape Town: Juta & Co. (Pty) Ltd.

Redelius, K., Quennerstedt, M., & Öhman, M. (2015). Communicating aims and learning goals in physical education: part of a subject for learning? *Sport, education and Society, 20*(5), 641-655.

Reece, I., & Walker, S. (2016). *Teaching, training and learning: A practical guide*. London: Business Education Publishers Ltd.

Rege, C., & Nicole, M. (2017). From content-centred to learning-centred approaches: shifting educational paradigm in higher education. *Journal of Educational Administration and History, 49*(1), 72-86.

Reinholz, D. (2016). The assessment cycle: a model for learning through peer assessment. *Assessment & Evaluation in Higher Education, 41*(2), 301-315.

Rieckmann, M. (2017). *Education for Sustainable Development Goals: Learning Objectives*: UNESCO Publishing.

Robertson, M., Line, M., Jones, S., & Thomas, S. (2000). International students, learning environments and perceptions: A case study using the Delphi technique. *Higher Education Research & Development, 19*(1), 89-102.

Robins, A., Ashbaker, B., Enriquez, J., & Morgan, J. (2003). Learning to reflect: professional practice for professionals and paraprofessionals. *International Journal of Learning, 10*(25), 55–65.

Robinson, B. J., Olvera-Lobo, M. D., & Gutiérrez-Artacho, J. (2016). After Bologna: Learner- and competence-centred translator training for 'Digital natives'. *From the Lab to the Classroom and Back Again: Perspectives on Translation and Interpreting Training. New Trends in Translation Studies Series*, 325-359.

Rowntree, D. (2015). *Assessing students: How shall we know them?* London: Routledge.

Rule, P., & John, V. (2011). *Your guide to Case Study research*. Pretoria: Van Schailk Publishers.

Sak, R., Erden, F. T., & Morrison, G. S. (2016). Child-centred education: preschool teachers' beliefs and self-reported practices. *Early Child Development and Care, 186*(8), 1185-1202.

Salomon, G. (2016). It's not just the tool but the educational rationale that counts. In *Educational technology and polycontextual bridging* (pp. 149-161): Springer.

Salter, B., & Tapper, T. (1981). *Education, politics, and the state: The theory and practice of educational change*. London:: Grant McIntyre.

Sanders, E. B. N. (2003). From user-centered to participatory design approaches. In *Design and the social sciences* (pp. 18-25). Frascara: CRC Press.

Sandvoll, R. (2014). Feeling good, but missing the mark. What happened to the assessment in peer assessment? *Journal of University Teaching & Learning Practice, 11*(1), 3.

Schweisfurth, M. (2013). *Learner-centred education in international perspective: Whose pedagogy for whose development?* : Routledge.

Schweisfurth, M. (2015a). Learner-centred pedagogy: Towards a post-2015 agenda for teaching and learning. *International Journal of Educational Development, 40*, 259-266.

Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English Language Teaching, 5*(9), 9.

Selwyn, N. (2007). The use of computer technology in university teaching and learning: a critical perspective. *Journal of computer assisted learning, 23*(2), 83-94.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63-75.

Sherbino, J., Frank, J. R., & Snell, L. (2014). Defining the key roles and competencies of the clinician–educator of the 21st century: a national mixed-methods study. *Academic Medicine, 89*(5), 783-789.

Shih, R.-C. (2011). Can Web 2.0 technology assist college students in learning English writing? Integrating Facebook and peer assessment with blended learning. *Australasian Journal of Educational Technology, 27*(5), 212-219.

Shulamit, K., & Yossi, E. (2011). Development of E-Learning environments combining learning skills and science and technology content for junior high school. *Procedia-Social and Behavioral Sciences, 11*, 175-179.

Sibaya, D., & Sibaya, P. (2008). Novice educators' perceptions of the teacher education programme proposed by the Norms and Standards for Educators. *Perspectives in Education, 26*(4), 86-100.

Silverman, D. (2015). *Interpreting qualitative data*. London: Sage.

Simpson, D. J., Jackson, M. J., & Simpson, J. C. (2004). *John Dewey and the art of teaching: Toward reflective and imaginative practice*: Sage Publications.

Singh, R. J. (2015). Use of blended learning in higher education-some experiences. *37*(1), 54-67.

Smith, J. K., & Heshusius, L. (1986). Closing down the conversation: The end of the quantitative-qualitative debate among educational inquirers. *Educational researcher, 15*(1), 4-12.

So, H. J., & Brush, T. A. (2008). Student perceptions of collaborative learning, social presence and satisfaction in a blended learning environment: Relationships and critical factors. *Computers & Education, 51*(1), 318-336.

Srinivasa Rao, A., Kumar, P., & Aithal, P. (2015). Strategic Planning in Higher Education Institutions: A Case Study of SIMS-VISION 2025.

Stainbank, L., & Gurr, K.-L. J. M. A. R. (2016). The use of social media platforms in a first year accounting course: An exploratory study. *24*(3), 318-340.

Stevens, M. (2013). Ethical issues in qualitative research. *King's College London*.

Straubhaar, R. (2015). The stark reality of the 'White Saviour'complex and the need for critical consciousness: A document analysis of the early journals of a Freirean educator. *Compare: A Journal of Comparative and International Education, 45*(3), 381-400.

Stryker, S. B., & Leaver, B. L. (1997). Content-based instruction: From theory to practice. *Content-based instruction in foreign language education: Models and methods, 8*(1), 3-28.

Suskie, L. (2018a). *Assessing student learning: A common sense guide*. San Fransisco: John Wiley & Sons.

Taba, H. (1962). *Curriculum development: Theory and practice*. New York: Harcourt Brace and World.

Taiwo, F. J. (2013). Transforming the Almajiri education for the benefit of the Nigerian society. *Journal of Educational and Social Research, 3*(9), 67.

Teixeira, P. N., Johnstone, D. B., Rosa, M. J., & Vossensteyn, H. (2006). *Cost-sharing and accessibility in higher education: A fairer deal?* (Vol. 14). Uxbridge: Springer.

Thijs, A., & van den Akker, J. (2009). *Curriculum in development*. New York: SLO. Nertherlands institutes for Curriculum development.

Thijs, A., & van den Akker, J. (2009). Curriculum in development. *Enschede: Netherlands Institute for Curriculum Development., 6*(1), 266-272.

Thomas, P. A., Kern, D. E., Hughes, M. T., & Chen, B. Y. (2015). *Curriculum development for medical education: a six-step approach*: JHU Press.

Thompson, P. (2013). The digital natives as learners: Technology use patterns and approaches to learning. *Computers & Education, 65*, 12-33.

Tilak, J. (2015). Global trends in funding higher education. *International Higher Education, 5*(42), 1-13.

Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of advanced nursing, 48*(1), 388–396.

Topping. K. (1998). Peer assessment between students in colleges and universities. *Review of educational research, 68*(3), 249-276.

Topping. K. (2009). Peer assessment. *Theory into practice, 48*(1), 20-27.

Tudor, I. (1993). Teacher roles in the learner-centred classroom. *ELT journal, 47*(1), 22-31.

Tunks, M. (2010). Using Moodle in your classroom. *Education Today, 3*, 40.

Tyler, R. W. (2013). Basic principles of curriculum and instruction. In *Curriculum Studies Reader E2* (pp. 60-68): Routledge.

Vakalisa, N. C. G. (2011). Participative Teaching. In: M. Jacobs, & N. Gawe, (Eds). Teaching-learning Dynamics, 4th edition (Ed.). South Africa: Pearson.

Valle, A., Cabanach, R. G., Núnez, J. C., González-Pienda, J., Rodríguez, S., & Piñeiro, I. (2003). Multiple goals, motivation and academic learning. *British Journal of Educational Psychology, 73*(1), 71-87.

Valverde-Berrocoso, J., & Coca-Pérez, J. L. (2014). Integration of Virtual Teaching/Learning Environments in Higher Education for the Development of Formative Assessment in the Field of Accounting. In *Innovation and Teaching Technologies* (pp. 23-29): Springer.

Van den Akker, Branch, R. M., Gustafson, K., Nieveen, N., & Plomp, T. (2012). *Design approaches and tools in education and training*: Springer Science & Business Media.

Van den Akker, De Boer, W., Folmer, E., Kuiper, W., Letschert, J., Nieveen, N., . . . Vaden-Goad, R. E. (2009). *Curriculum in development*. Enschede: Netherlands Institute for Curriculum Development.

Van den Akker, & Thijs, A. (2009). Curriculum in development. *Netherlands institute for curriculum development, 25*(3), 49-58.

Vázquez, V. P., & Ellison, M. (2018). Examining teacher roles and competences in Content and Language Integrated Learning (CLIL). *Linguarum Arena: Revista de Estudos em Didática de Línguas da Universidade do Porto, 4*, 65-78.

Villalobos, O. B. (2014). Content-based instruction: A relevant approach of language teaching. *15*(20), 71-83.

Visscher-Voerman, I., & Gustafson, K. L. (2004). Paradigms in the theory and practice of education and training design. *Educational Technology Research and Development, 52*(2), 69-89.

Vyas, D., & van der Veer, G. C. (2005). *Experience as 'meaning': creating communicating and maintaining in real-spaces.* Paper presented at the Proceedings of the Tenth IFIP TC13 International Conference on Human-Computer Interaction.

Waage, J., Banerji, R., Campbell, O., Chirwa, E., Collender, G., Dieltiens, V., . . . Kingdon, G. (2010). The Millennium Development Goals: a cross-sectoral analysis and principles for goal setting after 2015: Lancet and London International Development Centre Commission. *The lancet, 376*(9745), 991-1023.

Walliman, N. (2017). *Research methods: The basics*. New York: Routledge.

Wang, M., Carver, J. J., Phelan, V. V., Sanchez, L. M., Garg, N., Peng, Y., . . . Luzzatto-Knaan, T. J. N. b. (2016). Sharing and community curation of mass spectrometry data with Global Natural Products Social Molecular Networking. *34*(8), 828.

Ward, P., Kim, I., Ko, B., & Li, W. (2015). Effects of improving teachers' content knowledge on teaching and student learning in physical education. *Research quarterly for exercise and sport, 86*(2), 130-139.

Weil, McGuigan, & Kern. (2011). The usage of an online discussion forum for the facilitation of case-based learning in an intermediate accounting course: A New Zealand case. *Open Learning: The Journal of Open, Distance and e-Learning, 26*(3), 237-251.

Weil, R. L., Schipper, K., & Francis, J. (2013). *Financial accounting: an introduction to concepts, methods and uses*: Cengage Learning.

Wellington, J. (2015). *Educational research: Contemporary issues and practical approaches*: Bloomsbury Publishing.

Wenzel, T. J. (2000). Defining Course Goals. *Analytical Chemistry, 72*(19), 659A.

Wet, D., & Niekerk, V. (2001). An innovative approach to accounting education at the first-year level. *Meditari accountancy research, 9*(1), 93-108.

Wiliam, D. (2014). *Formative assessment and contingency in the regulation of learning processes.* Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Wiliam, D., & Thompson, M. (2017a). Integrating assessment with learning: What will it take to make it work? In *The future of assessment* (pp. 53-82): Routledge.

Wiliam, D., & Thompson, M. (2017b). Integrating assessment with learning: What will it take to make it work? In *The future of assessment*. New York: Routledge.

Xu, J., & Croft, W. B. (2017). *Quary expansion using local and global document analysis.* Paper presented at the Acm sigir forum.

Xu, Y., Wang, L., Wang, S.-y., & Liu, M. (2015). An effective teaching–learning-based optimization algorithm for the flexible job-shop scheduling problem with fuzzy processing time. *Neurocomputing, 148*, 260-268.

Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, *20*(2), 134-152.

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. *European Journal of Education*, *48*(2), 311-325.

Yin. R. K. (2003). *Application of case study research. 2nd ed*. Thousand Oaks, CA: Sage.

Yin. R. K. (2017). *Case study research and applications: Design and methods*. Thousand Oaks: Sage publications.

Yin, R. K. (2018). *Case Study Research: Design and methods (5th ediction)*. London: Sage.

Zhao, M., Zhou, H., Long, X., Zhang, X., Lin, J., & Yacoub, S. M. (2018). Document analysis for region classification. In. London: Google Patents.

Zimmerman, J. L., & Yahya-Zadeh, M. (2011). Accounting for decision making and control. *Issues in Accounting Education, 26*(1), 258-259.

Znaniecki, F. (1934). *The method of sociology*. New York: Farrar & Rinehart.

Annexures

Annexure A: Consent letter for the participants (students).

Curriculum Studies, School of Education,
College of Humanities,
University of KwaZulu-Natal,
Edgewood Campus,

Dear participant

INFORMED CONSENT LETTER

My name is Siyabonga Cele. I am a Masters' student studying at the University of KwaZulu-Natal, Edgewood campus, South Africa. I am interested in exploring first-year students' experiences of using Moodle in learning Accounting undergraduate module at a South African University. As a mentor and part of the Academic Monitoring and Support programme (AMS) at the University of KwaZulu Natal (Edgewood Campus) I have observed that first-year students have various challenges about the use of Learning Management System (Moodle) in learning accounting undergraduate module. As a result, in accounting discipline they have a large number of students, and therefore, when I facilitate the mentorship process as a mentor, I observed that most students especially first-year students don't have laptops, those who have laptops does not know how to use them, and they are also lacking basic computer literacy skills, which makes it more difficult for them to use Moodle, even though they are referred to Moodle user-manual but that manual is meaningless to them because they are lacking those skills of using technology which is hard-ware and soft-ware. This suggest that they are drawing much on their personal experience. Moreover, these conditions which are witnessed by first-year students makes it more difficult for them to receive learning material such as assignments, test and tutorials etc. This challenging condition have an impact on first-year students to experience

academic life differently, this may result in the missing of the assignments' due dates and failing of the Modules. This arouse interest to me to conduct this study to explore first-year students' experiences of using Moodle in learning Accounting undergraduates' module.

Please note that:

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person, but reported only as a population member opinion.
- The interview and focus groups discussions may last for about 15 minutes, relevant documents will be analysed, and the reflective activity will be sent to you via e-mail.
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- There will be no limit on any benefits that you may receive as part of your participation in this research project;
- Data will be stored in secure storage and destroyed after 5 years.
- You have a choice to participate, not participate or stop participating in the research. You will not be penalized for taking such an action.
- You are free to withdraw from the research at any time without any negative or undesirable consequences to yourself;
- Real names of the participants will not be used, but symbols such as A, B, C, D, E and F will be used to represent your full name;
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.
- If you are willing to be interviewed, please indicate (by ticking as applicable) whether or not you are willing to allow the interview to be recorded by the following equipment:

	willing	Not willing
Audio equipment		
Photographic equipment		
Video equipment		

I can be contacted at:
Email: 213508873@stu.ukzn.ac.za
Cell: +84 520 7758/ 078 791 0652

My supervisor is Dr. Cedric Bheki Mpungose who is located at the School of Education, Edgewood Campus of the University of KwaZulu-Natal. Contact details:

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You may also contact the Research Office through:
P. Mohun
HSSREC Research Office,
Tel: 031 260 4557 E-mail: mohunp@ukzn.ac.za

Thank you for your contribution to this research.

PARTICIPANT'S DECLARATION

I…… (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

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

SIGNATURE OF PARTICIPANT **DATE**

…… **……**

Annexure B: letter to the participants

Data Generation instruments

Reflective activity.

Exploring First-year Students' Experiences of Using Moodle in Learning Accounting Undergraduate Module at a South African University

Question 1.1	*Why do you have an interest in learning Accounting Module through Moodle? (reasons)*
Rationale	

Technological Knowledge

Question 1.2	*What resources do you use when learning Accounting module using Moodle? (resources)*
Resources	

Content knowledge

Question 1.3	*What content are you learning in Accounting Module using Moodle?*
Content	

Pedagogical Knowledge

Question 1.4	*Towards which goals are you intending to achieve when using Moodle in learning Accounting Module? (goals to be achieved)*
Goals	

Question 1.5	*How assessment is done in Accounting Module through Moodle?*
Assessment	

Question 1.6	*What teaching and learning activities do you use on Moodle in learning Accounting module?*

learning activities	

Question 1.7	*How do you perceive your role when using Moodle in learning Accounting module? (students' role)*
Learning roles	

Question 1.8	*Where do you learn Accounting module using Moodle? (location/environment)*
Location	

Question 1.9	*With whom are you learning Accounting module, in terms of financial, cultural and physical aspects?*
Accessibility	

Question 1.10	*What is the time allocation for learning each content in Accounting Module using Moodle? (time)*
Time	

Annexure C: One-on-one Interview Schedule

Question 1.1	*Why do you have an interest in the learning of Accounting Module 210? (reasons)*
Sub-questions	○ What personal rationale/reason that made you to learn an Accounting 210 Module? ○ What social rationale/reason that made you to learn an Accounting 210 Module? ○ What professional rationale/reason that made you to learn an Accounting 210 Module?

Question 1.2	*What resources do you use when learning an Accounting* 210 Module*? (resources)*
Sub-questions	○ What hardware resources do you use when learning an Accounting 210 Module? ○ What software resources do you use when learning an Accounting 210 Module? ○ Which learning strategies or theories that guides you when you're learning an Accounting 210 Module?

Question 1.3	*With whom are you learning an* Accounting 210 Module, *in terms of financial, cultural and physical aspects? (accessibility)*
Sub-questions	○ What is the Cultural background of the majority of Accounting 210 Module students? ○ What is the financial state of the majority of Accounting 210 Module students? ○ What is the physical state of the majority of Accounting 210 Module students (physical ability)?

Question 1.4	*Towards which goals are you intending to attain when learning an* Accounting 210 Module*? (goals to be achieved)*

Sub-questions	○ What are your aims of learning Accounting 210 Module? ○ What are the objectives of learning Accounting 210 Module? ○ Indicate learning outcomes in the learning of Accounting 210 Module?

Question 1.5	*What content are you learning in* Accounting 210 Module*? (content)*
Sub-question	What module content do you cover in Accounting 210 Module? *(you can provide me with the module outline)*

Question 1.6	*What are learning activities do you use when learning your* Accounting 210 Module*?*
Sub-questions	○ What Moodle activities do you use to engage as students? ○ What Moodle activities do you use in to unpack the Accounting content? ○ What Moodle activities are used to ensure the attendance of students in lectures?

Question 1.7	*How do you perceive your character when learning* Accounting 210 Module*? (students' role)*
Sub-question	○ Is your lecturers' role seeming as the instructor, assessor or facilitator when learning Accounting 210 Module?

Question 1.8	*Where do you learn your module,* Accounting 210 Module*? (location/environment)*
Sub-questions	○ Is online platform conducive, substantiate? ○ Do you learn Accounting 210 Module in the lecture halls, (face to face interaction)?

	○ Is blended learning possible in Accounting 210 Module?

Question 1.9	*What is the time allocation for learning each content in A*ccounting 210 Module*? (time)*
Sub-questions	How is time allocation to each topic in Accounting module? ○ Number of weeks ○ Number of days ○ Number of hours

Question 1.10	*How* Accounting 210 Module *is assessed? (assessment)*
Sub-questions	○ What activities are used during assessment for learning? ○ What activities do you use during assessment of learning? ○ What activities do you use during assessment as learning?

Annexure D: Document analysis schedule

Technological Knowledge	**Content Knowledge**	**Pedagogical Knowledge**
A. Resources: • Hardware resources • Software resources • Ideological resources	A. Content: ▪ Financial accounting ▪ Managerial accounting ▪ Managing resources	**A. Rationale (Reasons)** o Personal reasons o Professional reasons o Social reasons
		B. Goals: o Aims o Objective o Outcomes
		C. Assessment: o Assessment as learning o Assessment for leaning o Assessment of leaning
		D. Accessibility: o Physical o Financial o Cultural
		E. Teacher role: o Instructor o Facilitator o Assessor

		F. Learning environment: o Face-to-face learning o Online leaning o Blended learning
		G. Learning activities: o Lecture centred o Student centred o Content centred
		H. Time: o Weeks o Days o Hours

Annexure E: Ethical Clearance

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

25 July 2018

Mr Siyabonga Alpheos Cele (213508873)
School of Education
Edgewood Campus

Dear Mr Cele,

Protocol reference number: HSS/0793/018M
Project Title: Exploring first-year students' experiences of using Moodle in learning Accounting Undergraduate Module at a South African University

Approval Notification – Expedited Application

In response to your application received on 26 June 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Dr Shamila Naidoo (Deputy Chair)

/ms

Cc Supervisor: Dr Cedric Mpungose
Cc Academic Leader Research: Dr SB Khoza
Cc School Administrator: Ms Tyzer Khumalo

Humanities & Social Sciences Research Ethics Committee
Professor Shenuka Singh (Chair)
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Website: www.ukzn.ac.za

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Annexure F: Gate keepers letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

7 June 2018

Mr Siyabonga Alpheos Cele (SN 213508873)
School of Education
College of Humanities
Edgewood Campus
UKZN
Email: 213508873@stu.ukzn.ac.za

Dear Mr Siyabonga Cele

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"Exploring first-year student's experiences of using Moodle in Learning Accounting undergraduate module at a South African University."

It is noted that you will be constituting your sample by conducting interviews and/or focus group discussions with first year students registered for an Accounting module.

Please ensure that the following appears on your notice/questionnaire:

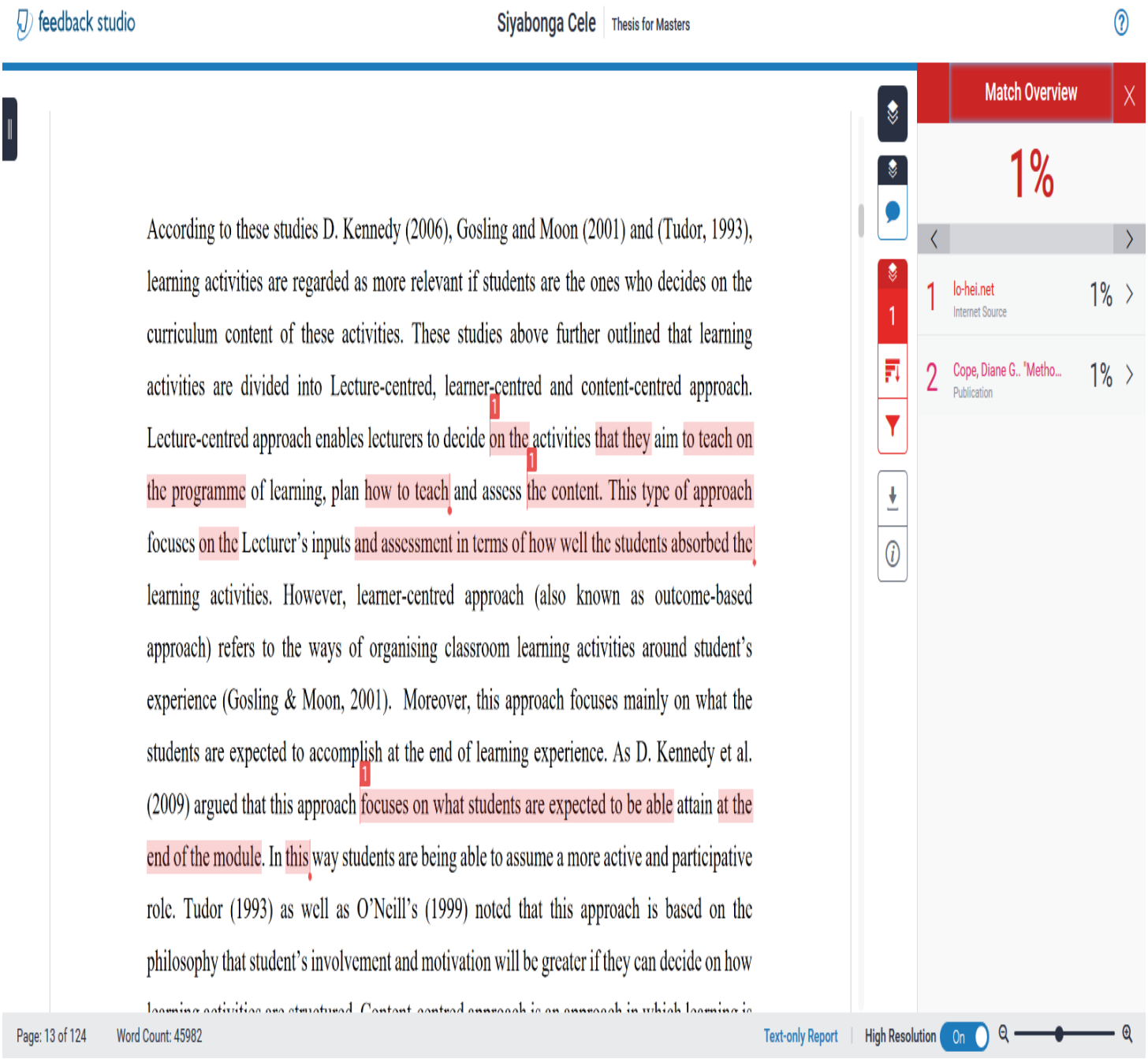
- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

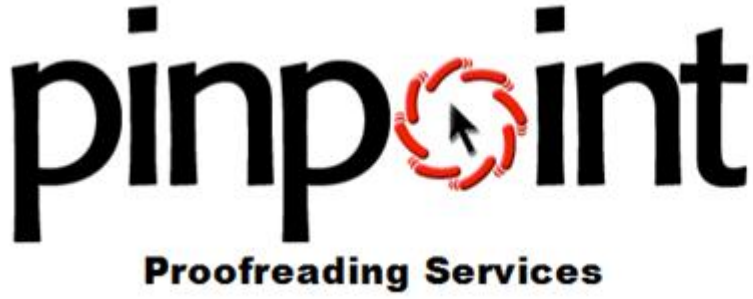
Yours sincerely

MR SS MOKOENA
REGISTRAR

Annexure G: Turnitin (plagiarism) report



Annexure H: A Letter from the editor



Lydia Weight
NTSD English Specialist
SACE No: 11135129

E-mail: lydiaweight@gmail.com

Pinpoint Proofreading Services

40 Ridge Rd

Kloof

Durban

3610

19 December2018

To whom it may concern

This is to certify that I, Lydia Weight, have proofread the document titled: Exploring First-year Students' Experiences of using Moodle in learning Accounting Undergraduate Model at a South African University by Siyabonga Cele. I have made all the necessary corrections. The documents are therefore ready for presentation to the destined authority.

Yours faithfully

L. Weight