IMAGINING AN AUTHENTIC WORKPLACE USING SIMULATION: EXPLORING SIMULATION PEDAGOGY IN AUDITING EDUCATION

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Dedicated to the memory of my beloved father, Errol Neal Smith

(7 February 1946 – 9 September 2018)

SUPERVISOR'S PERMISSION TO SUBMIT

I, Professor S.M. Maistry, as the candidate's supervisor, agree to the submission of this thesis.

Supervisor's signature: _____ Date: _____

DECLARATION

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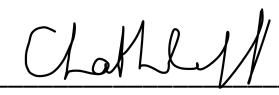
Signature: 

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ABSTRACT

Over the last forty years, there have been frequent calls for a change in the way that accounting programmes are presented at higher education institutions. Central to this argument is the gap that exists between what accountants and auditors do in practice and what accounting education teaches. This gap may be attributed in part to students' inability to apply their theoretical knowledge in a practical real-like setting. Furthermore, most accounting students have had limited exposure to the business world, leaving them with little context in which to apply their theoretical knowledge. Coupled with a schooling background that encouraged rote learning rather than the development of a deeper understanding of concepts and principles, students often adopt a surface, rote-learning approach that does not promote deeper understanding either. In response to calls for a more practical approach to teaching and learning in accounting, the South African Institute of Chartered Accountants recently introduced a competency framework that is built on the principles of experiential learning, calling for students to be able to apply their theoretical knowledge in a practical real-world-like setting.

Given the gap that exists between students' theoretical knowledge and graduates who are able to apply this knowledge immediately upon entering the workplace (Rudman and Terblanche, 2012), there appears to be the need for a teaching model that moves away from the typical lecturing model. Such a model should allow students to be more actively involved in the learning process, and encourage students to develop skills that will allow them to apply theoretical knowledge and develop pervasive skills for use in such settings. Some educators have turned to simulation to assist with this.

To address this gap, and against the backdrop of attempts to reform accounting education, an in-depth qualitative case study was conducted, exploring students' experiences of simulation pedagogy in a final year undergraduate Auditing module at the University of KwaZulu-Natal. The study's use of multiple data sources, including focus group interviews, individual interviews, written questionnaires, and reflective journals yielded rich insights into the phenomenon. Purposive sampling was used to select twenty participants from the Westville campus student cohort. The data was analysed using a content and thematic analysis approach.

Confirming the literature, students experienced the active nature of the simulation favourably. In addition, they reported that the simulation afforded them the opportunity to grapple with its contents and learn from mistakes made during the process; this quality of simulation provided the key to unlocking a deeper understanding of the auditing concepts and principles and the practical application thereof. The visual aspect of the simulation allowed students to create mental images and motion pictures of the procedures performed, which could subsequently be retrieved for later referral in a similar situation, and in the development of abstract concepts.

Although the simulation had been received favourably by the study's student participants, there were aspects of the pedagogy that met with resistance. Many of the students did not respond favourably to the call for group work. Although the students agreed that simulation pedagogy could be valuable to their development for their future careers, they did not believe that it would assist them to pass their examinations. They cited the manner in which assessments are structured, and argued that a more lecture-intensive, rote-learning approach was required for the current examination structure.

A unique contribution of the study to accounting education literature was its highlighting of the underlying factors that impact students' ability to learn and develop their understanding of auditing concepts and principles through audit simulation.

A further unique contribution of the study to accounting education literature was the researcher's use of self-study, as well as an introspective reflection of her role as facilitator. This approach provided an opportunity to reflect on the effectiveness of the simulation, as well as consider possible ways to strengthen teaching practice in simulation-led learning.

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LIST OF ABBREVIATIONS AND ACRONYMS

AAA	American Accounting Association
AC	abstract conceptualization
AE	active experimentation
APC	Assessment of Professional Competence
B.Com Acc	Bachelor of Commerce in Accounting
CA (SA)	Chartered Accountant (South Africa)
CE	concrete experience
CTA	Certificate in the Theory of Accounting
ELT	Experiential Learning Theory (Kolb's model)
I-E-O	Input-Environment-Output
ITC	Initial Test of Competence
KZN	KwaZulu-Natal
PGDA	Post Graduate Diploma in Accounting
PwC	PricewaterhouseCoopers
RO	reflective observation
SAICA	South African Institute of Chartered Accountants
UKZN	University of KwaZulu-Natal
ZPD	Zone of Proximal Development

CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

Tell me and I will forget

Teach me and I will remember

Involve me and I will learn — Benjamin Franklin.

1.1 INTRODUCTION & THE THEORY-PRACTICE DEBATE

Globally, many have argued in favour of changing the manner in which accounting programmes are presented to students (Steenkamp & Rudman, 2007). In 1986, the American Accounting Association (AAA) Committee conceded that, while the accounting profession itself had changed in order to meet society's changing demands, the educational institutions responsible for educating future accountants and auditors had lagged behind (AAA Future Committee, 1986). The committee identified a growing gap that exists between what accountants do, and what accounting education teaches, and advised that this gap would only be closed by a concerted overhaul of accounting education at large (AAA Future Committee, 1986). This would necessitate a redesign of the pedagogy used to develop knowledge and skills to meet the needs of professional accountants in the changing business world (Lin, Xiong & Lui, 2005).

The gap that exists between accounting education and accounting/auditing practice may be attributed, in part, to the principal modes of teaching in use, namely lectures and tutorials. Such modes, as well as the absence of concrete experience, have been identified as weak links in traditional teaching (Siegel, Omer & Agrawal, 1997). The overriding concern is that simply understanding the theory is insufficient; students need to be able to apply their theoretical understanding in a practical, real-like setting (Chapman & Sorge, 1999).

A further reason for the gap between education and the profession is the fact that the majority of auditing and accounting students have not been exposed to the business world. They have had little or no exposure to business activities, which constitute the subject matter of auditing. In turn, this makes it difficult for them to understand even

basic auditing concepts and procedures. Even though textbooks and lecture handouts can provide a theoretical understanding of concepts and principles, the application of this knowledge in a practical setting is very difficult to simulate in a classroom setting (Arens, May & Dominiak, 1970; Siegel, Omer & Agrawal, 1997; Crawford, Helliar, Monk & Stevenson, 2011).

Auditing students' struggles to cope with auditing at a tertiary level may be summarised as follows: firstly, they struggle to find the link between theory and practice; secondly, it appears that theoretical lectures do not prepare students for the real working world; thirdly, they struggle to conceptualise auditing, and cannot visualise the audit process; and finally, they struggle to see the 'big picture', and are unable to see how individual concepts fit together (Rudman & Terblanche, 2012).

In addition to concerns raised about students' inability to relate theory to practice, and the over-emphasis of a lecture-based teaching approach, today's graduates need more than just traditional technical skills. Prospective employers require new recruits to possess soft skills such as critical thinking, problem-solving, and well-developed communication skills, in addition to the essential accounting (and auditing) skills (Weaver & Kulesza, 2014). Such skills can be developed by encouraging and requiring students to participate actively in the learning process, and by learning how to apply theoretical principles practically.

Disciplines like auditing in particular, have an inherent practical dimension that necessarily requires teaching that creates opportunities for the application of theory. Simulation is one such teaching method. There is however limited empirical research into how this teaching method might be employed in the auditing context, especially in the South African context. The purpose of this study then, is to explore student experiences of learning in an audit simulation teaching and learning context. The study draws on socio-constructivist theory both in its methodological approach to investigating the phenomenon of student experiences of learning and in understanding the theoretical location of audit pedagogy in the broad field of educational theory.

1.2 EPISTEMOLOGICAL ACCESS AND ACADEMIC DISCOURSE IN HIGHER EDUCATION IN SOUTH AFRICA

The term epistemological access was coined by Wally Marrow, and relates to "students' acquisition of the discursive, linguistic, and textual practices of the discipline that affords them the capacity and ability to effectively function and successfully perform academically in their specific disciplines" (Rambe & Mawere, 2011).

Morrow argued that while formal access to higher education is presently foremost in most South African minds, the most important 'access' needed for success at university is epistemological access (Bozalek, Garraway & McKenna, 2011), where epistemological access involves "learning how to become a successful participant in an academic practice" (Morrow, 2009).

While many would lay the blame for the theory-practice divide at the feet of the university, Morrow argued that one of the primary stumbling blocks in gaining epistemological access in the context of higher education may be attributed primarily to the students' schooling background, which promotes rote learning and does not allow for the development of critical thinking skills (Carelse, 2011).

While Morrow suggested that students need to engage deeply with the knowledge of the academic programme for which they are registered (Rambe & Mawere, 2011), research suggests that many students entering higher education institutions incorrectly believe that university-based coursework consists solely of factual information that must be memorised, as at school (Rusznyak, Dison, Moosa & Poo, 2017), which encourages a 'surface approach' to learning. It may be argued that universities' contribution to this troubling state of affairs is their (potential) failure to acknowledge this phenomenon and act accordingly.

Epistemological access refers to students' ability to learn how to access the tenets of the discipline/subject, its language, its concepts/constructs, its ways of thinking, its ways of writing, its ways of speaking, and ways of communicating its information. Such ability allows students to access the discourse of the discipline fully. The challenge here is to assist students in becoming participants in, and users of, a shared disciplinary practice of the discipline (Rambe & Mawere, 2011), where the discourse of an academic discipline

has “particular epistemic values, norms, and conventions, including the way knowledge is constructed, the basis for knowledge claims, and how knowledge is communicated and transmitted” (Ellery, 2011).

In order for students to gain epistemological access, the “values and conventions of the discipline’s discourse must be revealed through instruction (starting with lectures) and situated learning practices” (Ellery, 2011). Lectures provide the opportunity to introduce key concepts to students, and can encourage them to learn more about a particular topic independently (Rusznyak, Dison, Moosa & Poo, 2017).

However, educators’ ability to inspire students to investigate topics independently is constrained by the university’s need to comply with the accreditation requirements of the South African Institute of Chartered Accountants (SAICA). Irrespective of whether such an approach is academically sound, this is the reality of accounting education in South Africa at present.

In the context of auditing education, students need to develop their understanding of several matters in order to confirm their epistemological access. Firstly, an understanding of the numerous auditing concepts that underpin all auditing activities is needed. A definition of what the terms mean is insufficient. Concepts like materiality, audit risk, audit opinion need to be understood within the context of a real audit.

The language used within the context of an audit must be understood and developed. Students need to understand how specific words may be used to convey particular auditing meanings. Students must develop the ability to use language appropriately in the context of an audit, or a legal matter (for example). There are various documents (Acts, Codes, and Standards etc.) that must be read, each with a specific linguistic approach. Students need to familiarise themselves with the style of writing and language in each of these documents. Typically, auditing questions are long, and using language correctly can reduce the amount of time necessarily spent on developing a response to a question. The use of appropriate terminology also conveys the professional nature of the individual. Students thus need to develop the ability to communicate appropriately with people at different levels within an audit environment.

Matters not related to the performance of audit procedures must also be addressed. For example, the overarching need for ethical conduct must be understood. Students must understand what it means to be ethical, and how unethical behaviour negatively influences both an audit and the profession. A good understanding of the need for quality control within an audit environment is essential, as well as the implications of poor quality control.

The development of students' writing skills is also essential. Students need to cultivate the ability to develop an argument to support or refute a claim. The ability to write succinctly using appropriate auditing terminology will enhance the quality of such documents. This applies in an educational environment too.

The ability to repeat theoretical information is insufficient. Students must develop the ability to apply knowledge in practical settings, and use information for the purpose that it was intended, namely a real-life audit.

Finally, students need to develop an understanding of the linkages between concepts within auditing and outside auditing. They have to understand that auditing is linked to accounting, taxation, and managerial accounting, as well as various other business-related subjects (such as economics, management, and information technology).

Accordingly, in the following section of this chapter, I shall discuss the qualification process of chartered accountants in South Africa, and how the qualification process has impacted tertiary institutions and their ability to meet stated objectives. I shall also discuss related concerns that have been raised regarding the state of accounting education in South Africa, and how this impacts teaching and learning at university level.

1.3 THE QUALIFICATION PROCESS OF CHARTERED ACCOUNTANTS IN SOUTH AFRICA

At SAICA (The South African Institute of Chartered Accountants) -accredited schools of accounting across South Africa, the primary aim of all accounting students is the attainment of the Certificate in the Theory of Accounting (CTA). This is a SAICA-developed designation that permits students to write the Initial Test of Competence (ITC), a SAICA-administered examination that forms part of the qualification process of Chartered Accountants (South Africa) (CAs (SA)).

There are currently 19 SAICA-accredited universities in South Africa, of which the University of KwaZulu-Natal is one (SAICA, 2017). As SAICA is the body charged with registering CAs (SA), universities are required to be accredited by SAICA for both their undergraduate and postgraduate programmes in order to be permitted to train students as prospective chartered accountants. Without such SAICA accreditation, students would not be eligible to write the professional qualifying examinations needed to register as a CA (SA).

In order to write the professional qualifying examinations, students must first complete an undergraduate degree and then obtain a CTA (at postgraduate level) at a SAICA-accredited university. Major subjects, at both undergraduate and postgraduate levels are Financial Accounting, Managerial Accounting and Financial Management, Taxation, and Auditing. After successful completion of the CTA, students enter the second stage of the qualification process, which consists of the completion of a training contract with a registered training office. During the training contract, students are required to pass two qualifying examinations, namely the ITC and the Assessment of Professional Competence (APC), both of which are set and administered by SAICA. Only once all these requirements have been met, may the candidate register with SAICA, and use the designation of CA (SA) (SAICA, 2017).

1.4 THE SAICA COMPETENCY FRAMEWORK

SAICA developed and approved a new competency framework in 2008, which recognises the need to base accounting and auditing in the real world, thus requiring auditing (and other) courses to be taught using practical, real-world examples (SAICA, 2014). The ability to do this requires insights into real-life work situations, and consequently tertiary institutions have begun to use role-play, case studies, and simulations as substitutes for work experience (Rudman & Terblanche, 2012).

The framework provides guidance to accredited universities' teaching programmes in two respects: firstly, it provides detail of discipline-specific knowledge that students must acquire during their qualifications, and secondly, it provides guidance on the development of pervasive skills that students should carry through to their professional career (SAICA, 2017). Universities are reviewed regularly by SAICA's educational unit in

order to assess whether the particular university's educational programme is appropriately aligned with the competency framework. Should this not be the case, the university will have to make appropriate changes in order to retain its SAICA accreditation.

The core ideas of John Dewey, one of the fathers of the experiential learning movement, have been used in the development of the conceptual framework. Dewey argued that, in order to gain knowledge and understanding, one must combine theory and practice (SAICA, 2017). The competency framework recognises the contextual nature of accounting knowledge, understanding that accounting and its related disciplines (including auditing) are grounded in the real world of current events. SAICA argues that where students are taught topics within the context of real life, they will begin to appreciate the significance of the topics, be able to master the complexities of the topics more easily, and begin to think professionally (SAICA, 2017). Consequently, it is imperative that accounting courses be taught using 'real-world' scenarios and examples (Steenkamp & Von Wielligh, 2011).

As SAICA's competency framework now formally addresses the development of generic/pervasive skills, all South African universities offering SAICA-accredited programmes, are expected to produce graduates capable of demonstrating such skills at acceptable levels of competency when they enter the working world (Barac and du Plessis, 2014).

De Villiers (2010) suggests that it is no longer sufficient to produce academically-strong graduates; while today's graduates must possess strong technical and analytical skills, they also need strong generic skills that enhance their employability and effectiveness in the working world. De Villiers (2010) concludes that "in an increasingly technological economy, it is simply not enough to deliver academically strong graduates … the consistent conclusion that increased emphasis on soft skills is imperative for almost all stakeholders".

De Villiers (2010) argued in favour of building pervasive skill acquisition into all programmes and at all levels in the undergraduate accounting programme, instead of attempting to provide pervasive skill training in a stand-alone module. Furthermore, de

Villiers argued that desired outcomes in respect of pervasive skills should be established ahead of time, with a concerted effort being made to address all such outcomes during the course of the programme. He suggested that teaching methods should allow for the development of both technical and pervasive skills simultaneously and continuously.

Various teaching methods have been suggested in response for such calls. This includes problem-based learning, work shadowing, business simulation, cooperative learning, project work, group work, and a variety of other activities where the learner is in direct contact with the realities being studied, which are collectively defined as experiential learning (Barac and du Plessis, 2014).

Having acknowledged SAICA-accredited universities' responsibility to teach pervasive skills in their academic programmes, it is then necessary to consider how the universities could best develop such skills in their students. The competency framework identifies three categories of pervasive skills, namely, ethical behaviour and professionalism, personal attributes, and professional skills (SAICA, 2019). However, in their study of SAICA-accredited universities' approaches to teaching pervasive skills, Barac and du Plessis (2014) identify that simulations are often used to teach only some elements of specific pervasive skills. The researchers identify three elements of personal attributes, namely developing as a life-long learner, working effectively in a team, and mastering time management as relevant. They also identify four elements of professional skills that can be addressed in a simulation setting, namely gathering information and ideas, critical thinking, problem solving, and communication.

It may thus be said that all SAICA-accredited universities (including UKZN) are obliged to present programmes that ensure practical skills are developed in students, and that this has a direct bearing on the teaching and learning strategies employed.

1.5 CHALLENGES FACING AUDITING ACADEMICS IN SOUTH AFRICA, AND THE IMPACT ON THE WAY WE TEACH TODAY

As is evident even to an outsider, SAICA wields considerable power over schools of accounting at South African universities. Without SAICA accreditation, the various schools of accounting in South Africa would probably cease to exist; students would simply not

attend a non-SAICA accredited university, as their primary purpose for studying accounting is to be able to qualify as a SAICA-accredited chartered accountant.

It is with this understanding that the educators within the various schools of accounting devote the majority of their working days to meeting SAICA's requirements. Meeting the SAICA accreditation requirements also influences the manner in which educators approach lectures. Their focus is on covering the SAICA syllabus. As the syllabus is extensive, there is little opportunity to encourage students to explore topics independently. This has the negative effect of reducing students' ability to access the discourse of the discipline.

The aforementioned situation has also led to most accounting educators being unable to devote much, if any, time to research-related activities. This has attracted criticism and concern from the wider university community who criticise accounting academics for their lack of peer-reviewed research outputs.

Recently, Verhoef and Samkin (2017) launched a scathing attack on the accounting academic community in South Africa, arguing that even though accounting educators have research responsibilities in their employment contracts, the vast majority of such educators fail to meet their obligations (Verhoef & Samkin, 2017).

The authors did, however, acknowledge that much of the blame for this state of affairs needs to be laid at the door of SAICA. They argued that SAICA directly influences accounting education and educators, and that SAICA has defined a syllabus that emphasises the teaching of technical aspects, at the expense of academic research (Verhoef & Samkin, 2017).

While Verhoef and Samkin's (2017) argument has merit, it is only one side of a complex matter. There is a critical shortage of accounting professionals in South Africa, and it is imperative that South African schools of accounting provide the accounting profession with as many competent graduates as possible, to meet this need. It may thus be argued that the actions of South African accounting educators have assisted in transforming the South African accounting profession, thereby contributing to the growth of the South African economy (Verhoef & Samkin, 2017).

While Verhoef and Samkin's (2017) argument has ruffled many a feather in schools of accounting, their argument has substance. The consistent need to meet SAICA's substantial accreditation requirements has resulted in little time for research into accounting-related matters, including teaching and learning. As a result, the average accounting educator in South Africa teaches from the perspective of a technical expert. Research into teaching and learning and curriculum development has been put on hold, which may explain academics' complete lack of understanding of all matters related to teaching and learning. It may also explain educators' resistance to changing the way they teach. The technical aspect of their teaching responsibilities takes centre stage, leaving little time to develop new approaches to teaching.

While SAICA's grip on South African schools of accounting is potentially worrisome, as is the accompanying lack of accounting-related research, the need still exists to develop accounting graduates who are prepared for the rigours of the real working world. It is submitted that simulation pedagogy would assist in such development of graduates.

1.6 PLOTTING THE WAY FORWARD

It may be argued that focusing on the development of a teaching model that moves away from the typical lecturing model and that allows students to be more actively involved in the learning process will encourage students to develop skills that will allow them to apply theoretical knowledge in a practical setting, and develop generic skills for use in such practical settings. Some educators have turned to simulation to assist with this.

Auditing educators have a responsibility to investigate ways to improve teaching models in order to close the gap that exists between students with theoretical knowledge and graduates who are able to apply this knowledge immediately upon entering the work place and thereby contribute to an organisation (Rudman & Terblanche, 2012).

This study was borne out of an ongoing concern for students' lack of success in their auditing studies. In my experience of teaching auditing at a South African university, I have observed first-hand how the abovementioned matters hinder students' learning, and affect their ability to make academic progress. Even amongst those who pass the undergraduate modules, many appear unable to cope with the postgraduate module that consists almost entirely of the application of theory to practical scenarios, and few are

able to enter their training contracts with auditing firms confident in their understanding of auditing. This study set out to obtain an understanding of how a different pedagogical approach, that is simulation, impacts on students' experiences of learning in an Auditing course.

1.7 ESTABLISHING THE RATIONALE AND MOTIVATION FOR USING SIMULATION PEDAGOGY

1.7.1 A rationale for using simulation pedagogy in higher education

With simulation, the emphasis is on the application of theory rather than on the theory itself. The primary objective of a simulation is to offer students an opportunity to practise the decision-making process using real-life scenarios (Chapman & Sorge, 1999), and to assist in conceptualising different theoretical concepts in order to bridge the gap between theory and practice (Rudman & Terblanche, 2012).

Although simulations do not generally test students' abilities to recall theory or facts, or to summarise previously learnt material (Silvia, 2012), they are able to create real opportunities for learning (Yaghi, 2008), allowing students to move from only "knowing" to "thinking". This also provides them with the opportunity to develop their higher-order thinking skills, skills that are essential for success in business, and in the accounting profession (Springer & Bothwick, 2004). It would therefore appear that the use of simulations could be consistent with the approach suggested by the "Big 8 White Paper" (Kullberg, Gladstone, Scanlon, Cook, Groves et al., 1989). This paper sought to encourage the use of more diverse teaching methods that would provide opportunities for exposure to the kinds of work that graduates would encounter in their post-university professional lives.

Several researchers and authors have argued in favour of using simulation in higher education, providing both unique as well as shared perspectives on the matter:

Silvia (2012) proposed four broad learning objectives for students in a university setting. He suggested that educators must ensure that their students (1) are able to apply book knowledge to the real world; (2) are able to see how abstract concepts and theories play out in the real world; (3) are able to experience real-world processes; and (4) become

motivated to become involved in the real-world processes that are discussed in class. Silvia concluded that simulations could assist in the achievement of all four objectives.

Newman and Twigg (2000) suggested that traditional lectures may not capture the imagination of students new to a particular field, and argued that simulations could stimulate interest, allowing students to experience textbook concepts first-hand in a practical setting.

Lainema and Lainema (2007) addressed the matter of oversimplification in a learning domain, as well as the tendency to look at concepts from just one perspective. They proposed that the inclusion of complex learning environments, such as those in simulations, would encourage students to identify relationships between concepts, allowing them to view topics and subject matter from different perspectives, and to emphasise active application of knowledge and skills to practical problems. While arguing that oversimplification of a learning domain is a problem, Lainema and Lainema (2007) acknowledged that, to start with, it may be necessary to simplify the task, while still "maintaining its essence". It is submitted that simulation could achieve this.

1.7.2 A rationale for using simulation pedagogy in auditing higher education

The need for a practical element in a practice-based course, such as auditing, has also received support. Participants in Helliar, Monk and Stevenson's (2009) study identified three factors in support of a practical component in auditing modules: (1) the need to grapple with theory in a practical way in order to make sense of the theoretical component; (2) the need to include a practical element, alongside a theoretical component, to ensure that students are able to see 'the whole picture'; and (3) that an auditor often acquires necessary skills through active participation. In essence, Helliar, Monk and Stevenson (2009) concluded that university courses should attempt to mimic the experience that might be gained on a real audit through the use of appropriate teaching methods, including simulation.

Similarly, Williams and Kollar (2009) noted that most accounting graduates are hired into entry-level auditing positions (such as training contracts), where they must immediately apply their theoretical knowledge. Where auditing has been taught theoretically with

textbooks and case studies, such new recruits do not possess the skills needed to move seamlessly into a practical setting. It is submitted that the implementation of a practical component (such as a simulation element) at university would provide an opportunity to develop such essential, practical skills.

1.8 SPECIFICALLY AT UKZN

The study described here was undertaken in Auditing 3B, a third-year (final year) semester-long module in the undergraduate Bachelor of Commerce in Accounting (B.Com Acc). While students are exposed to auditing in the second year of the degree programme, this is the first time that they are exposed to the entire audit process, and it is important to develop their understanding of basic principles and concepts, and to prepare them for their postgraduate year of study (where application of theory in practical tutorial-based scenarios is emphasised).

During eighteen years of teaching experience, all of which have been at UKZN, I have repeatedly noticed that students are unable to bridge the gap between theoretical understanding and practical application, at both undergraduate and postgraduate level. Students are required to attend lectures, during which the educator reviews the theory related to a topic. Thereafter, they are required to prepare tutorial questions (mini case studies that are based on real-life scenarios). The concern is that the majority of them have never been exposed to a real-life audit, and that they are unable to cross the divide that exists between their theoretical textbook and the more practical tutorial examples.

A common problem faced by students relates to audit procedures (a fundamental process which lies at the heart of the module). Students must develop an understanding of various audit procedures that will be used to gather audit evidence. However, having never actually performed these procedures in practice, they have no internal frame of reference on which to draw; they simply know how to recall what the procedure purports to do. They are unable to actually perform the procedure using physical documents. This results in students memorising (through rote learning) lists of procedures for assessment purposes, without actually understanding what is taking place.

The auditing simulation used for purposes of this study was developed by PricewaterhouseCoopers (PwC), one of the “Big 4” international auditing firms. The

simulation was initially developed for their own in-house training purposes, and later shared with all SAICA-accredited universities in order to expose students to a "real-life" audit. The overriding objective of the simulation is to expose students to a "real" (albeit fictional) audit, and to require students to perform audit procedures using accounting information and documentation. The detail related to the simulation is discussed in Chapter 3.

1.9 THE BIOGRAPHY OF OUR STUDENTS

Although a more comprehensive description of our students is provided in Chapter 4, at this point it is useful to provide some biographical information about UKZN B.Com Accounting students in general. The university has positioned itself as an 'access' university, meaning that it caters for many students from previously disadvantaged communities, with a large proportion of the university's students being Black African. Importantly, such students have typically not been exposed to industry and commerce on a large scale, and English (the medium of instruction) is not their first language. Such students typically need more assistance to succeed in their studies.

1.10 RESEARCH DESIGN, AND CONTRIBUTION

This qualitative, interpretive study used a case study research design, set in two focus groups (on the Westville and Pietermaritzburg campuses of UKZN) that ran concurrently with the Auditing 3B practical audit group project. The project was run during the second semester of 2018. Fifteen students (in Westville) and twenty students (In Pietermaritzburg) – volunteers from the mainstream programme – agreed to participate in the focus groups. All Auditing 3B students were required to participate in the group project. Focus group interviews and reflection journals were used to generate and analyse data. In addition to data collected from the two focus groups, data (in the form of a questionnaire) was also collected from the wider Auditing 3B student cohort on both the Westville and Pietermaritzburg campuses.

The overarching objective of this study was to explore experiences of learning in an audit simulation environment. The following overarching research question guided my study:

1. What are students' experiences of learning in audit simulation pedagogy?

In addition to this question, two sub-questions informed the overarching question:

2. How do students learn during an audit simulation?
3. Why do students learn in this manner during an audit simulation?

The research will make a valuable contribution to the existing literature by offering a student perspective of the benefits (or drawbacks) of the implementation of a simulation in the practical world of auditing education. This study will also be of interest to other universities and professional training providers who are considering the adoption of simulation within teaching practice.

1.11 ORGANISATION OF THE STUDY

This chapter has introduced the study, offering some detail to the background of the study, rationale, aims, and the research question in relation to the research methodology.

The remainder of the study is organised as follows:

Chapter 2 reviews the literature on simulation pedagogy in education, and specifically in auditing education, and learning within simulation-led learning experiences.

Chapter 3 creates the foundation for the development of the conceptual framework for this study.

Chapter 4 focuses on the research methodology and a situated description of the simulation experience investigated.

Chapter 5 presents the data analysis findings for the study participants.

Chapter 6 presents an introspective reflection by the researcher.

Chapter 7 presents a discussion of the research findings, and the summary, conclusions, and implications for the study are finally presented in Chapter 8.

CHAPTER 2

LITERATURE REVIEW: RESEARCH INTO SIMULATION IN HIGHER EDUCATION

2.1 INTRODUCTION

The previous chapter outlined the context for this study, highlighting global concerns around students' learning in auditing and the changing demands being placed on auditing education, as well as possible options to mitigate the problem. These concerns, in addition to my own observations regarding difficulties encountered by auditing students, shaped the motivation for this study. In addition, I provided an overview of the university's relationship with the leading South African accounting professional body, the South African Institute of Chartered Accountants (SAICA), and its influence on the approaches adopted at the university. Thereafter, I established the motivation and rationale for the use of simulation pedagogy, both in a general higher education context, as well as specifically within accounting/auditing education.

In this chapter, I create a context for the research into of simulation pedagogy. Thereafter, I discuss the roles played by the facilitator and the simulation participant, and the relationship that exists between the two parties. Next, I introduce and describe a pedagogical model that may be used to facilitate learning in simulation. I also provide an overview of simulation as it pertains to accounting and auditing education, and follow this with a discussion of the learning process during a simulation. Thereafter, I address concerns that simulation pedagogy is not as effective as it would first seem. Lastly, I consider the literature review in the context of the current study.

2.2 DEFINING WHAT IS MEANT BY SIMULATION PEDAGOGY

The term 'simulation' may be used to describe a micro world in which individuals can immerse themselves and learn by doing (Wynder, 2004). It is a form of experiential learning that is student-centred, introduces many aspects of learning, and has a high degree of realism (Breckwoldt, Gruber & Wittman, 2014). Simulations usually require participants to complete reasonably complex tasks that are close to real life. Hughes and

Scholtz (2015) described student participation in a simulation as students engaging in an "experiential journey of learning".

Importantly, the educator controls the parameters of this world, with the objective of achieving various educational outcomes. As the scenario is often ambiguous or open-ended in nature, the student is encouraged to contemplate the implications of the scenario, which in turn encourages them to use critical and evaluative thinking. It is a strategy that fits well with the principles of constructivism (Hough, 2012). Important too is the understanding that simulations create a safe learning environment (Rush, Acton, Tolley, Marks-Mann & Burke, 2010) where students are able to develop their understanding and practise their skills without fear of real failure.

While not a definition, a description of the key features of simulation is useful when attempting to understand what simulation encompasses (Mislevy, 2011). The key features are identified as the practice of tasks, feedback, determining what will occur, refining skills, developing abilities, and building experience about what does and does not work in various circumstances (Mislevy, 2011).

Simulations provide opportunities for individuals to learn and develop skills for circumstances that may be expensive, time-consuming, or dangerous (Mislevy, 2011). Examples include airline pilots who train in a full motion simulator, repeatedly practising what must be done should the airplane's engine fail, and the medical student who uses a simulated patient, practising how to react in the event of a medical disaster. In both of these examples, the simulator provides valuable experience for developing the skills necessary to deal with any eventuality, thereby providing the pilot or the medical student with confidence so that they can deal with whatever circumstances present. The simulation highlights key patterns that must be mastered, allows for both repetition and varied practice, and provides critical opportunities for feedback (Mislevy, 2011). It may be argued that this is the core of what simulation is.

The term pedagogy places simulation firmly within an education context for this study. While there are many definitions that accurately describe the term, the following definition of pedagogy will be used in the current discussion: "pedagogy is another word for education; the profession and science of teaching. It refers broadly to the theory and

practice of education, and how this influences the growth of learners" (www.vocabulary.com).

2.3 UNDERSTANDING WHAT IS MEANT BY SIMULATION-LED LEARNING

A review of the literature reveals that there are also many definitions for simulation-led learning. Accordingly, for purposes of this study, the following general definition has been utilised: "Simulation-led learning approaches aim to imitate a system, an entity, phenomenon, or process. They attempt to represent or predict aspects of the behaviour of the problem or issue being studied. Simulation can allow experiments to be conducted within a fictitious situation to show the real behaviours and outcomes of possible conditions" (Lean, Moizer, Towler & Abbey, 2006).

In the context of auditing, the definition may be expanded to consider the fact that the simulation should enable participants to develop insights into the practical application of auditing theory (Le Roux & Steyn, 2007), as the purpose of utilising a simulation within the context of auditing education is to expose students to the practical aspects of an audit, allowing them to gain a deeper understanding of how their theoretical understandings may be applied in a real-life audit.

2.4 THE ROLES OF THE FACILITATOR AND THE PARTICIPANT, AND THE RELATIONSHIP THAT EXISTS BETWEEN THEM

At the heart of the simulation-led learning experience lie three important players: the simulation facilitator, the simulation participant, and the simulation instrument and related environment.

From the literature, it is evident that there is an inextricable link between the role that the simulation facilitator plays during the simulation experience, and that of the simulation participants. It is in the successful navigation of this complex relationship that much of the success of the simulation experience can be found. The role played by simulation instrument and the related environment will be discussed later.

2.4.1 The role of the facilitator

While the concept of student-led learning is frequently emphasised, the notion of the student as independent student should not be exaggerated or romanticised. Irrespective of the method of instruction, a significant part of the learning takes place as a result of the intervention of the simulation facilitator (Rutten, 2014). This suggests that although simulation can provide opportunities for participants to learn on their own by grappling with concepts, the responsibility for the creation of appropriate learning opportunities still lies with the facilitator. It is the more experienced facilitator that must guide and drive the learning process.

In order to fully realise the potential of the simulation, it is not sufficient to simply place the participants within the simulated environment, and provide them with diverse, practical experiences (Vardi, 2008). “Something more” is required.

The role of the simulation facilitator is multi-faceted, and has been explored extensively in the literature. The first task that the simulation facilitator executes is the creation of suitable learning opportunities for simulation participants (Vardi, 2008), which is achieved by developing appropriate learning objectives (Kille, 2002) as these will set the scene for what will take place during the simulation (Vardi, 2008). The learning objectives will then influence the design of the simulation, and its subsequent implementation (Kille, 2002). They will also guide the learning experiences that occur within the simulation (Gopinath and Sawyer, 1999; Katula and Threnhauser, 1999).

Broadly, the goals of a generic simulation include providing participants with an active learning experience in order to increase their exposure to, and their understanding of, subject matter, increasing interest and levels of engagement with subject material, and the development of additional skills (Kille, 2002).

The task of guiding students through the simulation-led learning experience requires the facilitator to abandon the expert-like approach that is generally seen in a lecture context (Bodhanya and Proches, 2014) in favour of engaging students actively in the learning process (Auman, 2011), thereby allowing them to take control of their own learning (Schwartz, 2014).

However, such a student-centred approach does not also imply an abandonment of the facilitator's responsibilities towards the simulation participants. On the contrary, such an approach requires that the facilitator focus on the participants, their needs, and their understanding within the simulation experience (Vardi, 2008). The fact that the facilitator is a subject expert means he is the appropriate person to determine what the participant needs to learn (Vardi, 2008), and how the learning process should unfold. While a simulation learning environment is student-centred, the facilitator brings the experience to life, creating learning opportunities for the participants (Vardi, 2008).

The role that the facilitator plays during the running of the simulation is extensive. Typically, the facilitator is perceived to be the source of subject-specific knowledge, the simulation organiser, and conveyer of information (Vardi, 2008). However, the role of the facilitator is significantly broader.

Notably, the facilitator enables simulation participants' learning (Vardi, 2008). The manner in which the facilitator sets about performing this task directly influences the quality of learning achieved by simulation participants. Referring to the concept of engaged learning, Auman (2011) stated that simulation participants must be encouraged to engage actively in the simulation in order to achieve meaningful and lasting learning.

Although Dewey suggested that facilitators should allow participants to grapple with problems, only intervening when they lack the skills needed to overcome a problem, several opposing approaches have been suggested in the literature regarding how to engage participants and facilitate learning. Newman and Twigg (2000) described themselves as crisis managers, seeking out students who needed assistance. In contrast, while Hsu (1989) wandered around the simulation venue, he limited his assistance and intervention to ensuring that students understood the tasks and processes. Shubik (2009) warned against facilitator intervention, stating that simulations are "a representation of an untidy reality for which rules cannot be given ahead of time".

The approach advocated by Vardi (2008) appears most consistent with that suggested by Dewey. Vardi argued that the facilitation of learning varies greatly from participant to participant, as different participants adopt different learning styles. He suggested that the appropriate approach is dictated by the individual participant's needs. He urged

facilitators to provide participants with individual attention, which would then allow him or her to tailor his or her teaching to participants' needs. He argued in favour of "more listening and watching, and less talking and directing". Harder (2011) aptly referred to this as knowing when to "step in and step out"; understanding when to intervene and when to allow participants to proceed unaided.

The facilitator's ability to understand when to intervene is possible where he or she recognises the need to focus on the needs of the participant (Vardi, 2008). This, in turn, requires the facilitator to develop an understanding of who the participants are (that is, their strengths, weaknesses, misconceptions) in order to tailor his or her approach to meet the individual's needs (Vardi, 2008).

In addition to creating an environment in which participants are able to engage actively with the simulation material and develop their own understanding, the literature also encourages the facilitator to take on the roles of mentor, guide, motivator, and confidence builder (Vardi, 2008). At the heart of these roles lies a relationship of trust that must be developed between the facilitator and the simulation participants; without this, the quality of the simulation experience and the concomitant learning will be poor.

Central to the process of learning within simulation is the facilitator's provision of feedback on participants' actions (Vardi, 2008). Breckwoldt, Gruber and Wittman (2014) suggested that successful feedback will encourage participants to engage in self-reflection and correction of behaviour, if necessary. It is the relationship of trust between the facilitator and participant that influences whether participants heed the facilitator's feedback advice; they need to trust that the facilitator is a subject expert and that he or she is able to assist (Vardi, 2008).

2.4.2 The ways that the participant influences the quality of learning in the simulation

Compared to research conducted about the role of the facilitator in simulation, there is a dearth of research related to the role that the participant plays in creating an effective learning experience.

In 2005, Jeffries developed a simulation model, with the intention of providing a structured approach to participant learning. Here, she identified the participant as one of

the model's constructs. Subsequent related research conducted by Jones, Reece and Shelton (2014) drew on previous research done in order to provide a more detailed understanding of participant characteristics and participant-related matters that influence the quality of learning that occurs during simulation.

Jones, Reece, and Shelton (2014) reported that participant motivation for participation in the simulation could affect the outcomes achieved. They argued that participants need to accept that learning is possible in a simulated environment, and be willing to accept that the simulation is a reasonable representation of a real-life situation.

Jones, Reece and Shelton (2014) also identified various participant emotions as being influential in the learning process; including anxiety, confidence, and a sense of vulnerability. Addressing participant anxiety, the authors highlighted anxiety that may be present when the simulation is used for assessment purposes, noting that participants could feel judged by fellow participants and the facilitator. While anxiety is generally viewed negatively, there is an optimum level of anxiety that motivates simulation participants to perform well (Palethorpe and Wilson, 2011). Low stress levels amongst participants is an indicator that the participant is not taking the activity seriously, and will probably derive little benefit from the experience (Durham, Cato, & Lasater, 2014).

While Leigh (2008) reported that many simulation participants describe improved confidence levels as a result of the simulation, Baxter and Norman (2011) suggested that the practice of self-assessment is not effective, with Jones, Reece and Shelton (2014) adding that there is not necessarily a causal relationship between competence and confidence.

Although the simulation environment has been presented as a "safe place to practice", allowing participants to learn without fear of failure (Ganley and Linnard-Palmer, 2010), Jones, Reece and Shelton (2014) argued that participants and facilitators might interpret the term "safe environment" differently, with participants still feeling vulnerable, and therefore still hesitant to make mistakes. The authors suggested that this could be due to a lack of trust between facilitator and participants, as well as the facilitator's perceived unwillingness to accept different approaches during the simulation. This opinion

reinforces Vardi's (2008) stance that the relationship between facilitator and participant influences the quality of learning achieved within simulation.

2.4.3 Teamwork, collaborative learning, and their effect on learning in simulation

As employers value the ability to work effectively in a group setting (Burke, 2011), many education simulations make use of group work instead of permitting students to complete the simulation on their own. However, despite the need to learn to work effectively in a group setting, many people dislike the thought of group work – a phenomenon referred to as "grouphate" (Burke, 2011).

The personalities within the group or team, as well as their working relationships with others in the group or team can result in group-related conflict, which can have a profound effect on team performance and individual learning (Adobar and Daneshfar, 2005).

The potential for such conflict may occur as early as the point at which participants are allocated to teams. Although allowing participants to form their own teams reduces the risk of such conflict (Adobar and Daneshfar, 2005; Burke, 2011), supporters of collaborative learning argue that it is better to assign participants to groups instead of allowing them to select their own team members (Burke, 2011).

Consequently, it is important for simulation participants to understand that their learning and performance in the simulation could potentially be affected by the dynamic that exists in a particular group (Adobar and Daneshfar, 2005). The effects of grouphate may be mitigated during the simulation pre-briefing. It is important to ensure that participants have realistic expectations about working in a group environment (Burke, 2011), and that they understand the reason for working in groups; this may reduce their resistance to the need to work in groups (Shimazoe and Aldrich, 2010). However, despite facilitator efforts, group dissonance may persist; some groups just do not work well together. Lack of group members' motivation, weak group leadership, and personality conflicts can contribute to such conflict (Burke, 2011).

Although the risk of conflict is ever-present in most group environments, Burke (2011) offered several advantages of group work, many of which are learning outcome-related.

This suggests that although group work may be problematic, if the facilitator and the participants understand the risks and potential consequences, they should be able to take advantage of the merits of group work, while addressing related hurdles.

Despite ostensibly supporting the use of group work, Burke (2011) cautioned that the act of assigning group work is not sufficient to create the desired learning outcomes. The facilitator needs to be mindful of how to facilitate effective collaborative learning environments.

Chickering and Gamson (1987) held that learning is enriched when it involves a team approach, is collaborative, not competitive, and is not done in isolation. It may be defined as participants working together in groups small enough that all group members can participate on a collective task (Monson, 2017) and achieve shared learning goals (Auman, 2011).

Collaborative learning is considered a suitable methodology for use in simulation because it addresses several key participant learning objectives (Auman, 2011), including enhancing participants' abilities to build knowledge together (Shulman, 2002), the development of interpersonal skills that are valued in today's working world (Barkley, 2005), and the ability to listen and understand others' views (Auman, 2011). In addition, simulation-led collaborative learning enhances participants' learning in real-world scenarios (Zulfiqar, Zhou, Asmi, & Yasin, 2018).

It is paramount that facilitators understand that there is a difference between collaborative learning and cooperative learning, which can influence group performance and individual learning (Zulfiqar, Zhou, Asmi, & Yasin, 2018). Shimazoe and Aldrich (2010) advised facilitators to ensure that tasks require common effort amongst group members, rather than permitting group members to divide the task into smaller, individual tasks that can then be joined together to form an end result.

Although Zulfiqar, Zhou, Asmi, & Yasin (2018) indicated that there have been many reports that collaborative learning has a positive effect on the academic performance of the student, some have found that collaborative activities do not have the expected benefits for student learning (Monson, 2017). Harkening back to concerns about how

simulation groups are selected, Monson (2017) suggested that collaborative group composition can influence how groups function, and questions whether such groups will contribute to student learning.

2.5 THE PROVISION OF AUTHENTIC TASKS IN A COMPLEX LEARNING ENVIRONMENT

In order for simulations to provide students with the opportunity to face real-life problems, the learning must take place in an environment that is reflective of the real world (Lainema and Lainema, 2007). Such complex learning environments create opportunities for students to construct knowledge, develop specific skills, and transfer knowledge to other learning environments, including the real world (Lainema and Lainema, 2007).

In order to provide a reasonably realistic experience, simulations must present authentic tasks by focusing on learning and skills in contexts that reflect the way the knowledge will be used in real life (Brown, 1998).

When addressing the problems presented in the simulation, the focus is on the doing (Kolb, 1984), where simulations provide the means to accomplish the desired learning outcomes. By developing simulations that include the required complexity and ill-structured components, it is possible for students to learn how to cope with the complex environments that they will be faced with in the working world. The simulation can assist by helping them to visualise processes, practice how to deal with matters, and how to develop an understanding of various cause-and-effect connections (Morecroft, 1999).

Although such complex environments provide opportunities for the student to think as an expert, it is not always possible to start with a truly authentic scenario. In such instances, although the task may be simpler, the essence of its authenticity must be maintained (Lainema and Lainema, 2007).

It is not enough to simply “know” concepts and definitions. If students are to perform at high levels of thinking, they must know how to solve the ill-structured problems that will present in practice; this is particularly true in disciplines such as accounting and auditing.

In comparison to well-structured problems such as those appearing in auditing tutorials, ill-structured problems do not have a "suggested solution"; they cannot be solved exactly using only one approach, which often leads to disagreement as to the most appropriate way to solve the problem (Springer and Bothwick, 2004).

In order to develop the skills needed to address such ill-defined problems, students must be given the opportunity to develop an understanding of the issues and problems, as well as an understanding of what acceptable solutions would look like (Springer and Bothwick, 2004), rather than simply relying on what the educator determines the answer to be. Simulation would offer students a chance to achieve this goal.

2.6 THE USE OF A FRAMEWORK OR MODEL TO ENHANCE THE QUALITY OF THE SIMULATION

A review of studies in which simulation-led learning has been explored, in the field of business education, suggests that within the broad field of business education, little attention is being paid to how the particular simulation has been developed. Studies simply refer to the simulation to be used during the study.

This is in contrast to the approach advocated in other disciplines, notably nursing education and medical education, where researchers have called for a "consistent and empirically supported model to guide the design and implementation of simulation and to assess outcomes" (Jeffries, 2005).

Jeffries (2005) argued that without such a model, and necessary attention to the various components in the model, the desired learning outcomes may not be achieved. It is submitted that this approach appears reasonable, especially in light of arguments that simulation is not effective.

Two examples of such frameworks or models are the Jeffries (2005) framework and the Keskitalo (2015) model. While both address concerns about the quality of learning that takes place within a simulation-led learning environment, their approaches are very different.

Although later research (Groom, Henderson & Sittner, 2014; Adamson, 2015; O'Donnell, Decker, & Howard, 2014; Hallmark, Thomas, & Ganntt, 2014; Jones, Reese, & Shelton, 2014; Durham, Cato & Lasater, 2014) was conducted into the Jeffries (2005) model to enhance it, its substance remained intact, and may be considered appropriate.

While the two models are distinctly different, there is overlap, suggesting that aspects from the two frameworks/models may be taken into account when developing a simulation.

2.7 THE JEFFRIES FRAMEWORK

Jeffries's (2005) framework consists of five major components: (1) teacher factors, (2) student factors, (3) educational best practices, (4) the design and implementation of the simulation, and (5) outcomes.

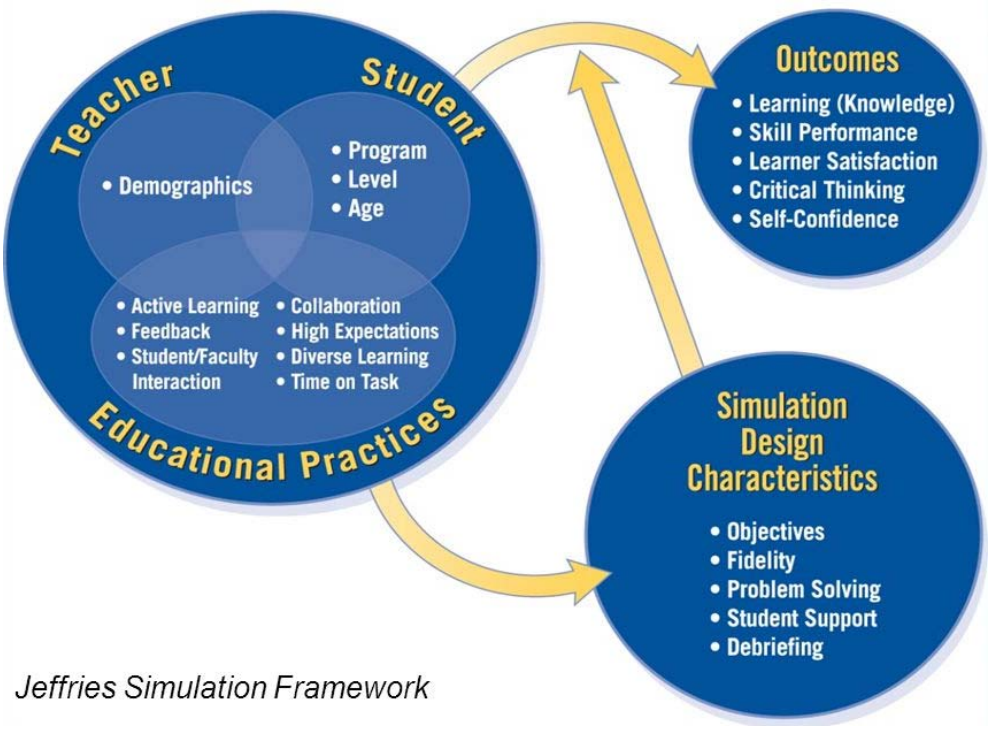

Figure 2.1: Jeffries's Simulation Framework

Source: Jeffries, P.R. 2005. A framework for designing, implementing, and evaluating: simulations used as teaching strategies in nursing. Nursing Education Perspectives, vol. 26. no. 2, pp. 96–103.

What follows is an overview of each of the variables, as well as a discussion of whether the literature supports the inclusion of each of the variables.

1. Teacher factors

Jeffries (2005) highlighted the importance of educators to the success of using alternative learning experiences, such as simulation activities. While acknowledging that simulation activities are generally viewed as student-centred, she suggested that the role that the educator takes on is essential, providing support throughout the simulation and leading the debriefing process that concludes the experience. This stance is generally supported, and the role of the educator is elaborated on later in this study.

2. Student factors

Although simulation experiences may differ, students should be expected to take responsibility for their own learning during a simulation experience. This includes being self-directed and motivated during the simulation, and being aware of the rules of engagement of the simulation. Furthermore, competitiveness during the simulation should be discouraged, as it can lead to stress and anxiety, thereby adversely affecting students' learning (Jeffries, 2005).

3. Educational (best) practice

Educational best practices must be incorporated into the simulation framework. When such practices are encouraged and used consistently, they can assist in achieving superior student learning and satisfaction (Jeffries, 2005).

Jeffries turned to Chickering and Gamson's (1987) principles for good practice in undergraduate education when considering practices for inclusion in the simulation framework. Although developed 30 years ago, these principles are still applicable in today's context.

The first education principle that Jeffries included is that of **active learning**. Chickering and Gamson's (1987) understanding of this concept may be described as follows, "Learning is not a spectator sport. Students do not learn much just by sitting in classes

listening to teachers, memorizing pre-packaged assignments, and spitting out the answers" (Chickering & Gamson, 1987, p.4).

The second educational best practice principle is **prompt feedback** (Chickering & Gamson, 1987). In essence, it means that "knowing what you know, and don't know, focuses learning" (Chickering & Gamson, 1987). Jeffries (2005) added that prompt feedback sessions can be used to "build on students' existing knowledge, and help them (to) gain confidence" (Jeffries, 2005). Here too, the educator appears to be at the heart of the activity.

Closely related to the principle of prompt feedback is the principle of **student/facilitator interaction** (Chickering & Gamson, 1987), where such contact is the most important factor in student motivation and involvement (Chickering & Gamson 1987), with students ostensibly solving problems more effectively when a facilitator is available to answer questions.

The fourth principle is that of **collaborate learning**, where "learning is enhanced when it is more like a team effort than a solo race" (Chickering & Gamson, 1987). The fifth principle is that of **high expectations,** which implies that where one expects more, students will typically rise to the occasion, producing work that is of a high quality (Chickering & Gamson, 1987).

Chickering and Gamson's (1987) sixth principle is that of **allowing for diverse styles of learning**. Typically, a student body is a diverse group, with a range of learning needs and expectations. The level of diversity of the study body will impact on how the educator develops teaching strategies and the curriculum. Importantly, simulations can accommodate diverse learning styles and teaching methods, and allow students and groups with varying cultural backgrounds to benefit from the experience (Jeffries, 2005, p.100). It is suggested that this is particularly relevant in South Africa where students come from very diverse backgrounds, with their schooling playing a significant role in the way that they learn. The final principle is that of **time on task,** with the authors suggesting that "Time plus energy equals learning. There is no substitute for time on task" (Chickering & Gamson, 1987).

4. Simulation design

The design of the simulation needs to support course goals, skill competencies, and learning outcomes (Jeffries, 2005). The primary areas that need to be considered during simulation design are learning objectives, fidelity, complexity, and debriefing.

Within the context of simulation design, **learning objectives** need to be clearly stated ahead of time, as they will guide and assess students' learning (Jeffries, 2005). Chin, Dukes and Gamson (2009) support this stance as they suggested that it is only possible to assess whether learning has taken place if one has set clearly defined goals ahead of the learning experience.

The related concepts of **fidelity** and **complexity** of the simulation should also be taken into account when designing the simulation. A valuable tool when used in simulation is that of **debriefing.** This aspect of simulation is discussed at length later in the review of the literature.

5. Outcomes

There is an abundance of research related to outcomes to be achieved in respect of simulation, with researchers and authors offering many divergent opinions regarding outcomes, such as **knowledge gained from simulation**, the **development of skills**, student **satisfaction**, **critical thinking**, and student **self-confidence**.

2.8 THE KESKITALO FACILITATION, TRAINING, AND LEARNING MODEL

According to Joyce and Weil, a pedagogical model can be seen as "a plan or pattern that can be used to shape curriculums (long-term courses of studies) to design instructional materials, and to guide instruction in the classroom and other settings" (Keskitalo, 2015).

The development of suitable pedagogical models for use in simulation-led education are essential to the educator, as they support the educator's or facilitator's thought processes, assist in bringing the students' viewpoints to the fore, and in facilitating a well-planned, well-run simulation experience (Keskitalo, 2015).

Although the use of simulation for educational purposes is not new, they have largely been implemented intuitively (Keskitalo, 2015). Various perspectives have informed the

use of simulation, notably Kolb's (1984) experiential learning theory, the principles of adult learning and Vygotsky's (1978) zone of proximal development. However, Kestikalo (2015) noted that the field of simulation-led learning has lacked a synthesis of these various perspectives. The Keskitalo model is an attempt to achieve this.

Figure 2.2: Keskitalo's Facilitation, Training, and Learning Model

Source: Keskitalo, T. 2015. *Developing a pedagogical model for simulation-led healthcare education.* Faculty of Education, University of Lapland. p.66.

The Facilitation, Training, and Learning model (the FTL model) is a synthesis of various educational perspectives (Keskitalo, 2015). It combines socio-cultural theory with the characteristics of meaningful learning (Ausubel, 1968) and concepts from previous pedagogical models. The model attempts to ensure that a more holistic and meaningful

approach to teaching and learning in simulation education is adopted, allowing facilitators and students to recognise their respective responsibilities within the simulation process (Keskitalo, 2015).

The learning process is described in terms of *Introduction, Simulator and Scenario briefing, Scenarios,* and *Debriefing* phases. Keskitalo (2015) suggested that the use of such distinct phases provides structure for the learning process. In addition, the model draws attention to matters that require both facilitator and student attention prior to and after the simulation activity.

The theoretical components of the model, namely socio-cultural theory and the characteristics of meaningful learning will be described in more detail in Chapter 3. At this juncture, the main phases of the simulation-led learning process, and the pre- and post-activities of the facilitators and the student participants are discussed in detail. In view of the fact that the model will be used extensively during the research component of this thesis, it is considered appropriate that these phases be discussed in detail.

1. Pre-activities

Here, the facilitator is tasked with designing the learning process and the learning environment, with specific learning objectives and student characteristics in mind. Furthermore, the facilitator should consider the characteristics of meaningful learning when planning, implementing, and evaluating student activities. In turn, the students are tasked with familiarising themselves with the subject matter of the simulation by way of, for example, pre-assignments, lectures, or reading (Keskitalo, 2015).

2. Introduction – Activating prior knowledge and setting the ground

At this stage of the process, the facilitator is tasked with explaining the learning objectives and the most important concepts that will be addressed during the simulation activity. Drawing on previous researchers' perspectives, Keskitalo (2015) suggested that this is most effectively achieved by showing students what they will be able to do after the simulation activity. Finally, Keskitalo (2015) suggested the inclusion of an explanation of how the simulation is organised.

From the students' perspective, the purpose of the Introduction stage is to activate their previous knowledge base and experiences that can be used as a foundation for the development of new knowledge during the process (Keskitalo, 2015). By the end of the Introduction stage, students should have reflected adequately on their previous knowledge and experiences in order to have a reasonable understanding of the topics, the learning objectives, simulation-led learning in general, pedagogical models and methods and relevant ground rules (Keskitalo, 2015).

3. Simulator and scenario briefing – familiarisation

At this point, the simulation participants enter the simulation. The stage can commence with a briefing by the facilitator to ensure that the participants are fully aware of what will be required of them (Keskitalo, 2015) thereby allowing them to settle into their roles and engage with the simulation properly (Dieckmann, Friss, Lippert, & Ostergaard, 2009).

During this phases, the participants are encouraged to set their own learning goals (Keskitalo, Ruokamo, & Vaisanen, 2010), or learning goals can be set collaboratively (Keskitalo, 2015).

4. Scenarios – guiding and participating

This phase is central to the simulation experience, with the participants immersing themselves in the simulation experience. Keskitalo (2015) cautioned that it is imperative for the facilitator to create an emotionally safe environment for all participants, as some may be afraid that the simulation environment may expose a personal lack of competence (Dieckmann, Friss, Lippert, & Ostergaard, 2009).

5. Debriefing – facilitating and reflecting

Although there are many different models available for debriefing purposes (for example, Dreifurst, 2011; Fanning and Gaba, 2007; Rudolph et al, 2007), Keskitalo (2015) focused attention on the activities that lie at the core of the debriefing process, noting that at this stage, participants are responsible for reviewing and reflecting on the learning process that has taken place. In addition, they are required to identify knowledge gaps that may have come to the fore, as well as forming new learning objectives (Keskitalo, 2015).

In contrast, the facilitator's role is that of "cognitive detective" (Rudolph et al, 2007) encouraging students to analyse their simulation experience to enhance their learning and future practice (Keskitalo, 2015). At this stage, the facilitator is also tasked with providing individualised feedback to students, as well as necessary emotional support (Keskitalo, 2015).

6. Post-activities

From the facilitator's perspective, it is critical to evaluate the whole instructional process after the simulation activity (Keskitalo, 2015). This entails consideration of the facilitation process and participant activities, and whether established learning objectives have been achieved. This process is essential to the development of simulation-led education, as well as to the development of the facilitator's own role within the process (Keskitalo, 2015).

From the students' viewpoint, Keskitalo (2015) suggested that this would be a suitable opportunity to test their learned knowledge and skills in a new scenario, as envisaged by Kolb (1984) for example.

2.9 A REVIEW OF ACCOUNTING EDUCATION LITERATURE RELATED TO SIMULATION AND SIMULATION-LED LEARNING

The literature on educational simulation is extensive. However, much of the literature pertains to the medical sciences and the natural sciences. Although the focus is very different in such disciplines, much of the theory related to the simulation itself is easily transferrable to auditing education.

Although there is limited research in auditing education, much more research has been conducted in other branches of business education studies. Accordingly, this study has been informed by literature related to studies conducted in a broader context. The majority of the research, in respect of educational simulations, has been undertaken in the United States, Europe, and Australia. One must thus be cognisant of the differences in student attributes that exist between South African students and those in more developed nations, and their impact on the simulation itself.

A number of local and international simulation studies conducted in various branches of business education studies (Wolmarans, 2006; Krogstad, Smith & Clay, 1986; Steenkamp & Rudman, 2007; Arens, May & Dominiak, 1970; Williams & Kollar, 2009; Drake, 1999; Rudman & Kruger-van Renen, 2014; Adobar & Daneshfar, 2005; Siegel, Omer & Agrawal, 1997; Riley, Cadotte, Bonney & MacGuire, 2013; Avramenko, 2012; Burdon & Munro, 2017) were reviewed, and the following was observed:

Firstly, very little detail is provided about the development of the simulation instrument itself. Secondly, although the majority of the studies sought to interrogate the learning that had taken place during the simulation, none of the studies reviewed made use of a learning framework (for example, Kolb). Apart from Burdon and Munro (2017), feedback to students to assist in the embedding of knowledge and learning, debriefing by the facilitator, and reflection were not addressed in detail. The concern here is that without these components, the learning cycle remains incomplete. The facilitator's role in the simulation-led learning experience also appears to be downplayed in most studies.

2.10 THE LEARNING PROCESS IN A SIMULATION LEARNING EXPERIENCE

2.10.1 The ultimate objective of a simulation experience

The ultimate goal of a simulation is the transfer of theory to daily practice, and the avoidance of incorrect actions in future situations (Breckwoldt, Gruber and Wittman, 2014). This would suggest that the ultimate goal of a (business, or auditing) simulation is a better-prepared workforce (Gopinath and Sawyer, 1999).

In light of the potential contribution of simulation to such knowledge transfer, le Roux and Steyn (2007) posed some pertinent questions; they considered whether knowledge transfer actually occurs during simulation, and if so, what knowledge is transferred? In order to begin to answer these questions, it is essential to understand how learning takes place, and whether it actually enables the participant to assimilate the knowledge (Gopinath and Sawyer, 1999).

While several structures and processes have been suggested in order to assist simulation participants to learn from their experiences, Lizzio and Wilson (2007) pointed to the quality and depth of reflection as being significant to the discussion.

2.10.2 Reflection and critical reflection

The process of reflection leads to the destabilisation of existing, taken-for-granted beliefs and assumptions, and creates opportunities for the assimilation of new knowledge, thereby supporting better choices or actions in the future (Ash and Clayton, 2004; Lizzio and Wilson, 2007).

While Lizzio and Wilson (2007) suggested that the guiding principle here is the awareness that the participant's assumptions holds the key to subsequent effective learning outcomes, Fook (2002) disagreed, stating that something more is needed, that what is required is critical reflection. They suggested that critical reflection involves thinking about one's practice, reviewing how such skills and responses have been developed, and only then developing revised theories of practice for future implementation. They held that it is in the understanding of, and being able to challenge, one's own assumptions that critical reflection occurs.

Although the practical application of reflection appears problematic (Heyler, 2015), the consequences of rigorous reflection argue in favour of facing the task of reflection head-on. Ash and Clayton (2004) stated that the more rigorous the reflection, the better the learning outcomes will be. They suggested that the quality and quantity of reflection are important predictors of positive learning outcomes, including a deeper understanding of theory as well as its application, a better grasp of complex problems, and the ability to analyse problems and develop solutions.

Welch (1999) cautioned that it is not enough to tell students to "go and reflect". Successful reflection requires assistance that challenges simulation participants' beliefs and assumptions, which would have the effect of deepening their knowledge, understanding, and learning (Ash and Clayton, 2004).

In simulation learning experiences, feedback and debriefing are the catalysts for reflection. Questions raised during feedback sessions and debriefing sessions will start the destabilisation process.

2.10.3 The provision of feedback

The provision of feedback to simulation participants can take place during the simulation experience itself, or during the debriefing session. Both instances create opportunities for students to reflect, and support Schon's (1981) understanding of the reflection process.

Schon (1981) identified two primary means by which students (simulation participants) can reflect, and referred to "reflecting on action" and "reflecting in action" (Schwartz, 2014). "Reflecting on action", the notion of learning from the past so that mistakes are not repeated, is well-documented, and would appear to be at the heart of every feedback or debriefing session. It allows the simulation participant to reflect on past actions, whether the chosen course of action was successful, and what changes could be made to allow for a more positive outcome. However, it is also possible to reflect in the moment, in order to re-shape and revise actions as they occur (Heyler, 2015). It seems that feedback could support "reflection in action" too.

In order to facilitate the transfer of knowledge in simulation, it is essential to provide participants with opportunities to learn from mistakes and to acquire "negative knowledge". Feedback plays a vital role in this process, highlighting participants' errors, and showing them why they made mistakes. Feedback starts the process of closing gaps in participants' performance (le Roux and Steyn, 2007; Breckwoldt, Gruber and Wittman, 2014).

2.10.4 The debriefing process

The debriefing activity that forms part of the simulation experience may be described as the cornerstone of the learning process (Gardner, 2013). The concept of debriefing in the context of an educational simulation has been widely explored. It is commonly accepted that a debriefing is crucial to the learning process, as it assists the simulation participant to explore what happened during the simulation. During the debriefing session, participants are encouraged to talk about their experiences, to develop insights into these experiences, and to connect the simulation activities to their real lives (Nicholson, 2012). Where a simulation does not include a debriefing component, a significant opportunity to create a meaningful educational experience is foregone (Nicholson, 2012).

Fanning and Gaba (2007) suggested that most models of debriefing probably evolve out of the natural order of human processing, namely (1) to experience an event, (2) to reflect on it, (3) to discuss it with others, and (4) to learn to modify behaviours, based on the experience. This explanation is aligned with Kolb (1984), and succinctly depicts the entire simulation learning process, including the debriefing process.

While the various models address the debriefing process in different ways, Nicholson (2012) commented that, at the heart of each of the models, lie three key activities: description, analogy or analysis, and application. These activities indicate the need for participants to reflect on their simulation experiences, recalling what happened during the activities and considering what they learned during the simulation. Finally, they need to find ways to tie this learning back to their own lives, considering how these experiences could be applied going forward. This too is in accordance with Kolb's (1984) model of experiential learning.

As with every aspect of the simulation process, central to the success of the debriefing activity is the role of the facilitator. A successful debriefing requires the facilitator to have already created a supportive environment where students will feel valued, respected, and able to learn in a safe environment (Fanning and Gaba, 2007). The creation of such a supportive environment calls for an environment where the participants know what is expected of them upfront, and where rules of engagement are established early on too (Fanning and Gaba, 2007).

It has already been established that the role of the facilitator is important throughout the simulation process. Although the debate related to making participants active and responsible for their own learning, while also ensuring that the debriefing session is as successful as possible, remains pertinent (Fanning and Gaba, 2007), it would appear that there is consensus about who should take responsibility for the debriefing process.

Drawing on previous research, Fanning and Gaba (2007) reported that data from various student surveys indicates that the perceived skills of the debriefer are positively correlated with the overall quality of the simulation experience. Although Kolbe et al (2013) pointed to the extent to which debriefings should be facilitator-led as being an area for further research, they also identified the need for training to ensure that the

debriefing session will stimulate and support participants' understanding of the processes that took place during the simulation. Furthermore, they suggested the establishment of a schedule of debriefing best practices, which includes the creation of a supportive learning environment and the training of instructors.

Two important methods may be utilised to conduct a successful debriefing. Firstly, feedback should be combined with reflective practice during the debriefing (Kolbe et al, 2013) with the aim of the assimilation of activities into a learner's cognition that seeks to produce long-lasting learning (Fanning and Gaba, 2007). Secondly, a facilitator-led debriefing is recommended (Kolbe et al, 2013) that includes two-way communication between facilitator and participant that draws out participants' performance explanations thereby facilitating strategies to improve future performance (Cant and Cooper, 2011).

The significance of the relationship between debriefing and reflection is apparent in the literature; it has an important influence on the learning that takes place in simulation, and reflective learning and debriefing join together to form a formidable teaching-learning strategy. Where debriefing promotes reflection, it encourages participants to question their own assumptions and to consider alternative approaches that may enhance future practice (Cant and Cooper, 2011). The strategy creates opportunities for participants to correct their mistakes and assimilate new experiences with existing ones, thereby developing better approaches that will enhance their professional competence (Rudolph et al, 2007).

Although the teaching-learning strategy of debriefing and reflection is praised, further research related to debriefing as a teaching and learning strategy is required (Dreifurst, 2009). The author highlighted several important aspects of the strategy that need to be investigated further. This includes concept aspects of debriefing (to achieve consistent, significant student learning and facilitator development) and research into concerns that some students do not engage in reflection consistently or thoughtfully enough for it to be a significant learning event (Dreifurst, 2009).

2.11 THE DEBATE ABOUT THE EFFECTIVENESS OF SIMULATION IN AN EDUCATIONAL CONTEXT

Despite the frequent use of simulation in many disciplines, there is an ongoing debate about whether simulation is an effective pedagogy (Prinsen & Overton, 2011). Although many researchers have alluded to the benefits of simulation, some argue that few of these claims have actually been substantiated by research (Feinstein & Cannon, 2002).

The lack of an acceptable methodology to assess the effectiveness of simulation is evidenced by conflicting suggestions made by various researchers. For example, Gosen and Washbush (2004) suggested that it is extremely important to assess outcomes within learning environments, believing that it is possible to assess experiential learning environments successfully. In contrast, Chin, Dukes & Gamson (2009) asserted that it may not be possible to measure the effectiveness of simulation, offering the open-ended or informal nature of simulation, as well as the fact that simulations may not have prescribed measurable outcomes, as reasons for this conclusion. Prinsen and Overton (2011) argued similarly, stating that although conceptual frameworks such as Bloom's taxonomy of learning and Kolb's model of experiential learning have been developed, it is only once researchers take a wider perspective of student learning that the benefits of simulation will become more pronounced.

In sharp contrast to the calls for taking a wider perspective on the matter of simulation effectiveness, Cannon and Burns (1999) argued in favour of the identification of measurable criteria by which a simulation experience can be evaluated against the demands of actual situations. They proposed the identification of the specific behaviours and requirements that constitute performance success, and suggested that in order to structure the research and to anchor it in an underlying theoretical framework, the researcher would view these behaviours and requirements through the lens of established taxonomies of educational objectives, namely cognitive, affective and psychomotor objectives. They noted that the output of this process would be a set of performance items that could be used to develop performance scales that could, in turn, form the basis for comparing performance in actual versus simulated environments.

2.12 LEARNING WITHIN THE CONTEXT OF SIMULATION

2.12.1 Students' experiences and their perceptions of learning within simulation

There have been many reports that participants in simulation have found them to be a valuable learning experience (for example, see Raymond, 2010; Wolmarans, 2005; Drury-Grogan & Russ, 2013; Steenkamp & Von Wielligh, 2011). Participants have reported that they have experienced significantly more learning from a simulation than they would have from a traditional lecture or tutorial (Raymond, 2010; Wolmarans, 2005; Drury-Grogan & Russ, 2013), and that simulations are able to link theory to real-life situations in ways that traditional lectures are unable to do (Silvia, 2012).

Participants have described how the simulation helped them to obtain a more all-encompassing understanding of the subject matter, and that simulations facilitated better decision-making because of teamwork and group learning (Drury-Grogan & Russ, 2013). Others have commented that simulations allow them to 'immerse' themselves in the task and to experience the subject matter in ways that lectures do not allow, and that this has enabled a deeper understanding of concepts and theories (Shellman & Turan, 2006).

In one study conducted in an auditing context, a cohort of simulation participants identified numerous benefits arising out of their participation in the simulation. The group noted that: (1) it made auditing more practical; (2) it enhanced the practical application and implementation of spreadsheets; (3) it allowed for the application of theory in a practical scenario; (4) it allowed for integration of various topics and subjects; (5) students learnt how to develop working papers; (6) students developed their problem-solving skills; (7) the simulation assisted in preparing students for their future working environments; (8) it reduced the amount of time necessarily spent studying auditing; (9) it enabled the development of insight into the practical operations of an audit; (10) it enabled the development of skills to interpret large volumes of data; (11) it improved the ability to bridge the gap between auditing theory and technical knowledge, and real-life situations and practical problems; (12) it improved the ability to summarise data; and (13) the ability to integrate an understanding of different components within an audit (Steenkamp & Rudman, 2007).

In addition to reporting enhanced theoretical understanding of subject matter, many have reported that participation in a simulation has led to improved pervasive skills too. Participants have reported enhanced teamwork skills, improved interaction skills, and a better understanding of the need to be a team player in today's business world (Drury-Grogan & Russ, 2013). Other participants have reported enhanced learning through group interaction (Lainema & Lainema, 2007). Still others have reported one of the major learning outcomes as being "the importance of facilitating input from everyone, while additionally ensuring that all team players were on the same page regarding the decisions made, based on the various inputs". The development of pervasive or soft skills within the context of a simulation has also been identified, including the ability to stay calm during challenging situations, and the importance of thinking before acting (Drury-Grogan-Russ, 2013).

However, although it may appear that simulation pedagogy should be adopted by all educational institutions as a matter of urgency, some have cautioned that simulation is not a panacea or 'silver bullet' to all academic problems (Lay & Smarick, 2006), with several competencies not being successfully transferred to students. Such non-transferrable skills include (1) the ability to distinguish fact from opinion; (2) the development of active listening skills; (3) the ability to prioritise when dealing with multi-problem situations and, in doing so, identify the problems that required immediate action; (4) the motivation to study; and (5) judgement skills (Steenkamp and Rudman, 2007). It seems that an acceptable compromise would be to include a practical component (such as a simulation) in an existing module where traditional teaching methods are utilised.

2.12.2 "I learnt a lot!"

Although, as described above, many studies (including Raymond, 2010; Wolmarans, 2005; Drury-Grogan & Russ, 2013) have argued that students' learning is enhanced through simulation, many also contend that students' testimonials and self-reports of learning cannot be relied upon when attempting to assess the quality of learning that has taken place during a simulation (Ash & Clayton, 2004).

Instead of relying on participants' perceptions of learning in simulation, there have been calls for an alternative approach, possibly one using measures that allow students to demonstrate that they have attained greater understanding, their ability to apply their knowledge, problem-solving skills, and cognitive development (Ash & Clayton, 2004).

2.12.3 The assessment of learning within simulation

Student learning and their reaction to the process should lie at the heart of the simulation. In essence, the overriding objective of a simulation experience is students who can leave feeling positive about the experience, confident in their abilities to take away practical skills, and abilities that can be applied in the workplace (Vardi, 2008).

A review of the literature suggests that there is consensus on the importance of assessment within the context of a simulation, with assessment being a "necessary complement to purpose". Although "learning is a complex construct, hard to pin down and therefore difficult to measure", it is appropriate for educators to at least attempt to determine whether or not learning has taken place during the simulation exercise. In light of educators' opportunity-cost and time-use choices, it is imperative that educators determine which approaches are more effective (Gosen & Washbush, 2004).

A review of the literature provides many examples and suggestions on approaches that have been used to assess the effectiveness of simulation in achieving learning outcomes:

Chapman and Sorge (1999) and Lay and Smarick (2006) suggested that although student evaluations can offer a glimpse into the effectiveness of simulations, it is crucial to compare students participating in a simulation to a similar group participating in a more traditional pedagogy. The authors asserted that this is the only way to truly begin to assess the effectiveness of simulations.

Conversely, Hassall and Milne (2004) believed that it should be left to the educators to decide what takes place in the classroom; they argued that if feedback is collected, this should be at the discretion of the educators. They also stated that participant opinions are important, and suggested that students' descriptions of their simulation experiences should be as highly valued as responses in terms of Likert-type scales.

Wolmarans (2006) posed some valid questions that could be considered for inclusion in Hassall and Milne's (2004) description above, and that should be answered in order to determine the impact of simulations. He suggested asking questions such as: Whether students regard a simulation as a positive learning experience? Whether students believe they achieve a better understanding and integration of concepts? Whether they enjoy the learning process more when a simulation is used? Whether they believe the simulation should be used in future? What are the most important benefits that they experience when they participate in a simulation? Effectively, the author is considering whether learning in the context of a simulation has indeed taken place.

Raymond (2010) argued that simply because a simulation did not result in statistically significant improvements in students' exam marks, did not mean that the simulation did not help students to achieve the stated learning objectives of the course. He provided other reasons to explain the lack of improvement in exam results, including that the simulation addressed matters not necessarily assessed during the exam, and the simulation may have helped the students learn new knowledge that was unrelated to the objectives of the course. He noted though that the students in his study believed that the simulation did assist them to gain knowledge related to stated learning objectives.

Anderson and Lawton (2009) suggested that "given the diversity of purposes for which simulations are used, it is not surprising that it has been difficult to devise a simple instrument that measures the effectiveness of simulations, and that it is equally difficult to generalize the results of studies that assess the educational value of simulations".

Student learning can also be assessed by assigning reflection papers or journal writing. For the purpose of assessment, writing gives participants the opportunity to reflect on the activities and articulate their thoughts in ways that are most meaningful to them (Chin, Dukes & Gamson, 2009). The authors also advocated for ungraded post-activity surveys, which provide the quieter participants with the opportunity to express themselves, as opposed to a group discussion which would often be dominated by a vocal minority.

2.12.4 A more formal approach to assessing the efficacy of simulation

For over 25 years, many researchers have used Bloom's taxonomy of learning objectives to guide their investigations of the learning that results from business simulations (Gosen & Washbush, 2004). In many respects, Bloom's taxonomy has been the anchor for assessing whether learning occurs in business simulations, (Anderson & Lawton, 2009) with many researchers having relied upon Bloom's taxonomy of learning objectives to guide their investigations of learning outcomes arising from simulations (Schumann, Anderson, Scott & Lawton, 2001).

However, there are those who believe that this approach is not appropriate, arguing that while the taxonomy provides a useful framework for *establishing* learning objectives, it may not be as helpful in *assessing* student learning (Schumann, Anderson, Scott & Lawton, 2001).

As an alternative to the use of Bloom's taxonomy, some have argued in favour of using a more formal approach, and have encouraged the use of (for example) Kirkpatrick's (1998) framework, as the framework is broader in focus than Bloom's taxonomy, and can offer another means for assessing the efficacy of simulations (Schumann, Anderson, Scott & Lawton, 2001).

Kirkpatrick's framework includes four levels of evaluation: reaction, learning, behaviour, and results. *Reaction* measures student satisfaction with the simulation experience. An understanding of participants' reactions to simulation is important because they provide feedback that is helpful to evaluate the learning experience and to provide suggestions for improvement of future learning experiences (Kirkpatrick, 1998).

Learning may be defined as the degree to which simulation participants change their attitudes, improve knowledge, or increase skill as a result of the simulation (Kirkpatrick, 1998). The learning could be assessed by questionnaires that measure attitudes, and by tests that measure knowledge or skill (Schumann, Anderson, Scott & Lawton, 2001).

The third level in Kirkpatrick's framework is *behaviour*, which refers to whether the learners actually use what they have learnt. The importance of this aspect of learning arises because students need to be able to transfer what they have learnt in the

classroom to other classes, or to the real world (Schumann, Anderson, Scott & Lawton, 2001).

The fourth level in Kirkpatrick's framework is *results*. Schumann, Anderson, Scott & Lawton (2001) noted that applying a four-level evaluation of results to settings outside of corporate training (for example, within a university simulation setting) is to decide which results are relevant to the examination. The authors suggested that this challenge may be appropriate from several perspectives. From the student's perspective, the relevant results may include results achieved, the number and quality of job offers received, salary offers, the speed and frequency of promotions and so forth. The researcher would then need to try to measure whether the simulation had had a positive effect on these areas.

Another model that could be used to assess the effectiveness of learning within simulation is Alexander Astin's I-E-O (Input-Environment-Output) model, where the 'Input' aspect of the model assesses students' knowledge, skills, and attitudes prior to a learning experience; the 'Environment' aspect of the model assesses students during the activity, and the 'Output' aspect of the model assesses success achieved after the experience (Qualters, 2010).

Although both frameworks do provide a more structured approach to the assessment of the efficacy of simulations, it may still be argued that neither of these frameworks will actually provide a firm "yes" or "no" of whether learning has actually taken place, as "learning is a complex construct, hard to pin down and therefore difficult to measure" (Gosen & Washbush, 2004).

2.12.5 Assessment within the context of simulation – a unique problem

The assessment of experiential activities, such as simulations, presents a unique problem to facilitators. In such activities, the means are as vital as the ends; thus it is important to look at assessment as more than an outcomes measure. While outcomes are important to measure, they reflect the end-product of assessment, not a complete assessment cycle (Qualters, 2010).

Furthermore, the development of appropriate assessments is also hindered by the variability that exists amongst student participants (Schwartz, 2014). To this end, and

similar to Jeffries (2005), Ewert and Sibthorpe (2009) identified a set of student-centred variables that need to be taken into consideration when developing assessment methods for simulation (and other experiential learning activities). The variables, referred to as *confounding variables* are either precursors, concomitant, or post-experience in nature (Schwartz, 2014).

Precursor variables exert their influence prior to the start of the experiential learning experience and include (1) students' prior knowledge and experience, (2) the demographics of the group, (3) pre-experience anxiety, motivations, and experience, and (4) self-selection into a specific programme (Ewert & Sibthorp, 2009). As will be discussed later, considerations of students' prior knowledge and experience is concomitant with Dewey's understanding that a person's previous experiences and knowledge will impact on how the experiential learning exercise plays out.

Concomitant variables arise during the experiential learning experience and influence the outcomes of that experience. They include (1) course specifics, (2) group characteristics, (3) situational impacts, and (4) frontloading for evaluation (Ewert & Sibthorp, 2009).

Post-experience variables come to the fore after the completion of an experiential learning activity, and include (1) social desirability or self-deception positivity, (2) post-experience euphoria, (3) post-experience adjustment or re-entry issues, and (4) response shift bias (Ewert & Sibthorp, 2009).

Student self-assessment of learning:

In stark contrast to calls for empirical evidence of learning, which would suggest such assessment is 'owned' by the educators, some have argued that assessment should be student-centred, and that "in much the same way that students are given power over their learning in the experiential classroom, so too should they be given a role in assessing their own learning" (Schwartz, 2014).

The ways in which students can conduct self-assessment in experiential learning (and simulation) include the following: (1) *Student-involved assessment*, which allows students to define how their work will be judged. They choose what criteria will be used to assess their work, or help create a grading rubric. (2) *Student-involved record keeping*, which

allows students to keep track of their work. This could be done through the creation of a portfolio that documents student progress over time. (3) *Student-involved communication*, which allows students to present their learning to an audience, such as with an exhibit or at a conference (Schwartz, 2014).

The literature provides many examples of methods that may be used to assess experiential activities, with many of these methods being student-centred and inextricably linked to reflection, thus helping students to focus their learning, while also producing a product for assessment purposes (Schwartz, 2014). Of these methods, Qualters (2010) singled out the learning portfolio as one of the most comprehensive methods of assessing experiential learning.

Learning portfolios are distinguished from standard professional portfolios through their inclusion of reflective components. It becomes a "purposefully designed collection connected by carefully thought-out structured student reflections". Beyond assessing student learning, well-constructed portfolios can be used for accreditation, university-wide outcome assessment, and to document and understand the learning process at both the level of course and programme (Qualters, 2010).

During research conducted on student self-reports on learning during simulation, Drury-Grogan and Russ (2013) suggested other techniques that could be used to enhance researchers' understanding of learning during simulation. The authors pointed to techniques such as (1) "data collection and coding of facilitator responses and proctor observations to triangulate these data with students' responses to enhance the findings beyond self-reports", (2) "collecting debriefing feedback from facilitators would provide another dimension to analyse student learning outcomes", and (3) contacting students who had previously participated in the simulation, because their "prior participation gives them an understanding of the flow of the simulation".

2.13 ARGUMENTS AGAINST THE USE OF SIMULATION, AND DISADVANTAGES OF USING SIMULATION

It is evident that the academic community is divided in their opinion on the effectiveness of simulation in higher education. While many believe that simulation-led experiential learning is of value, many others have raised doubts about the pedagogy.

Some have argued that student-centred, active learning approaches such as simulation are a waste of valuable class time and that they are responsible for the creation of 'village idiots' in the process (for example, Rochester, 2003). The author argued that traditional lectures and case studies are more effective than active learning approaches, as these approaches ensure that students learn what is important and necessary.

In contrast, there are those who have argued that even if simulation is not significantly more effective on all accounts, it is certainly not less effective than lectures. In addition, simulations are much more effective in motivating students to engage with the study material, and are able to develop interpersonal skills. On balance, simulations seem to prepare students better for the professional environment than lectures do (Prinsen & Overton, 2011).

Some researchers have criticised simulation pedagogies because of the general failure to examine the effectiveness of such tools in a systematic way (Lay & Smarick, 2006). Lay and Smarick (2006) identified several concerns related to the effectiveness of simulation as pedagogy, including the fact that much of the evidence related to the effectiveness of simulation is anecdotal, and that simulation is simply the latest teaching fad to take hold. The authors argued in favour of a more rigorous comparison of simulation to other teaching pedagogies before suggesting that simulation should be widely applied.

Lay and Smarick's (2006) concerns about evidence, in support of simulation, being largely anecdotal in nature were supported by Silvia (2012) who suggested that "perhaps the largest point of contention raised by those who question the utility of active learning activities is the lack of empirical evidence that these techniques really work". The author suggested that, instead of "flocking blindly toward an approach that is an unproven panacea", educators should determine whether "what many think works, actually does work" in their particular circumstances.

Many have expressed concerns that preparation time required for simulations is too onerous for the pedagogy to be considered for use (Silvia, 2012; Seaton & Boyd, 2008; Faria & Wellington, 2004; Asal, 2005). While simulations may make complex theory clearer to the student, they take up too much lecture and discussion time (Silvia, 2012,

Asal, 2005). Silvia (2012) also argued that simulations make it more difficult to cover all required material in the time available.

In addition, "simulations demand time and organisational effort (which becomes more challenging as the size of the class grows). The successful use of simulations is contingent upon the cooperation of the majority of the students …. Uncooperative students can also lead to serious problems when a minority of students does much of the work" (Asal, 2005, p.361).

Other concerns raised include the fact that the activities do not work as intended (Silvia, 2012); that educators have other responsibilities that compete for the time required to implement new methodologies such as simulation (Seaton & Boyd, 2008); that educators do not have sufficient information about the simulation to implement it; and funding concerns (Faria & Wellington, 2004).

One of the main disadvantages of introducing any new method of teaching is the willingness to embrace the method as well as the level of success achieved, which are often monitored using student satisfaction as a gauge. Studies have found that while effort can be put into promoting the better use of skills as well as the development of new skills, where the student chooses not to engage, the activity will be deemed useless. Past experience has found that unless the student sees some reward, (in the form of improved results or opportunities for employment, for example) engagement and satisfaction will remain low (Burdon and Munro, 2017).

In their recent study, Burdon and Munro (2017) initially believed that their auditing simulation would provide a positive learning experience for their students. However, their findings were to the contrary, indicating that students were not as enthusiastic about the simulation. Firstly, they believed that their students would perceive the benefits related to the simulation, simply because the simulation accurately reflected a real-life audit and its associated problems. Their findings indicated that while students agreed that the simulation had real-life benefits, they were either unable, or unwilling, to engage fully with the simulation.

Secondly, and particularly alarming for Burdon and Munro (2017), was the students' resistance to group work. The researchers had initially believed that students would derive benefit from group work. In sharp contrast to their expectations, students were extremely hostile towards the notion of group work. The researchers pointed to a potential weakness in university graduates who dislike group work, as audit work takes place predominantly in the form of group work in practice.

2.14 IMPLICATIONS OF THE LITERATURE REVIEW FOR THE CURRENT STUDY

The literature review informed the current study in many ways, providing guidance and structure to the study. The literature review highlighted the roles played by the facilitator and the study participants, and emphasized the intertwined nature of this relationship. The Keskitalo model provided detailed instruction on how to facilitate the simulation, and provided a framework in which to develop an appropriate simulation. In addition to Keskitalo's insights into the simulation process, other authors' writings provided assistance in developing understanding of the simulation process.

At the heart of the study lay the need to understand teaching and learning within the context of a simulation experience. The literature review assisted in developing this understanding. Although teaching and learning is a complex concept, the literature provided guidance on matters that are relevant to the discussion of simulation-led learning.

While it is possible to become enamoured with the simulation process, thinking that it is the cure for all that ails student learning in Auditing, the literature also tempered the pedagogy's achievements, signposting its potential shortcomings.

CHAPTER 3

CONCEPTUAL FRAMEWORK

3.1 INTRODUCTION

"Education theories underpin educational design, content, delivery, evaluation, assessment, practice, performance and attitude. It is therefore essential that any educational activity, including educational simulations, that is designed to prepare an individual for the real working world, has its groundings in educational theory" (Shepherd, 2017).

Accordingly, in this chapter, I introduce and discuss the conceptual framework that has been chosen to assist in explaining the influence of a simulation-led experience on students' learning. The chapter begins with a brief discussion of education theory, and I draw the distinction between theoretical and conceptual frameworks. Thereafter, I discuss the various components of the study's conceptual framework.

3.2 EDUCATION THEORY

Education theory is a "scientifically supported set of principles designed to explain an educational occurrence, providing a framework for providing interpretation of observations and functioning as a link between research and practice. The research around the theory commonly occurs as a consequence of a hypothesis or an assumption being generated. As the research unfolds, the theory is supported or strengthened (or not) from the data being generated and that research may entail revision of the theory if the data does not provide support to the hypothesis" (Shepherd, 2017).

3.3 THE DISTINCTION BETWEEN THEORETICAL AND CONCEPTUAL FRAMEWORKS

"Although theoretical frameworks are sometimes referred to as conceptual frameworks, these terms are neither interchangeable nor synonymous" (Grant and Osanloo, 2014). In order to allay the confusion that is caused by this practice, it is important to differentiate the two terms.

Grant and Osanloo (2014) defined a theoretical framework as one that is "derived from an existing theory (or theories) in the literature, (and) that has already been tested and

validated by others, and is considered a generally acceptable theory in the literature". A theoretical framework is ordinarily used in quantitative research (Imenda, 2014).

In contrast, a conceptual framework may be defined as a "network … of interlinked concepts that together provide a comprehensive understanding of a phenomenon. The concepts that constitute a conceptual framework support one another, articulating their respective phenomena and establish a framework-specific philosophy" (Jabareen, 2009). The need for a conceptual framework is often borne out of the fact that there is no single theory that can deal with the relevant phenomenon meaningfully (Imenda, 2014).

The process of arriving at a conceptual framework is, in essence, an inductive process whereby small individual pieces (in this case, concepts) are joined together to reveal a more extensive proposal of possible relationships (Imenda, 2014).

Ngulube and Mathipa (2015) recommended that a conceptual framework is best depicted diagrammatically, with the most general concept being placed at the top of the diagram (refer to Figure 3.1 below). The specific concepts that relate to the general concepts are then identified and linked to each other and the general concepts at the top form a conceptual framework for the enquiry, or a map of literature demarcating the boundaries of the study. It is with this recommendation in mind that the diagrammatic depiction of the current study's conceptual framework is shown below in Figure 3.1

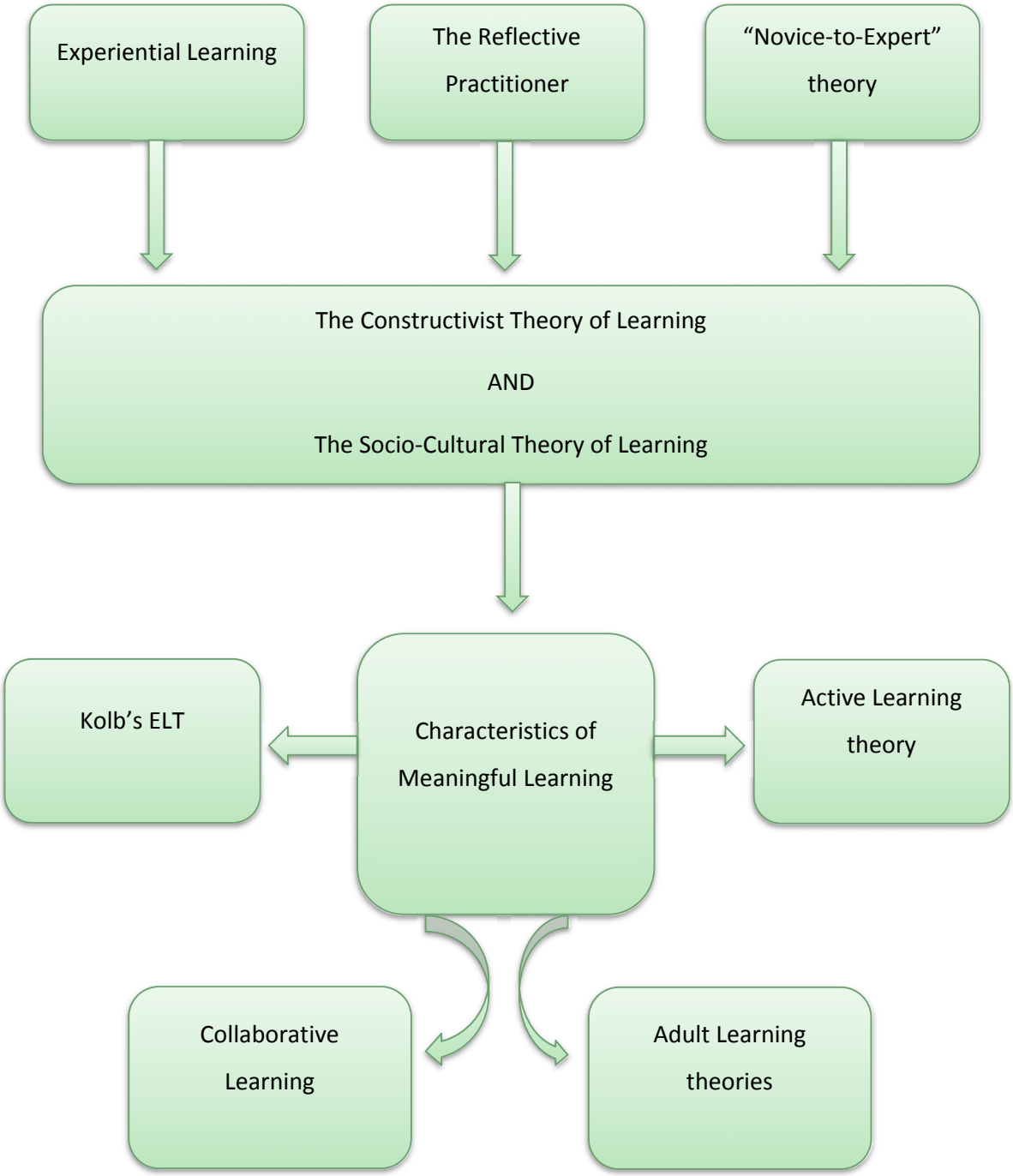

Figure 3.1 Depiction of the current study's conceptual framework

3.4 THE CONCEPTUAL FRAMEWORK FOR THE STUDY

3.4.1 The educational philosophy underpinning the framework

In exploring the underpinning educational philosophy that allows for the realisation of the conceptual framework for simulation in auditing education, two educational philosophies are applicable: the constructivist theory of learning, and the socio-cultural theory of learning, with the former featuring more prominently.

3.4.2 The constructivist theory of learning

The design and implementation of the simulation intervention was informed by constructivist learning theories. The following section outlines the principles that informed the design of the simulation intervention, allowing for the creation of a constructivist learning environment with which to teach the practical application of auditing concepts and skills.

Kerka (1997) said the following of constructivism,

> "Constructivist learning environments offer the potential for locating learning in the ***context*** of real-life situations and problems. They offer a rationale for curriculum integration that connects learning to the workplace. Learning is facilitated through the design of classroom activities that guide students to work ***collaboratively*** with others, set their own sequences and pace of work, and actively engage in problem-solving, critical thinking, and negotiation. It is this domain that allows learners to move from passive observers to ***active learners*** who ***construct knowledge*** by ***integrating*** new information and experiences into what they have previously come to understand, revising and re-interpreting old knowledge in order to reconcile it to the new".

Thus, constructivism establishes a series of principles that must be accomplished during the development of an educational activity. Drawing on Kerka's (1997) understanding of constructivism, the principles may be described as: authentic activities; active; collaborative; constructive; experience and reflection; and shared responsibility and authority.

The principle of *authentic activities* conveys that constructivist learning environments provide the potential of locating learning in the context of real-life situations and problems. They allow for curriculum integration that connects learning to the workplace (Kerka, 1997).

The *active* principle provides that total student participation is required (Zurita & Nussbaum, 2004), and that learning is an active process (Tam, 2000). Students are encouraged to actively participate to discover and construct their own opinions, thoughts, and beliefs (Askeland, 2003). If what learners encounter is inconsistent with their current understanding, their understanding can change to accommodate new experiences (Olusegun, 2015).

The *collaborative* principle provides that learning is best facilitated through the design of learning experiences that require students to work collaboratively with others (Kerka, 1997). Students are encouraged to share their different understandings with each other, testing the degree to which such varied understandings are compatible with each other. The value of such an approach is that it allows students to evaluate whether their own understandings are appropriate, and then to develop new understandings (Savery & Duffy, 1995).

The *constructive* principle of learning provides that knowledge should be constructed by the student, not provided by an educator. Supporters of constructivism assert that people must construct their own understanding and knowledge of the world through experience and subsequent reflection on those experiences (Bereiter, 1994).

The related concepts of *experience* and *reflection* are central to constructivist learning theory. Constructivist learning theory argues that people produce knowledge and form meaning, based on their experiences (Olusegun, 2015). Closely related to the principle of experience and reflection is the notion of reconciling new knowledge to old knowledge, and the concepts of assimilation and accommodation. Assimilation refers to the process whereby a person will incorporate new experiences into old ones, resulting in new perspectives and outlooks, and allowing for previous misconceptions to be rectified. The concept of accommodation involves a “reframing (of) the world and new experiences into the mental capacity already present” (Olusegun, 2015).

The principle of *shared authority and responsibility for learning* states that learning in a constructivist environment is characterised by shared knowledge, authority and responsibility amongst students and educators. Here, the educator's role is one of guide, and the students are typically divided into small, homogeneous groups (Tam, 2000).

The constructivist theory of learning and the study

The simulated audit experience supports the *authentic activities* principle by providing the student with a simulated audit that is modelled on a real audit that would take place in the working world. The detail of the simulated audit is discussed in the methodology chapter which follows this chapter.

The *active* principle is supported by the simulated audit as students are required to perform the audit themselves. They must understand why and how procedures are to be performed; it is not sufficient to simply know what the procedures are. The task of actually performing audit procedures is designed to identify gaps and errors in students' theoretical understanding of what auditing actually entails.

The *collaborative* principle is supported by the simulated audit as the audit is a group exercise, and students are encouraged to share their experiences and understandings with their group members.

The *constructive* principle is supported by the simulated audit, as the facilitator does not provide the answers to the questions posed in the simulation. Students are required to interrogate the information and documentation provided in order to develop their own understanding and answers.

The *experience and reflection* principle is supported by the simulation. Students are required to actually perform audit procedures and to gather audit evidence to support their conclusions. They are encouraged to reflect on their activities to assist in cementing auditing principles and concepts. It is the experience of actually performing the procedure and the reflection on what has taken place that lead to transformative learning that can be carried forward to another experience.

The *shared authority and responsibility for learning* principle is also supported by the simulated audit. While constructivism assumes that the students will take a more authoritative role in the learning experience, the role of the facilitator should not be downplayed. The simulation facilitator adopts an understated stance during the simulation, allowing students to grapple with problems themselves – thereby developing a deeper understanding of the relevant concept. The specific simulation chosen for use during the Auditing project was also carefully interrogated by the facilitator to confirm whether the simulation would allow for students' understanding to be stretched to allow for deeper learning and understanding.

The facilitator's role in the creation of the learning environment

As with all aspects of a simulation-led learning experience, the facilitator's role here is pivotal. In contrast to some opinions, constructivism does make provision for the role of the facilitator, valuing the individual's role as facilitator (educator) and knowledge expert. However, the role of the facilitator is different from that in the traditional classroom. Here, they assist in the construction of knowledge instead of simply reproducing a series of facts (Thirteen, 2017), creating a learning environment that directly exposes students to the material being studied.

In accordance with the constructivist approach to teaching and learning, the focus must remain on the empowerment of the student. It is the facilitator's responsibility to provide the students with learning opportunities that will allow them to test theories through real-world application of their knowledge (Brown, 1998).

Seeking to answer the much-asked question of "what can the educator do to carry out that role?" Brooks and Brooks (1999) developed a framework within which educators can experiment with the constructivist teaching approach. The authors perceived a constructivist educator to be one who will (1) encourage and accept student autonomy and initiative; (2) use a wide variety of materials, including raw data, primary sources, and interactive materials and encourage students to use them; (3) use terms such as "classify", "analyse", "predict", and "create" when considering tasks; (4) allow student responses to drive lessons, change teaching strategies, and modify content; (5) inquire about students' understandings of concepts before sharing his/her own understanding of

the concepts; (6) encourage students to engage in dialogue with the educator, and with one another; (7) encourage student inquiry by asking thoughtful, open-ended questions and then encouraging students to ask questions of each other (8) seek elaboration of students' initial responses; (9) encourage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion; (10) allow wait time after posing questions; (11) provide time for students to construct relationships and create metaphors; and (12) nurture students' natural curiosity.

In addition to general constructivist principles, three constructivist models, Experiential Learning, Schon's (1983) Reflective Practitioner, and the Dreyfus (1984) Five-Stage Model of Adult Skill Acquisition are closely aligned to this study.

3.4.3 Experiential Learning

Experiential learning is aligned with the constructivist theory of learning because, in both, the outcomes of the learning process are diverse and difficult to predict, and students play a pivotal role in the development of their own learning. Experiential learning is grounded in the constructivist theory of learning, and is interdisciplinary in nature. Silo-based learning does not accurately reflect the working world, and the experiential learning classroom experience better reflects the real world.

In order to develop graduates who are both relevant and competitive, many tertiary institutions have started to adopt teaching methods that will allow their students to engage in the learning process (Austin & Rust, 2015). Such an approach provides them with the necessary skills to enter the real working world relatively seamlessly (Schwartz, 2014). Experiential learning is one such method, which essentially creates a bridge between *knowing what* and *applying how* (Askeland, 2003). The bridge emerges as a result of the *doing* and connecting the doing with theoretical knowledge.

Various terms have been used to label the process of learning from experience. John Dewey discussed "learning by doing", while Wolfe and Byrne used the term "experience-based learning" (Gentry, 1990). Lewis and Williams (1994) suggested that "in its simplest form, experiential learning means learning from experience, or learning by doing. Experiential learning first immerses learners in an experience and then encourages

reflection about that experience to develop new skills, new attitudes, or new ways of thinking" (Schwartz, 2014).

The rationale for the adoption of experiential learning within a higher education context is primarily grounded in the utilisation of better teaching methods, and the provision of a vastly improved teaching and learning experience. Within professional disciplines (such as Accounting/Auditing), experiential elements are core to the degree and subsequent career. This is evidenced by students' calls for more practical application, a greater connection to their desired profession, an integrated curriculum, transferrable skills, and assessment and feedback (Porter, 2015).

The very nature of experiential learning means that it can often be difficult to confirm whether an activity is experiential in nature. While many activities have the potential to be experiential, defining them as such depends largely on how they are executed (Chapman, McPhee & Proudman, 1995):

> "Simple participation in a prescribed set of learning experiences does not make something experiential. The experiential methodology is not linear, cyclical, or even patterned. It is a series of working principles, all of which are equally important or must be present to varying degrees at some time during experiential learning. These principles are required, no matter what activity the student is engaged in, or where the learning takes place" (p.43).

Prior to Chapman, McPhee and Proudman's (1995) calls for a series of working principles to assist with the definition of experiential activities, Wolfe and Byrne (1975) proposed that experientially-based learning approaches include four key tasks: design, conduct, evaluation, and feedback.

Suggesting an alternative approach to Wolfe and Byrne's approach, Chapman, McPhee and Proudman (1995) argued in favour of a set of working principles that underpin the activity, and provide guidance in the development of the learning experience.

Chapman, McPhee and Proudman's (1995) principles state that (1) there must be a balance between the experiential activities and the underlying content or theory; (2) the

facilitator must create a safe space for students to work through their own process of self-discovery; (3) as the student is the self-teacher, there must be "meaning for the student in the learning" (this suggests that the learning activities must be personally relevant to the student); (4) experiential activities must allow the student to make the connections between the learning they are doing, and the world; (5) reflection is of paramount importance in experiential learning – students should be able to reflect on their own learning, bringing "the theory to life" and gaining insights into themselves and their interactions with the world; (6) students must be fully immersed in the experience, not merely doing what they feel is required of them – the "process needs to engage the student to a point where what is being learning and experienced strikes a critical, central chord within the learner"; (7) by working within a space that has been made safe for self-exploration, students can begin to analyse and even alter their own values; (8) part of getting students to see their own learning in the context of the whole world is to start showing the relationships between "student to self, student to teacher, and student to learning environment"; and finally, (9) students must be encouraged to step outside of their comfort zones during the learning process – this doesn't just refer to physical environment, but also to social environment (which could include, for instance, "being accountable for one's actions and owning the consequences").

3.4.4 Schon's Reflective Practitioner

Schon's work centres on the concept of the reflective practitioner. He offered a practical epistemology of how the reflective practitioner uses reflection relative to action and experience, referred to as *reflection in action,* and *reflection on action.* Cowan subsequently adapted Schon's ideas, adding a third form of reflection, *reflection for action,* which is anticipatory reflection before a learning activity, based on prior experience and knowledge (Hughes and Scholtz, 2015).

3.4.5 The Dreyfus Five-Stage Model of Adult Skill Acquisition

The Dreyfus Five-Stage Model of Adult Skills Acquisition is grounded in the argument that 'skill in its minimal form is produced by following abstract formal rules, but that only experiences with concrete bases account for high levels of performance". The five stages of expertise are identified as novice, advanced beginner, competent, proficient, and

expert, and the model focuses on four mental tasks, namely components, perspective, decision, and commitment (Dreyfus, 2004).

Defining these terms is central to developing an understanding of the model. With reference to the four mental tasks: the term “components” refers to the “elements of the situation the individual is able to perceive”; the term “perspective” refers to the selection of elements or situations of the problem that are important to focus on; the term “commitment” refers to the extent to which the individual is in the outcomes of the learning situation, as well as understanding and deciding how to address the issue; finally, the term “decision” refers to how individuals reach a decision, either analytically or intuitively (Dreyfus, 2004).

At the heart of the model lies the path that the individual must follow in order to progress from novice status to that of an expert. According to Dreyfus (2004), individuals must progress through each stage of expertise, drawing on previous problem-solving experiences in order to reach higher levels of expertise.

At the *novice* level, the individual’s behaviour is rule-governed, with the novice needing structure and rules to guide their performance (Dreyfus, 2004). The progression from novice to advanced beginner is characterised by repeated application of the facts and rules to real situations. It is in the repetition that the individual begins to associate the facts and rules with the context in which the tasks are located. In turn, it is this association that can then be taken forward to new situations (as experience) (Honken, 2013).

At the *advanced beginner* level, the individual begins to recognise patterns within activities. However, he/she is still unable to distinguish what is relevant to the particular situation. He/she still searches for predictability and certainty, assuming that there is one best way to perform the task and that there is someone (an expert) who will know how to perform the task. Advanced beginners typically search for books and experienced people who have “the answers” (Dreyfus, 2004).

It typically takes an advanced beginner two years of relevant experience to progress to the *competent* level. At this level, the individual’s performance is efficient, organised,

analytical and planful. They have developed conscious goals and plans, and take personal emotional responsibility for the task outcomes (Dreyfus, 2004). Although competent individuals do still refer to rules and make use of analytical processes, increasingly they begin to rely on their past experiences when deciding what elements of the situation to focus on (Honken, 2013).

At the *proficiency* level, the individual is able to see the "big picture". The individual has now accumulated a store of personal professional knowledge and intuition, and is able to synthesize individual components into the so-called "whole" (Honken, 2013).

Having journeyed along the path, the destination is *expert* performance. Here, the individual not only sees what needs to be done, but also sees the solution without having to go through the analytical process. At this level, the individual is totally immersed in understanding the situation, making decisions on how to proceed, and in the outcome of the situation (Honken, 2013).

3.4.6 The socio-cultural theory of learning

Several theoretical perspectives have been offered to explain how social interaction leads to higher levels of reasoning and learning (Palincsar, 1998); Vygotsky's (1978) sociocultural theory of human learning features prominently. The theory describes learning as a social process, with learning taking place on two levels: firstly, through interaction with others, and secondly, as it is integrated into the individual's mental structure.

One of the major constructs emanating from Vygotsky's writings (and pertinent to the current study) is that of the *Zone of Proximal Development* (ZPD). The term describes the distance between the actual development level as determined by independent problem-solving, and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers (Mutekwe, 2018). Collaborative learning (relevant to simulation learning) is an example of a strategy to support the intellectual knowledge and skills of learners and facilitate intentional learning.

While the ZPD has become synonymous in the literature with scaffolding, Vygotsky never used this term in his writings. It was introduced by Wood et al to imply that, having had the benefit of scaffolding, the student will be able to master the task on his own and the scaffolding can be removed (Mutekwe, 2018).

3.4.7 Characteristics of meaningful learning in simulation-led learning environments

A theoretical understanding of the characteristics of meaningful learning

The concept of meaningful learning was first presented by Ausubel (1968) and later expanded on by many authors in various contexts (Keskitalo, 2015). It is rooted in constructivism (Cadorin, Bagnasco, Rocco, & Sasso, 2014), which has been identified as one of the two educational philosophies that allow for the realisation of the conceptual framework for simulation in auditing education.

According to Ausubel, "the most important single factor influencing learning is what the student already knows". Ausubel's understanding of knowledge construction is consistent with the constructivist perspective of learning, with both approaches suggesting that knowledge construction occurs when the student is able to relate new, relevant information to existing knowledge in a connected and coherent way (Vallori, 2014). Here, learning requires a re-working and transformation of already-acquired knowledge, as opposed to a supply of new, unique knowledge (Cadorin, Bagnasco, Rocco, & Sasso, 2014).

Wong (2015) reported several learning outcomes that arise out the meaningful learning process, including learning how to recognise and solve problems, comprehending new phenomena and constructing mental models of those phenomena, and setting goals and regulating their own learning (that is, learning how to learn). Such learning outcomes are highly desirable and are associated with a "student-centred learning" approach which is preferable to the traditional "teacher-centred teaching" approach normally seen in classrooms.

Wong (2015) noted that meaningful learning activities need to be active, constructive, intentional, authentic, and cooperative in nature, in order for real learning to take place – where "learning" is defined as an experience-based process that generates long-term

behavioural change, as well as the acquisition of knowledge, abilities, and competence (Cadorin, Bagnasco, Rocco, & Sasso, 2014). Cadorin, Bagnasco, Rocco, & Sasso (2014) also identified the principles of "change", and "developed through experience" as being relevant to meaningful learning.

Characteristics of meaningful learning used in this study

The characteristics (features) of meaningful learning used in the present study were previously used by Keskitalo (2015) in a study of simulation-led learning for healthcare educators. While the context of that study was unrelated, the overarching objective is similar. I have chosen to adopt Keskitalo's (2015) approach because it is with these theoretical viewpoints in mind that the auditing simulation facilitator can also plan, implement, and evaluate the entire educational process in order to assess and enhance the quality of students' learning experiences.

Keskitalo (2015) used fourteen characteristics of meaningful learning (well in excess of that which is generally utilised) to describe, foster, and evaluate students' meaningful learning in simulation-led learning environments. They are *experiential, experimental, emotional, socio-constructive, collaborative, active, responsible, reflective, critical, competence-based, contextual, goal-oriented, self-directed, and individual.*

The characteristics of meaningful learning can be used to create a good basis for learning. Since they take the approaches of various learning theories into account, they can help to create learning experiences that are more holistic and meaningful (Keskitalo, 2015).

Following the approach proffered by Keskitalo (2015) (Table 3.1 below), I now present *what* these special characteristics are, *how* they can be understood and implemented in these particular learning environments, and *why* it is important to take them into account.

Table 3.1. Characteristics of meaningful learning, and their practical implications

Characteristics	
1. Experiential 2. ***Experimental***	**What?** Using prior experiences as a starting point for learning (Kolb, 1984; Zigmont et al, 2011), but also having a valuable opportunity to experiment with new tools, devices, situations, roles, theories etc. before entering the (auditing) profession. **Why?** Former experiences guide our behaviour and learning (Dieckmann, 2009), and should be taken into consideration. Concretely doing and experimenting, as well as making sense of these experiences is the essential aim of simulation-led learning (Keskitalo, 2011, 2012; Kolb, 1984). **How?** The *environment* and *tasks* make it possible for students to engage in active examination and experimentation. The *facilitator* takes into account the students' prior experiences and actively encourages them to use these experiences in learning and in responding to opportunities to acquire new ones. *Students* utilise, reflect on, and accommodate prior experiences and engage in acquiring new ones.
3. Emotional	**What?** Simulation-led learning is designed to generate emotional experiences. Emotional responses should be taken into account during the debriefing phase (Keskitalo et al, 2010).

	Why? Emotions are always entwined with learning (Engestrom, 1982) especially in simulation-led learning. Emotions affect motivation, but they also have an impact on how students act in the learning environment and on what they remember later on (Damasio, 2001; DeMaria et al, 2010; Triqwell, 2012). Therefore, we should take them into account. **How?** The *environment, scenarios,* and *materials* are constructed to generate emotions (DeMaria et al, 2010). The *facilitator* prepares the students for the forthcoming learning event during the introduction and simulator and scenario briefing phases, as well as taking emotional responses into account e.g. during the debriefing (Dieckmann and Yliniemi, 2012). *Students* are willing to engage and reflect on their feelings and consider the influence of their feelings on their motivation, activity, work etc. (Keskitalo et al, 2010).
4. Socio-constructive 5. ***Collaborative***	**What?** Students evaluate and accommodate new ideas on the basis of their previous knowledge during the joint learning process (Dolmans et al, 2005; Jonassen, 1995; Keskitalo, 2012). **Why?** In most cases, simulation-led learning is designed to be a collaborative undertaking. The aim is for students to participate in the enquiry process and gradually accumulate knowledge.

	How? The *environment, tasks,* and *material* support students' knowledge construction and collaboration. The *environment* can include tools with which knowledge can be retrieved and stored for later use. The *facilitator* develops tasks that are based on students' prior knowledge, conceptions, and beliefs and that require collaborative activity (e.g. Fanning and Gaba, 2007). He/she also directs the collaborative activities and knowledge construction. The *students* participate in the interaction, bringing their knowledge, understanding, and skills to the joint activity and discussion. They apply and practice knowledge and skills using different senses, learning strategies, roles etc. (Merrienboer and Sweller, 2010).
6. Active 7. ***Responsible***	**What?** The student's role is active, and the student is responsible for his own learning. The facilitator guides rather than lectures (Fanning and Gaba, 2007). **Why?** Simulation-led learning environments are designed to be replicas of real working life. The purpose of the simulation-led learning environment is for students to learn to manage the necessary skills and knowledge in order to work as skilful auditing professionals. Therefore, we should encourage students to work as they would in real life. **How?** The *environment* supports student activity. In addition, the *assignments* and the *learning materials* support students'

	active information retrieval, evaluation, and construction. The *facilitator* plans meaningful learning activities and encourages the students to apply their knowledge and practice skills during the learning process (Alinier, 2011). The *students* are active and responsible in the practicing, retrieval, evaluation, and application of knowledge as well as in discussion and reflection (Issenberg et al, 2005).
8. Reflective 9. ***Critical***	**What?** Critical reflection on one's own learning, learning strategies, knowledge, skills, attitudes and the learning environment (Fanning and Gaba, 2007; Hakkarainen, 2007; Jonassen, 1995). Experience itself is only a part of what is necessary, as students have to assimilate what they are experiencing into their body of knowledge **Why?** Critical reflection on the learning process is often considered to be the most critical phase of simulation-led learning as it enhances the students' learning. **How?** The *environment* includes things that support the students' reflection (e.g. video camera, TV, peaceful and pleasant room, safe atmosphere, competent instructor etc.) In addition, *assignments* (e.g. a reflection journal) can support students' reflection. The *facilitator* supports the students' reflection by asking questions, specifying, elaborating, guiding etc. The *students* reflect on their own learning processes and the decision making that was involved in these processes.

	Students give and receive feedback
10. Competence-based 11. ***Contextual***	**What?** Learning is contextual. Thus, learning objectives are simulated through real-life cases and examples that have their origin in working life (Alinier, 2011; Jonassen, 1995; Keskitalo, 2011). **Why?** Information is best learned when it is taught and practiced in a context that resembles real life (Bransford et al, 1999). The aim of the simulation-led learning is to educate skilful and adult professionals who have the ability to demonstrate the actions and skills needed in real working life (Anema, 2010). **How?** The *environment* includes authentic tools and devices which are embedded in real-life cases (Alinier, 2011). Content is simulated through real-life cases and presented in a variety of ways and from different perspectives (Dolmans et al, 2005). The *learning objectives* are based on the competence that is required in real working life (Harden et al, 1999). The *facilitator* plans appropriate and sufficiently authentic scenarios for the students' learning and formulates the learning objectives together with the students, if possible. This engages them better in learning, and makes them conscious of the competence they will need to have in the future (Schuzt et al, 2002; Gibbons et al, 1980). The *students* try to find out solutions and different perspectives on the issues and compare the learning situation to the real world (Schuzt et al, 2002).

12. Goal-oriented 13. ***Self-directed***	**What?** Setting general learning objectives as well as one's own learning goals and following up on those goals during the learning process (Jonassen, 1995; Keskitalo, 2012; Keskitalo et al, 2010, 2014). **Why?** Goals direct out thoughts, behaviour, and strategies, and without clear goals, it is difficult to find ways to solve problems (Dieckmann, 2009). Simulation-led learning also about educating adult learners who are self-directed and intrinsically motivated by nature (Fanning and Gaba, 2007). **How?** The *environment, assignments,* and *materials* support the planning, follow-up, and evaluation of students' own learning. In simulation-led learning environments, video recordings, discussions, learning diaries, observational ratings, tests etc. can be used to evaluate learning. The *facilitator* supports, guides, and maintains the students' learning processes. The facilitator models, encourages, and gives timely support. The *students* set their own learning goals and actively try to fulfil them.
14. Individual	**What?** Taking into account individual preferences; providing individual guidance and feedback (Hakkarainen, 2007; Keskitalo et al, 2010; 2014). **Why?**

	Learning is different for every individual (De Corte, 1995), and students perceive the learning environment differently. Therefore, individual differences should be considered wherever possible (Alinier, 2011; Zigmont et al, 2011a). **How?** The *environment, assignments,* and *materials* support different learning styles. The environment can be changed to meet various needs. The *facilitator* familiarises him/herself with the students and gives individual feedback and support. The *students* can train using strategies that are best suited to them, and receive individual feedback about their own learning.

Source: Kestikalo, T. 2015. Developing a pedagogical model for simulation-led healthcare education.

3.4.8 Kolb's experiential learning theory

The experiential learning theory (ELT) (Kolb, 1984) was introduced in Chapter 2 of this thesis. The ELT has been used frequently as a framework for understanding how learning from experience occurs (Carroll, 2009). It is an effective and credible framework, and it is often the main, or only, theory referred to in many works on experiential learning (Healey & Jenkins, 2000).

The ELT model may be used to understand the various stages of learning, and the different ways in which people receive and process new knowledge (Akella, 2010). According to Kolb (1984), "Learning is the process whereby knowledge is created through the transformation of experience". Learners respond to a learning situation by experiencing (CE), reflecting (RO), thinking (AC) and finally acting (AC) on what they have learnt (Kolb & Kolb, 2009).

Kolb (1984) described the ELT model as a four-stage cycle involving four modes of learning: Concrete Experience (CE), Reflective Observation (RO), Abstract

Conceptualization (AC), and Active Experimentation (AE). The model is a simple description of the learning cycle that "describes how experience is translated through reflection on concepts, which could be guides for active experimentation and the choice of new experiences" (Akella, 2010).

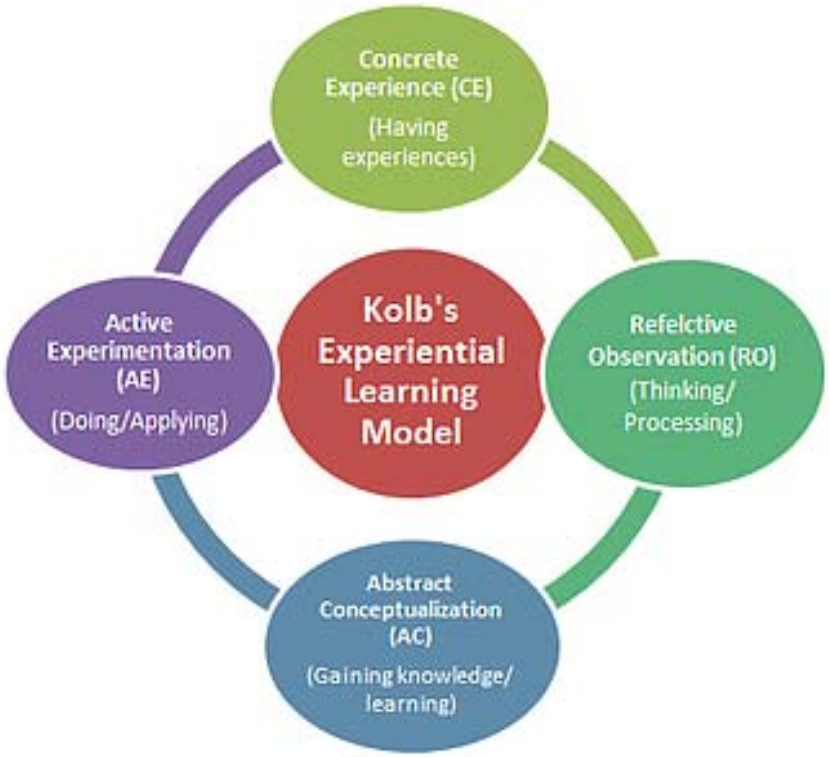

Figure 3.2: Kolb's ELT Model – simplified version

Source: Akella, D. 2010. Learning together: Kolb's experiential theory and its application. *Journal of Management and Organisation,* vol. 16, no. 1, 100–112.

Despite being a description of the learning process in general, Kolb's ELT emphasises the need for experience and reflection (Akella, 2010). Without reflecting on their experiences, students often make the same (or similar) mistakes. Reflection creates opportunities not only for the student to understand what has happened, but also to ask and answer questions related to the activities. In turn, this allows students to incorporate new understandings into their existing knowledge, thereby increasing knowledge and overall learning effectiveness (Akella, 2010).

A brief description of the four stages is appropriate (Brock & Cameron, 1999; Akella, 2010; Kolb & Kolb, 2011):

The CE stage provides the basis for the learning process; wanting to involve the participant personally. During the RO stage, the individual will attempt to make sense of the concrete experience, indicating why and how it occurred. Reflection assists the individual in dividing up their experiences into parts and categorising them for the next stage of the learning process. During the AC stage the individual begins to develop a deeper understanding of general concepts that were lived during the concrete experience. This is done by reflecting on key aspects of the experience that came to light during the experience, and then bringing these concepts (thoughts) together in a general model. In contrast to the CE stage, where the individual needed to be open to all eventualities, they are now required to adopt a logical approach in order to understand situations and problems. Here, the students may require assistance from the text (theory) and the facilitator to be able to proceed to the next stage. Finally, during the AE stage, the individual will incorporate and test the theories (developed during the previous stage) in new experiences, and use them to serve as guides when creating new experiences.

The ELT model introduced a fundamental, yet pioneering, understanding of the concept of learning. In order to understand how learning takes place within the Kolbian model, a deeper understanding is required of the model itself.

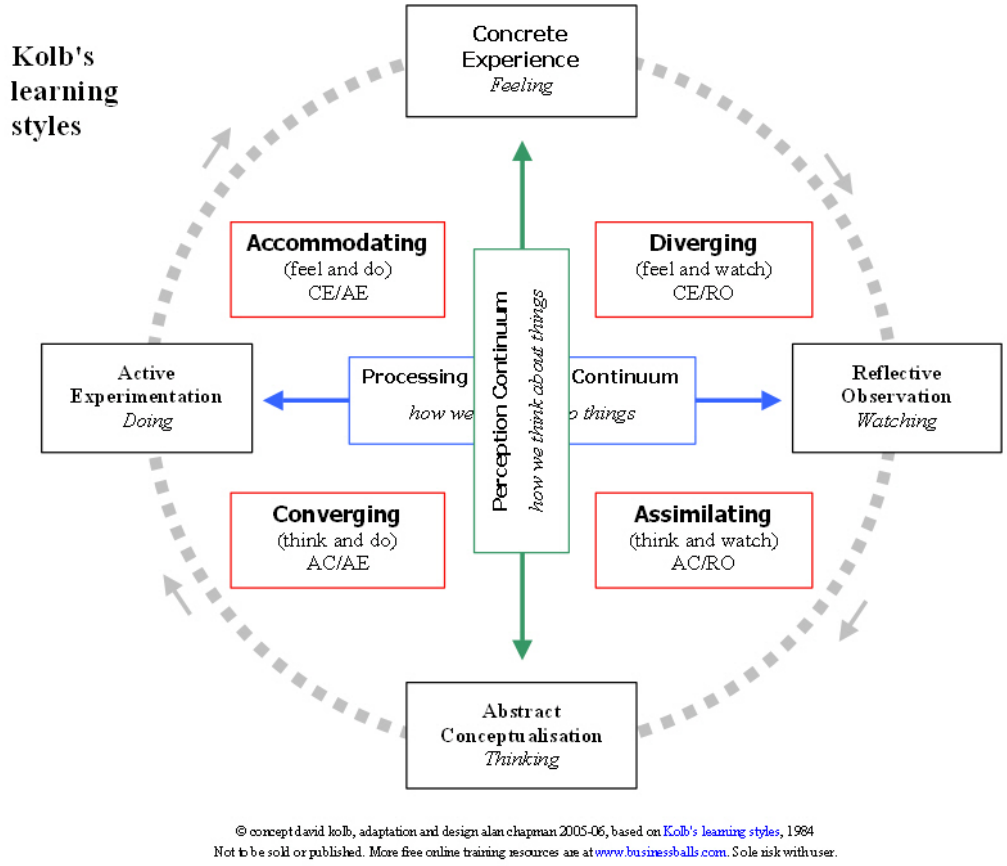

Figure 3.3: Kolb's ELT Model – detailed version

Source: Kolb, A.Y. & Kolb, D.A. 2011. *Experiential learning theory: A dynamic, holistic approach to management learning, education, and development*. [Online]. Available WWW: https://weatherhead.case.edu/departments/organizationalbehavior/working-Papers/WP-07-02.pdf [Accessed: 21 April 2017].

As may be seen above, there are two primary axes that lie behind the cycle: an abstract conceptualization – concrete experience (AC – CE) vertical axis, or dimension, and an active experience – reflective observation (AE 0 RO) horizontal axis, or dimension (Kolb & Kolb, 2011). These two axes reflect the two main dimensions of the learning process, corresponding with the two major ways by which individuals learn (Healey & Jenkins, 2000).

The first dimension (AC – CE axis) addresses how an individual perceives or grasps new information or experience, and the second addresses how they process or transform what they have perceived. The manner in which experiences may be perceived ranges

from becoming (fully) immersed in the experience (using one's senses and feelings in a concrete way) to thinking abstractly (by using logic and reason). Thereafter, having perceived the experience, it is necessary to understand it by transforming the experience. Again, the manner in which this process takes place can vary from person to person, with some preferring to 'do' (that is, active experimentation), while others prefer to 'watch' (reflective observation) (Healey & Jenkins, 2000).

Two important aspects may be highlighted here. Firstly, it is clear that learning requires abilities that are complete opposites, and that the individual must frequently choose which set of learning abilities to bring to the fore during a particular learning task. Secondly, both sets of abilities are required for learning to take place. Kolb (1984) stated that, central to his model, is the fact that learning (and therefore knowing) requires

> "… both a grasp or figurative representation of experience, and some transformation of that experience. Either the figurative grasp or operative transformation alone is not sufficient. The simple perception of experience is not sufficient for learning; something must be done with it. Similarly, transformation alone cannot represent learning; there must be something to be transformed, some state or experience that must be acted upon" (p.41).

Although the cyclical nature of the model may suggest that students need to stick to the process rigidly, the purpose of the model is not to create a rigid learning pattern. Instead, the model seeks to summarise all stages of effective learning, so that they can be incorporated into the curriculum/course design and requirements. The overriding requirement of the Kolbian model is that educators should create learning opportunities using all four learning stages, and that students have the opportunity to use their preferred learning style, while still developing the other three styles (Brock & Cameron, 1999).

Kolb's (1984) understanding of the learning process has been borne out in several empirical studies. For example, Herz and Merz (1998) discovered that students believed that participation in simulation contributed to all four stages of Kolb's leaning cycle. Within the context of the simulation, their students indicated that they had learnt abstract theories and concepts during lectures, readings and discussions (abstract

conceptualization). The students took part in the simulation itself, performing their roles within the simulation, and developing goals that they wished to achieve (concrete experience). Next, the students developed strategies to achieve their goals and experiment with their strategies (active experimentation and concrete experience). Finally, they reflected on their actions, choices, and the outcomes (reflexive observation) (Shellman & Turan, 2006).

Wolmarans (2006) also provided guidance on what would take place as a student moved through Kolb's learning cycle. He reported that after attending a lecture (i.e. the concrete experience), a student may reflect on what they have been told or has observed (i.e. reflective observation). Conceptualization requires the student to ask: 'what can I learn from this, and apply elsewhere?' (i.e. abstract conceptualization). In the experimentation stage, the student applies this knowledge under other circumstances (i.e. active experimentation), which leads to a new experience and the cycle continues.

Concrete experiences can engage students' minds and emotions, providing them with the opportunity to bridge the gap between the academic and the real world. The more relevant the experience is to the student's circumstances, the more likely they are to become immersed and involved in the experience (Brock & Cameron, 1999). The objective, of providing the auditing students with the opportunity to apply their theoretical understanding of auditing to a close-to-real audit, is just this. That is, to provide them with the opportunity to make the jump from theory to practice.

Techniques that provide opportunities for reflective observation include "leading or arranging discussion and brainstorming sessions, asking rhetorical questions in lectures, providing questions related to the course readings, and/or asking students to keep journals of write logs as they reflect" (Brock & Cameron, 1999). Techniques that were adopted during the study are described in detail in the following chapter.

Abstract conceptualization can be nurtured by a variety of methods, including "model-building assignments, asking for critique of models in the literature, assigning readings, and/or providing analogies or descriptions of models and theories in lectures" (Brock & Cameron, 1999). What is essential at this stage of the process is that the facilitator is seen to be 'thinking out loud'; this provides students with an example of how to learn to think

too. Where the facilitator only provides solutions to problems that students have been grappling with, they may find it difficult to replicate the processes that result in higher-level learning; in essence, the students need to see how the facilitator arrives at the answer (Brock & Cameron, 1999). During the study, the facilitator needs to observe from a distance, allowing students to grapple with the issues at hand, but willing to discuss the matters when asked. This approach, relating to this study, is discussed in detail in the following chapter.

Activities that encourage active experimentation include simulations. The emphasis is on 'hands-on doing', using models or theories to provide practical or useful outcomes (Brock & Cameron, 1999). Thus, the simulation serves a second purpose (that is, in addition to being the concrete experience). During the simulation used for the current study, students had the opportunity to revise the way they approach tasks, actively experimenting with an alternative approach.

3.4.9 Other educational theories

In their exploration of educational theories of simulation, Breckwoldt, Gruber & Wittman (2014) offered some insight into the lack of a coherent, specific theory of simulation learning. The authors suggested that, while there are many theories of learning and instruction that offer plausible explanations for why particular forms of simulation learning are effective, there does not appear to be an all-encompassing education theory of simulation learning. Instead, they observe that "theoretical accounts of simulation learning tend to be eclectic", with theoretical explanations for simulation's learning efficacy being found in different approaches which individually focus on particular aspects of learning that are inherent to the process of simulation-led learning.

Instead of being critical of this state of affairs, they remarked that "We do not deplore this situation, but consider that it supports the strength of simulation learning. It might be deplored, however, that the lack of a unified theory of simulation learning is responsible for the lack of coordination of research on simulation learning" (Breckwoldt, Gruber & Wittman, 2014).

In addition to those theories and concepts already explored above, a review of simulation-related literature revealed several additional theories and concepts that are relevant to learning in a simulated environment, including active learning, two related adult learning theories and collaborative learning.

3.4.10 Active learning

Bonwell and Elison define active learning as "anything that involves students in *doing things* and *thinking about the things* they are doing" (Graffam, 2007). Active learning places the responsibility for learning on the students, and has become popular particularly in business programmes in higher education (Drake, 2012). Active learning provides the means to help students become more engaged in the learning process. It creates classroom environments where students not only acquire knowledge, but where they are also given the opportunity to apply this knowledge in ways that are similar to those they will face in their future careers (Drake, 2012). For learning to be active, learners need not only to do something, but also need to reflect on what they are doing (Graffam, 2007).

The effectiveness of active learning strategies depends primarily on the teacher and the way that he or she understands his or her role in the classroom. The teacher's main role is to plan and design classroom situations that will provide active learning experiences. He or she should also make students aware of the related teaching goals, methods to be applied and expected learning outcomes (Peko and Varga, 2014). In active learning environments, teachers focus less on the content and more on stimulating reflection reviews of the nature of the knowledge developed. Learning experiences are designed to allow students to grapple with ill-structured problems (Graffam, 2007).

Designing active learning engagements means finding ways to activate the learners' experiences so their previous world comes into direct contact with the new world being explored. This combination, when followed by meaningful reflection, builds frameworks upon which new learning functions (Graffam, 2007).

Active learning approaches often utilise cooperative learning groups, a constructivist-based practice that places particular emphasis on the contribution that social interaction

can make (Brame). According to Vygotsky (1978), learning takes place when students solve problems beyond their current development level with the support of their instructor or their peers. Therefore, active learning approaches that rely on group work rest on the sociocultural branch of constructivist learning theory, leveraging peer-peer interaction to promote students' development of extended and accurate mental models (Brame)

Active learning is very different to passive learning, although passive learning is important to the learning process too, and its role should not be downplayed. However, as a method, it fails to connect students directly with the knowledge and skills that they need to learn (Graffam, 2007).

The difference is not just observable, it is ideological (conceptual). Whereas passive learning presupposes that knowledge can be transferred from one person to another, active learning presupposes that all knowledge is constructed by the learner. Each offers a very different kind of epistemological underpinning. Passive learning perceives knowledge as a commodity, whereas active learning perceives knowledge as an experience created by the individual's meaning making process (MacLellan, 2005).

The theoretical basis for active learning may be described as follows: Constructivist learning theory emphasizes that individuals learning through building their own knowledge, connecting new ideas and experiences to existing knowledge and experiences to form new or enhanced understanding (Graffam, 2007). The theory posits that learners can either assimilate new information into an existing framework, or can modify that framework to accommodate new information that contradicts prior understanding. Approaches that promote active learning often explicitly ask students to make connections between new information and their current mental models, extending their understanding. In other cases, teachers may design learning activities that allow students to confront their misconceptions, helping students reconstruct their mental models based on more accurate understanding. In either case, approaches that promote AL promote the kind of cognitive work identified as necessary for learning by constructivist learning theory (Brame).

3.4.11 Commentary – a prelude to the discussion of education theories in an adult learning context

While university students may not necessarily generally be considered adult learners, Askeland (2003) suggested that experiential learning takes adult learning principles into account. The adult learning theories discussed below are thus considered relevant and appropriate to the discussion of learning in a simulation context.

3.4.12 Adult Learning theory (Andragogy)

The first additional education theory identified is Adult Learning theory or Andragogy, where Andragogy is refers to the teaching of adults (Zigmont, Kappus, & Sudikoff, 2011). There are a number of theorists that support the notion of adult learning, including John Dewey. However, from a contemporary perspective, the works of Malcolm Knowles dominate the literature and its applications (Shepherd, 2017).

Breckwolt, Gruber, & Wittman (2014) suggested that simulation-led learning addresses the essential principles of adult education, and it appears appropriate to foster adult learning. The approach employs a genuinely learner-centred approach, and it facilitates learning as described in Kolb's (1984) cycle of experiential learning.

The use of personal experiences is a basic tenet of adult learning, as well as of reality-play and simulation (Askeland, 2003). From the works of Knowles (1985), the underlying premise of andragogy is based on a range of quite specific assumptions about how adult learners learn (Shepherd, 2017).

Knowles's theory can be stated with six assumptions related to the motivation of adult learning: (1) ***the need to know*** – adults need to know the reason for learning something; (2) ***foundation*** – experience (including making mistakes) provides the basis for learning experiences and activities; (3) ***self-concept*** – adults need to be responsible for the decisions related to their own education. They need to feel involved in the planning and evaluation of their learning activities; (4) ***readiness*** – adults are most interested in learning activities that have immediate relevance to their work and/or personal lives; (5) ***orientation*** – adult learning is problem-centred, rather than content-oriented; and (6) ***motivation*** – adults respond better to internal rather than external motivators (Knowles, 1985).

Adult learning theory and the study

- ***The type of learning experience presented***

The notion of being *self-directed and self-regulated* (Knowles, 1985) suggests that they will learn what they want to learn, when they perceive the need for this learning. Their readiness to learning is triggered by a need to know how to perform more effectively in an aspect of one's life (Zigmont, 2010).

Zigmont (2010) suggested that such "readiness" cannot be imposed on students; "as educators, we cannot force students to learn. Instead, we must explain the relevance the learning has on their work and help them to make decisions about how, when, and why to learn. In this way, the educator serves as facilitator of learning, rather than a "teacher"".

The relevance of the simulation-led learning experience was repeatedly emphasised during the current simulation experience, particularly during the pre-simulation briefing where the link between the university experience and practical auditing was explored. In addition, students were provided with learning objectives for the simulation experience during the pre-simulation briefing.

The concept of being self-regulated requires a student-centred approach (Zigmont, 2010) and is closely linked to the concept of being self-directed. In adopting a self-directed stance, the participant is able to take responsibility for his/her own learning, rather than relying on the "teacher" to assume responsibility for what is taught.

The *intrinsic motivation to learning* (Knowles, 1985) is fundamental to adult learning. Ryan and Deci (2000) observe that, for adults, learning is not its own reward. In contrast, their motivation to learn is rooted in their belief that the learning will have positive practical outcomes that are concrete and immediately useable. Essentially, adults are motivated to learn by the need to solve problems (Breckwolt, Gruber, & Wittman, 2014).

- ***The impact of experience on learning***

Students' *previous knowledge and experiences* are acknowledged as a resource for learning (Zigmont, 2010; Kolb, 1984). However, as Zigmont (2010) observed, the

challenge for educators lies in "how to activate relevant prior knowledge and elicit participants' experiences, to allow the student to explore the old and the new side by side". While Zigmont (2010) suggested the use of guided reflection to achieve these aims, the current study's participants lacked practical audit context, thereby requiring the facilitator to rely on developing students' abilities to link their theoretical understanding to the current, practical scenario.

A foundation of previous knowledge and experience permits adults to *form mental models,* which govern their behaviour, and guide learning and practice (Zigmont, 2010, Kolb, 1984). While Kolb (1984) advocates this activity as an essential part of the learning process, Zigmont (2010) and Eckert and Bell (2009) caution that entrenched mental models are often relied upon even in the face of contradictory evidence. In the current study, this anomaly has been addressed through the use of feedback and reflection in order to destabilise participants' mental models where needed.

The concept of *analogical reasoning in learning and practice* is also relevant within the context of simulation-led learning. Adults use analogical reasoning to adapt or connect their existing mental models to new information (Zigmont, 2010). Where the connection proves successful, the analogy (that is, similarity or likeness) between the previous and the current situation is deemed feasible, thereby allowing the new experience to be integrated into the student's existing mental model (Seel, 2006). Put differently, the ability to reason via analogy to integrate new experiences into mental models enables individuals to transfer knowledge from their past experiences to use in new situations (Zigmont, 2010). From the simulation facilitator's viewpoint, simulations may be designed that accentuate students' existing mental models, thus helping the simulation participants to identify areas where they need and want to learn (Zigmont, 2010). Significantly, Adult Learning theory principles allow educators to facilitate the education process, while allowing adults to self-regulate their learning and focus on their own learning objectives (Zigmont, 2010).

3.4.13 Self-directed learning

Self-directed learning is an essential element in problem-based learning and, in a broader sense, student-centred learning (Silen and Uhlin, 2008). It may be considered an essential

element in simulation-led learning (with simulation-led learning displaying many of the same characteristics as problem-based learning). Self-directed learning as a concept was born and examined thoroughly within the tradition of adult education (Silen and Uhlin, 2008).

Hiemstra (1994) provided an overview of important aspects of self-directed learning, adding credibility to the argument that self-directed learning is inexorably linked to simulation-led learning. The author states that, within a self-directed learning environment, individual learners become empowered to take increasingly more responsibility for various decisions associated with the learning endeavour. Self-direction is best viewed as a continuum or characteristic that exists to some degree in every person and learning situation; within a self-directed learning environment not all learning takes place in isolation; such learners appear willing and able to transfer learning, in terms of both knowledge and study skill, from one situation to another; such learning activities can involve various activities and resources e.g. self-guided reading, participation in study groups, reflective writing activities; and effective roles for teachers in self-directed learning are possible e.g. promoting critical thinking.

Self-direction in learning is a term recognising both external factors that facilitate a student taking primary responsibility, and internal factors that predispose an adult to accepting responsibility for learning-related thoughts and actions. The extent of self-directed learning can be viewed on a continuum, with optimal learning conditions existing when the learner's level of self-direction is balanced with the extent of to which self-directed learning opportunities are possible (Hiemstra, 1994).

While early research focused on external factors that facilitate self-directed learning (such as implementing learning activities, available learning resources), more recent research has focused on understanding internal factors that equip students with the ability to engage in self-directed learning, such as self-concept, readiness for self-direction, the role of experience, and learning styles of some of the characteristics (Hiemstra, 1994).

Self-directed learning and the study

Although writing in the context of medical education, Towle and Cottrell (1996) offered insights that may be extended to Auditing education too, thereby supporting the

inclusion of self-directed learning in the current conceptual framework. The authors suggested that medical (and auditing) education needs to be a lifelong learning process, but that this process demands more than simply keeping abreast of latest developments. They argued that it requires a reflection on practice to permit the incorporation of new experiences, the relating of present circumstances to previous experiences, and the re-organisation of current experiences based on this process. They point to shortcomings in traditional medical education (which can mostly likely be levelled at auditing education too), suggesting that medical teachers have incorrectly focused their attention on what they teach (e.g. the need to "cover the subject" in lectures), instead of finding ways to help students learn effectively and efficiently. In turn, this has done little to assist students develop lifelong learning skills.

In support of self-directed learning, Silen identifies two dialectic relationships that are created when students are challenged to take responsibility for their own learning.

In respect of the first dialectic relationship, Silen suggested that during the self-directed learning process students fluctuate between "chaos" (frustration, disorientation) and cosmos (the heavens; structures that they have constructed themselves). It is in this struggle, which is similar to the learning situation described within the context of Kolb's (1984) theory of experiential learning, that learning takes place. It is in the struggle to make sense of a myriad of confusing facts and terms that chaos reveals cosmos. Silen and Uhlin (2008) suggested that it is the relationship between chaos and cosmos that creates the driving force that pushes the student to grapple with questions similar to teachers' traditional educational questions: *what* is to be learned, *how* should it be learned, *why* should the students learn certain things, and what are the *objectives* of the learning process and how are they attained?

The second dialectic relationship that emerges in self-directed learning points to students' need for collaboration with their lecturers / facilitators on the way to becoming self-directed. The educational framework in use and the manner in which teachers chose to implement it, creates (or hinders) opportunities for students to influence their own learning (Silen and Uhlin, 2008).

Towle and Cotrell (1994) provided examples of self-directed learning activities that can be used to encourage and/or facilitate self-directed learning. Several of these activities are present in the current study, thereby enhancing students' opportunities to take responsibility for their own learning.

Towle and Cottrell's (1994) examples of self-directed learning activities and guidance on course-related features, and their associated incorporation into the current study are detailed In Chapter 3 as part of the analysis of the simulation experience.

3.4.14 Collaborative learning – theoretical foundations

Although there is little agreement on the definition of collaborative learning, Laal and Laal (2011) suggested that a good way to understand what is meant by collaborative learning is to refer to definitions developed by various experts in the field.

MacGregor (1990) referred to collaborative teaching and learning as a teaching approach that involves students working together to solve a problem, complete a task, or create a product. Later, MacGregor and Smith (1992) suggested that collaborative learning is an umbrella term for a variety of educational approaches that involve joint intellectual effort by students, or students and teachers working together in a search from understanding, solutions, or meaning. Dismissing a teacher-led approach to learning, the authors also focused on the need for students to explore or apply course material themselves (that is, as student-centred approach). Golub et al (1988) emphasised the need for communication between students during collaborative activities, arguing that it is in this talking that much of the learning takes place. Gerlach (1994) also emphasised the social aspect of collaborative learning, suggesting that learning is a naturally social act that requires participants to engage with each other, talking amongst themselves to find answers.

Perhaps drawing on previous definitions, Laal and Laal (2011) synthesized these ideas to provide a seemingly comprehensive definition of collaborative learning. They suggested that "collaborative learning is an educational approach to teaching and learning that involves groups of learners working together to solve a problem, to complete a task, or create a product. In a collaborative learning environment, the learners are challenged both socially and emotionally as they listen to different perspectives and are required to

articulate and defend their ideas. In doing so, they begin to create their own unique conceptual frameworks and not to rely on an expert's or a text's framework".

While still not defining collaborative learning, Johnson et al (1990) described five basic elements that need to be present in a collaborative learning experience. Importantly, the authors pointed out that the term collaborative learning is not tantamount to group work, and that the following needs to be present: (1) ***interdependence*** amongst team members, with an understanding and belief that successful completion of tasks is dependent upon being connected for purposes of the tasks; (2) significant ***interaction*** between team members, with an understanding of the need to help and encourage each other, as well as the need to provide feedback and the willingness to challenge decisions, conclusions and reasoning if need be; (3) individual ***accountability*** and personal ***responsibility,*** with an understanding that each team member is accountable for their share of the team's work, and is jointly responsible for the mastery of material to be learned; (4) the development of team members' ***social skills,*** with encouragement and assistance in the development and practice of trust-building, leadership, decision-making, communication, and conflict management skills, and (5) group ***self-evaluation,*** with an understanding of need to set group goals, to assess the team's progress in meeting stated goals, and to identify changes needed to enhance group performance.

Perhaps more significantly, Klemm (1994) emphasized what collaborative learning is not. The author suggested that collaborative learning is not just talking to each other while completing the assignment on an individual basis, and it is not about a few of the group members doing all the work with the rest of the group members falsely taking credit for a share of the work.

The paradigm of collaborative learning is intertwined with the other education theories and concepts that underpin simulation-led learning. While providing a thoughtful analysis of the products of collaborative learning, Johnson, Johnson, and Smith (1991) also (albeit unintentionally) also succeeded in interweaving collaborative learning into simulation-led learning.

The authors aligned collaborative learning with the principles of constructivism and the theory transformative learning, noting that knowledge is constructed, discovered, and

transformed by students. They reinforced the role of the educator as one of facilitator of learning, with him/her creating learning opportunities that allow the student to construct meaning from the material supplied.

Furthermore, Johnson, Johnson, and Smith (1991) identified collaborative learning as active in nature, suggesting that learning is something that a student does (not something that is done to the learner) – thereby distancing the approach from teacher-led learning strategies and aligning it with student-centred learning approaches.

The authors also found parallels between collaborative learning and constructivist principles, experiential learning theory and adult learning theory in respect of the approach's ability to incorporate new experiences with existing knowledge to develop improved understanding of concepts.

3.5 CONCLUSION

This chapter developed and explained this study's conceptual framework, which consisted of eleven elements. The educational philosophy underpinning the framework consisted of the constructivist theories of learning and the socio-cultural theory of learning. Included in this aspect of the framework were three specific constructivist theories, namely experiential learning, Schon's reflective practitioner, and the Dreyfus five-stage model of adult skill acquisition. The characteristics of meaningful learning, Kolb's experiential learning theory, three adult learning theories and collaborative learning also form part of the conceptual framework.

The next chapter explains and discusses the research design and methodology used in this study.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The previous two chapters reviewed existing research around the use of simulation-led learning, and discussed the conceptual framework that that framed this study. This chapter discusses the research approach I followed in seeking to deepen the understanding of auditing students' learning in a simulation-led environment.

Sections 4.2 and 4.3 consider the relevance of a qualitative, interpretive approach and a case study research design, and describe the research site and selection of participants for this study. Section 4.4 describes the Auditing 3B project in detail. In section 4.5, I consider the implications of my role as insider-researcher. In Section 4.6, I describe the processes that I used to generate and analyse the data. In section 4.7, I reflect on the methodology and methods selected for the study, and consider challenges and compromises considered necessary. Issues of rigour and ethics are considered in Sections 4.8 and 4.9. Finally, in Section 4.10, I provide some concluding comments.

4.2 QUALITATIVE RESEARCH APPROACH AND AN INTERPRETIVE PARADIGM

The qualitative research approach was selected for this study as it allowed me to study human action from the insider's perspective in order to be able to describe and understand participants' understanding of learning, rather than explaining and predicting human behaviour (Babbie & Mouton, 2012). The approach permitted me to focus on the ways that the study participants interpreted and made sense of their experiences during the simulation, and allowed me to build a 'a complex, holistic picture, analyse words, report detailed views of informants, and conduct the study in a natural setting' (Creswell, 2007). In essence, the approach permitted me to tell the participants' stories in the most appropriate way.

In addition, the qualitative research approach is closely aligned to the principles of constructivism, one of the theories that framed my study. Here individuals seek to understand the world in which they live and work, developing subjective meanings of their lived experiences. As many diverse meanings exist within and amongst individuals,

researchers look for the “complexity of views rather than narrowing the meaning into a few categories or ideas” (Creswell, 2007). Researchers rely as much as possible on the participants’ views of situations, asking open-ended questions to elicit suitably rich answers.

As in qualitative research, constructivist researchers recognise that their own histories and backgrounds shape their interpretation of individuals’ experiences, and “they position themselves in the research to acknowledge how their interpretation flows from their own personal, cultural, and historical experiences” (Creswell, 2007). The researcher’s intent, then, is to make sense of (or interpret) the meanings that others have about the world too. This is why qualitative research is often call “interpretive research”

Interpretivist researchers prefer studies that uncover insider perspectives and real meanings of social phenomena from the study participants. Here the experiences and values of both research participants and researchers substantially influence the collection of data and its analysis (Wahyuni, 2012).

My own experiences as a student have played an important role in positioning myself in this study. As a student, I experienced many of the same frustrations and challenges that the study participants (and wider student cohort) have. Such a personal connection to the study both challenged and assisted me. It challenged me to remain impartial when investigating study participants’ responses to the simulation, and assisted me because I understood the students’ concerns and frustrations.

The qualitative approach was a suitable approach for the study because it allowed me to immerse myself in the participants’ lives during the simulation exercise. It was acceptable, if not encouraged, to become involved in their lives during the simulation. This allowed for a closer relationship; one where the study participants felt more at ease with me, and were willing to discuss their challenges and triumphs in the simulation.

The interpretive paradigm was most appropriate because of my insider status in the study. I had personal experience with the challenges that the study participants were facing, and I believe that this gave me an advantage over a researcher who had possibly not lived through similar experiences. My experiences became my link to the study

participants, and allowed me to understand and interpret their experiences more truthfully.

For the above reasons, the approach adopted was most suitable to answer the critical question posed at the start of the study. Insights into the study participants' experiences were central to understanding and answering the established critical question.

Having selected the qualitative research approach and the interpretive paradigm as the starting point for the study, I then considered what the most appropriate research design would be. This too was a simple task, as there was only one suitable option – a case study research design.

4.3 CASE STUDY RESEARCH DESIGN

In this study, I sought to develop an in-depth understanding of students' experiences of learning in a simulated audit, and selected a case study approach to achieve this.

Regrettably, case studies have been criticised by many for their lack of scientific rigour and failure to address generalisability (Noor, 2008). However, even though the use of a case study approach to collect data is contentious, they are widely recognised in many social studies especially where an in-depth explanation of social behaviour is sought (Zainal, 2007). Furthermore, where the approach is correctly applied, it becomes a valuable method to develop theory, evaluate programmes, and develop interventions (Baxter and Jack, 2008). As the overriding aim of the current study was to develop a deep understanding of students' learning experiences within a simulation, the case study research design was considered apt. Such deep understanding cannot be achieved using a quantitative research design.

At the core of concerns about the use of a case study approach lies misunderstanding about what case study is, and how it can used in qualitative research (Baxter and Jack, 2008).

There are instances, particularly in the social sciences, where researchers are interested in insights, discovery, and interpretation instead of hypothesis testing (Noor, 2008). Such research objectives are attainable with the case study approach. Yin (2003) suggested

that the case study approach should be applied when the focus of the study is to answer the subjective "how" and "why" questions, as well as allowing the investigation of contextual realities, and the differences between what was planned and what actually transpired (Noor, 2008).

In the current study, the primary objective of understanding students' experiences in simulation can be devolved down into the "how" and "why" questions referred to by Noor (2008). A deeper understanding of learning necessitates an understanding of *how* such learning is achieved, as well as an understanding of *why* learning occurs in this manner. Failure to answer these questions adequately will prevent the deeper understanding of learning that is sought.

The use of a case study research design creates opportunities to progress from the particular (that is, the current study) to the general (that is, simulation in the wider context) by inferring transfer (Saldana, 2016). The use of a case study research design provides opportunities to consider whether what was observed in the current study will be observed elsewhere, by predicting patterns of what may be observed and what may happen in similar present and future contexts (Saldana, 2016).

The case study approach is not intended to be a study of the entire organisation; instead, it is intended to focus on a particular issue or feature. The case study approach becomes useful when one needs to understand some particular problem or situation in great depth, and where one can identify cases that are rich in information (Noor, 2008). The case study approach enables a researcher to closely examine the data within a specific context, and can be considered a robust research method when a holistic, in-depth investigation is required (Zainal, 2007). In the current study, the study of students' learning was confined to their experiences of simulation-led learning. While the simulation (group project) is only one aspect of the Auditing 3B module, understanding the learning that takes place here is essential. Should the simulation experience not translate into deep, rich understanding of Auditing in a practical context, an alternative approach will need to be sought. Without the case study research design in place, the decision to continue with the simulation (or not) will be made without as much relevant information as is needed.

The qualitative case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data resources. This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood (Baxter and Jack, 2008)

One of the advantages of this approach is the close collaboration between researcher and participant, while enabling participants to tell their stories. Through these stories, the participants are able to describe their views of reality and this enables the researcher to better understand the participants' actions (Baxter and Jack, 2008). This aspect of case study research design lies at the heart of the reason for selecting a case study for the current research study. Student learning must be seen through their eyes, as their understanding of the concepts is paramount. The decision to utilise simulation to effect change in students' understanding cannot be viewed through the eyes of an expert (that is, the lecturer) as this person has already developed such understanding, albeit it during his or her practical training. The purpose of the research is to understand whether the simulation will assist in developing students' understanding prior to commencing a training contract – in order to provide students with an advantage when they venture out into their training contracts.

Prior to conducting the final, full-scale simulation-based cased study, the decision was made to utilise a pilot study. The rationale behind this decision will now be considered, before addressing the full-scale study in more detail.

4.4 THE USE OF A PILOT STUDY AHEAD OF THE FINAL, FULL-SCALE STUDY

4.4.1 Introduction

While some have argued that pilot studies are not necessary in qualitative studies, many researchers have argued to the contrary, citing several benefits of conducting a pilot study in qualitative research. Dikko (2016) suggested that pilot studies provide the opportunity to reflect on whether concepts had been effectively operationalized, and van Teijlingen and Hundley (2001) reported that a pilot study allowed them to detect possible flaws in their research process. Ismail, Kinchin and Edwards (2018) suggested

that pilot studies offer novice researchers an opportunity to minimize the risk of encountering unmanageable problems during the data collection process, as well as during the processing and analysis of data. Fraser, Fahlman, Arscott, and Guillot (2018) stated that a pilot study provides the researcher to mitigate the risk associated with failure of the final, full-scale study, and van Wijk and Harrison (2013) believed that pilot studies can add value and credibility to the entire research process.

The approach proposed by Kezar (2000) has been adopted for the current study. Kezar's arguments in respect of pilot studies are grounded in the hermeneutic circle, as described by Heidegger. The circle provides a useful framework with which to understand the importance of pilot studies in the broader research context; it proposes that a researcher must have a practical sense of the domain in which a phenomenon is situated, in order to develop deeper understanding of that phenomenon. Kezar (2000) points to two important implications of the e hermeneutic circle that contribute to (higher education) research. She draws attention to the importance of grounding the research process in practical activity, and highlights how reflection can improve research practice. Kezar (2000) further suggests that pilot studies can be used effectively to enhance the research design, conceptualization, interpretation of findings, and ultimately, the quality of the results. It was with these objectives in mind that the current study's pilot study was conducted.

Reflecting on her experience with a pilot study, Kezar (2000) reported identifying several shifts in her understanding of the phenomenon being studied. She noted that although these shifts were not noticeable while conducting the pilot study, they became more noticeable as time passed. The researcher reported that she had drawn on hermeneutic theory to assist her in understanding the way that the pilot study had shaped her understanding of how to study a particular phenomenon. She specifically identified that the changes in her understanding had been a consequence of engaging in practical activity and reflection.

4.4.2 Conceptualisation and Research Focus

It was with this understanding that I conducted a pilot study ahead of the final, full-scale simulation study. During the pilot study, I performed dual roles during the process – that of simulation facilitator, and that of researcher.

The focus of the current pilot study was twofold: firstly, this was the first audit simulation project to be conducted at UKZN and I wanted to engage with the research phenomenon practically. Running a smaller-scale version of the simulation provided me with the opportunity to engage with the simulation case study itself to see how best to approach the case study – from the perspective of the simulation facilitator

Secondly, the pilot study allowed me to consider my role as researcher. The study offered an opportunity to streamline and validate the research process. Dikko (2016) suggested that, in the conduct of research, the choice of appropriate data collection instruments is important, as is the need to ensure that the chosen instruments perform the desired job properly, that is they collect the right data. The pilot study process assisted in assessing the feasibility of the planned research process, which in turn, assisted me in deciding how to best conduct the final, full-scale study (Ismail et al, 2018).

In addition to engaging practically with the current study's pilot study, I spent a significant amount of time reflecting on how it had evolved, and the lessons learned during the pilot study.

4.4.3 Methodology

Case selection

A different, yet similar, simulation case study used for purposes of the pilot study. The case study was also developed by Pricewaterhouse Coopers. The audit client depicted in the case study was that of a confectioner. Although set in a different industry to the main study's case study, the tasks that participants would be required to attempt were similar. Aspects related to inventory, accounts receivable, accounts payable, bank and cash, planning activities (including materiality and risk) were included.

Participants

Four groups consisting of five students took part in the pilot study. The participants formed part of the Auditing 3B student cohort on the Westville campus of UKZN, and had volunteered to assist with the pilot study. As with the main study, all students in the Auditing 3B cohort were required to complete the group assignment.

I met with the participants on a weekly basis over four weeks, during which time they completed the tasks related to the case study.

Research Data collection

Multiple sources of evidence were used during the pilot study. Participants were asked to complete reflective journals, to participate in focus groups, and to participate in individual interviews.

4.4.4 Pilot Study Findings

The current study's pilot study yielded five primary groupings of findings: (1) study participants' insights in respect of learning arising out of the simulation, (2) study participants' experiences of group work, (3) the theoretical nature of Auditing at UKZN, (4) concerns that assessment drives focus in Auditing modules, and (5) concerns about the importance of suggested solutions in Auditing modules.

1. Study participants' insights in respect of learning arising out of the simulation

Study participants identified three primary mechanisms that assisted in the development of their understanding of Auditing in a practical setting: (i) the importance of actively performing tasks; (ii) the visual nature of simulation, and (iii) the need to grapple with the contents of the simulation, and the capacity to learn from mistakes.

Study participants emphasized the importance of actively performing tasks. The simulation provided them with the opportunity to actively and physically engage with the various audit tasks, in an authentic, real-world-like environment. They reported that the opportunity to inspect real audit-related documentation allowed them to connect abstract terms and concepts to concrete documents and related procedures.

The simulation assisted in the development of a deeper understanding of how each procedure assisted in the gathering of evidence to support (or refute) an assertion. The simulation approach permitted study participants to take ownership of their learning, by providing opportunities to develop their own understanding of theoretical concepts and terms.

The simulation also allowed study participants to deepen and expand their theoretical understanding of Auditing. The practical nature of the simulation provided an opportunity to correct or incorporate new understandings into their previous understanding and knowledge. The simulation acted as a bridge between theory and practice, allowing students to move beyond a purely theoretical understanding of auditing.

The active nature of the simulation created opportunities for participants to be more engaged in the learning process. The simulation provided participants with opportunities to address confusing and misunderstood concepts, and to develop a broader "bigger picture" view of auditing. This also facilitated the breaking down of learning "silos" and the subsequent replacement of an understanding that linked diverse concepts and topics.

The simulation experience developed students' critical thinking abilities. They started to move beyond commonplace approaches to problems, beginning to develop the ability to think more independently. They also began to move beyond a superficial, procedural approach to the audit, starting to focus on the reason for performing procedures; audit objectives now started to guide their actions.

The visual nature of the simulation was significant to the pilot study participants. Prior to the simulation, students had had limited experience with audit-related documentation. This documentation now became a visual aid to the learning process. The audit became experiential and tactile to the study participants; it allowed them to replay activities in their heads at a later date, using the documentation as hooks on which to hang their experiences to use later in a similar experience.

The need to grapple with the contents of the simulation and the ability to learn from mistakes was significant to the pilot study participants too. The simulation study participants recognized that wrestling with the simulation tasks ultimately led to effective

learning and understanding. They acknowledged that making mistakes was central to the learning that was achieved. They contrasted lecture-based learning to simulation based-learning, with the former approach resulting in learning that is passive, neatly packaged, and ineffectual, while the latter leads to learning that is messy, convoluted, and very hands-on. The participants acknowledged that while they felt uncomfortable during the simulation, feeling inadequately prepared for the tasks, they did understand the purpose of approach; to develop direction and focus in the learning process.

2. Study participants' experiences of group work

The four pilot study groups approached the simulation uniquely, with each approach achieving varying degrees of success.

The first group wanted to ensure everyone learned as much from the experience as possible; the group attempted each task as a group, and tasks were not allocated to individual group members. The group's approach resulted in disagreement within the group as each group member sought to achieve his or her own project goals instead of working together as a team to complete the project successfully.

The second group attempted to complete the simulation in the manner recommended by the lecturers. They focused on specific sections of the audit, and attempted to review others' work to get a more complete understanding of the audit. They encountered problems with this approach though, with group members reporting limited learning opportunities.

The third group allocated tasks to individuals and relied upon a review process to enhance individuals' learning experiences. This approach appeared to work well for this group.

The fourth group's members did not initially trust each other's work; mutual trust and respect did not develop immediately here, and it took time to build the trusting relationships necessary for successful group work.

3. The theoretical nature of Auditing at UKZN

In response to the practical approach of the simulation, pilot student participants were critical of the approach generally used in Auditing modules at the university. They pointed to the ordered, structured approach of Auditing modules and contrasted this to real audits. They argued that Auditing at university does not prepare them for the real working world.

4. Assessment drives focus

While the pilot study participants believed that the simulation provided an excellent training ground for the real world of auditing, they did not believe that this approach would be useful for assessment purposes at university. They believed that assessments would continue to be aligned with the lecture and tutorial approach generally followed.

5. The perceived importance of suggested solutions

Closely aligned with concerns about the assessment policy and the neatly-packaged lecturer programme were participant concerns about the lack of a suggested solution to the simulation. They struggled to cope without concrete answers to the questions posed in the simulation.

While the findings were limited, they provided insight into students' experiences with the simulation, and were considered applicable in light of the study's overall objective.

4.4.5 Conceptual Revisions

Similar to Kezar's (2000) experience, I interrogated and reflected on my experience of the simulation pilot study. As with Kezar (2000), the deepening of my understanding of the simulation process came about as a result of actually having been engaged in the practical activity of the audit. Although I had extensive experience as an auditor, my role here was different. Here, my role was that of learning facilitator, and I needed to find the most appropriate tools with which to assist participants in their learning process.

The revisions described in this section are fundamental and critical to the pursuit of understanding (Kezar, 2000) how students engage with, and experience, an audit

simulation as part of their auditing studies at university. The pilot study refined the overall approach to the simulation by allowing me to consider participant needs while engaging with the case study.

Several operational problems were identified as a result of the pilot study. While the simulation is intended to expose students to as realistic an audit as possible, the pilot study alerted me to the fact that participants need more support than would be provided in a real audit. The primary purpose of the simulation is the development of students' practical auditing knowledge and skills, which requires scaffolding to enable them to reach the point where they can work unaided.

1. The need for a comprehensive pre-briefing

The pilot study identified that students lacked a basic understanding of what was needed to start the audit process. Their theoretical, lecture-based understanding of auditing did not provide a suitable starting point to the practical audit, and they were confused. They needed assistance in making sense of the information and documentation provided for the simulation. While this was not done during the pilot study, it was clear that such a pre-briefing would provide much-needed guidance and focus for the students' experience.

2. Learning how to reflect on one's own experiences

The need to ensure that participants understand how to reflect on what they have learned was also identified during the pilot study. Students' inability to reflect effectively on the audit process limited the learning to come out of the simulation pilot study. Although they had been encouraged (in compliance with Kolb's experiential learning theory) to reflect on their actions, pilot study participants were provided with explicit guidance on how to engage in self-reflection. It appeared that students did not know how to engage in formal self-reflection. Such detailed guidance on how to reflect would be needed in the final study.

3. The need for a comprehensive debrief

The need for a comprehensive debrief after the completion of the simulation was also identified. While pilot study participants were interviewed after the simulation, this was primarily from a research perspective, with limited attention to learning outcomes and unanswered audit process questions. Pilot study participants were not provided with the opportunity to resolve outstanding queries which, in turn, limited their learning opportunities. The debrief would need to include a technical auditing component during which participants would be given the opportunity to address problems identified, to highlight and resolve unanswered queries, and to develop an understanding of how theory informed practice.

4. The level of assistance required by simulation participants

The level of assistance offered was also identified as a matter requiring attention. During the pilot study, I answered all questions as fully as possible. Upon reflection, this approach appeared incorrect. The approach failed to allow students to grapple with the issues at hand. It was evident that participants needed to find their own answers that this approach would develop valuable learning skills that could be carried forward to different situations. I make the decision to step back during the final study, to allow participants to find their own way to the answers. Support would be limited to situations where the participant had exhausted all other avenues of assistance.

4.4.6 Methodological Revisions

Two primary research instruments were utilized during the pilot study: the participants' reflective journals, and semi-structured interviews (in a focus group and individual interview context).

The pilot study assisted me in identifying methodological changes in all areas of the research design, including (1) The use of reflective journals, (2) focus groups and individual interviews: the interview process – reframing the interview, and reordering and revising the questions, and (3) analysis.

1. Data collection – revising the format of reflective journals

Participants were asked to complete reflective journals after each meeting. The reflective journals consisted of a set of predetermined questions, and students were requested to answer these questions as fully as possible. After each session, I reviewed the completed journals and found that most participants did not engage as desired with the questions. Although I changed the questions asked in the reflective journal, the responses remained abstract and generalized. As a result, the reflection journal approach was amended for use in the final, full study.

2. The interview process (for focus groups and individual interviews)

Another outcome of the pilot study was the complete overhaul of the interview questionnaire that would be used for the final, full study. The problem of abstract, generalized responses (seen in the reflection journals) continued here. Upon reflection, I realized that I was asking the wrong questions, that my questions were not probing enough. As a result, although participants' answers appeared abstract and generalized, the problem lay with my interview questions and my approach during the focus group and individual interviews.

My mistake had been to try to elicit responses to questions that I was not actually asking. As a result, participant responses were too brief and limited in their value. I did not realize this trend until I began analyzing the data through narrative analysis. In the final study, I changed my approach extensively. Having engaged practically with the simulation, and having reflected on the outcomes of the pilot study, I was more able to develop probing questions that interrogated participants' experiences in a more appropriate fashion. As a result, participants' descriptions of their experiences were richer and more in-depth.

3. Analysis

In the review of my pilot study interview transcripts, it became evident that the collected data was limited. Having realized my error with regards the interview questioning process, this was to be expected. While the data collected did yield some useful insights into participants' experiences, a more in-depth analysis was needed for the full study.

In the final study, participants' stories lent themselves to detailed narrative analysis, which allowed me to develop a more meaningful interpretation of their experiences.

4.5 THE FULL-SCALE SIMULATION STUDY

4.5.1 Research site and content

My study was conducted at the University of KwaZulu-Natal (UKZN), South Africa. UKZN was formed on 1 January 2004 following the merger of the University of Natal and the University of Durban-Westville. The university has a diverse student population and offers qualifications in a wide range of disciplines on five campuses. The study was based in the Auditing 3B module, on the Westville and Pietermaritzburg campuses of UKZN. While I do not teach on this module, my postgraduate students are drawn from the Auditing 3B cohort.

Auditing 3B is a compulsory second-semester module in the B.Com (Accounting) degree. The module forms part of the degree's "Big 4" major subjects (along with Financial Accounting, Managerial Accounting and Finance, and Taxation), and is a prerequisite for entry to the Post Graduate Diploma in Accounting (PGDA) which, in turn, is the prerequisite to the ITC, the first set of nationally-written examinations *en route* to qualifying as a CA (SA). As UKZN is accredited by SAICA, the topics and learning levels for all modules are prescribed by SAICA in their competency framework document.

The class size is approximately 400 on the Westville campus of UKZN and approximately 150 on the Pietermaritzburg campus. Teaching takes the form of four weekly plenary lectures, supported by weekly double-period tutorials, where the focus is on practical application of the theoretical lectures. Tutorial groups consist of approximately 30 to 40 students on both campuses.

Following on from the first-semester module (Auditing 3A), students are required to learn auditing terminology, audit procedures, and statutory and professional matters that pertain to the auditing profession. As lectures are theoretical in nature, tutorials are used to transfer knowledge into a practical setting. Students are required to prepare answers to questions posed about practical scenarios for further discussion during the tutorials. The students are provided with 'suggested solutions' to the questions, and are

encouraged to ensure that they understand why the suggested solution answers are presented in a particular way.

4.5.2 Selection of participants

Participants for the study were drawn from Auditing 3B student cohorts on the Westville and Pietermaritzburg campuses of UKZN. The participants volunteered to participate in the study.

All students enrolled for the Auditing 3B module were required to complete a practical project, and it is this project that formed the basis of the study. Having obtained permission from the module coordinator, I met with the student cohorts during an information session prior to the start of the project. Here, I explained what participation in the study would require of them: weekly attendance (over a three-week period) of a three-hour session during which participants would be required to work towards completing their projects; weekly completion of a reflective journal detailing their experiences in the study; participation in focus groups and in-depth interviews after the completion of the project; and an agreement to allow me to use their written reflections for research purposes. Interested students were asked to complete a short application form, indicating whether they were registered for all 'Big 4' modules, and whether this was their first time attempting Auditing 3B, or whether they were repeating the module.

I anticipated that there would be sufficient volunteers for me to select a sample, and I hoped many students would take up an opportunity that was potentially beneficial to their overall performance in the module. I received approximately 100 applications for the study.

From the applications received, I selected 2 purposive samples. The sample size for Pietermaritzburg was 20 participants, and in Westville the sample size was 15 students. The reason for the smaller sample size in Westville was related to the unavailability of a venue that would accommodate more than 15 students. As the project was a group project consisting of groups of five students, the sample sizes permitted 4 groups in Pietermaritzburg and 3 groups in Westville. This was considered manageable in light of available resources.

Groups consisted of five students; this was the number of students per group suggested by PwC (the auditing firm that had developed the audit simulation), and was based on the number of questions to be answered in the project, as well as the amount of work that would be required. From a research perspective, completion of the project on a group basis also mimics the real working world in which trainee accountants are often required to work in groups to complete an audit assignment.

An important feature of qualitative research is the sampling process utilised. The process allows researchers to hand-pick study participants based on their possession of particular characteristics and/or knowledge being sought. In this way, the researcher is able to gather a sample that is satisfactory to their specific needs (Cohen, Manion, & Morrison, 2011). In this study, the purposeful sampling process was utilised. Students were selected on the basis of their ability to add value to the study. Participants consisted of students who were either taking all four B.Com (Accounting) modules (the 'Big 4'), or who were repeating Auditing 3B. Students repeating Auditing 3B would have previously struggled with auditing, and it was hoped that they would be able to provide rich data to assist in addressing the study's critical question. With regards students attempting the 'Big 4', such students would not have failed auditing yet, and it was hoped that they would bring a different perspective to learning in Auditing 3B.

Although only 35 students were selected to participate in the study, all registered Auditing 3B students were provided with lecturer support for the duration of the project. his was deemed extremely important, as concerns had been raised that students participating in the study may have an unfair advantage over students who were completing the simulation without additional support.

The allocation of participants to groups (both within the study and for the wider student cohort) was done by academic staff, and students were not given the option of choosing their own groups. This was done to simulate the real working environment in which trainee accountants are often required to work with unfamiliar colleagues.

4.5.3 Participant profile

It is essential for researchers and teachers alike to remain sensitive to the fact that students have mostly likely had diverse lived experiences, and that general assumptions about matters such as competence, socio-economic background, life experiences, and schooling should not be made. The student profile prepared for this study allowed me to better understand student responses as they are inexorably linked to the individual's background.

In order to develop a clearer understanding of who the study's participants were, I asked the participants to complete a biographical questionnaire. The results of the questionnaire are detailed in Appendix 2.

In addition to the results of the questionnaire detailed in Appendix 2, the following commentary on biographical information provides insights into the study participants:

The total number of students in Westville was 15, while in Pietermaritzburg there was a total of 20 students, 2 of whom did not complete the biographical questionnaire. Accordingly, the total number of students in Pietermaritzburg (for purposes of this questionnaire) is only 18.

There was a relatively consistent spread of students with all but one student either being Black African or Indian. Accordingly, 55% of students participating in the study were not first-language English speakers. The majority of such students indicated that they were not completely comfortable studying in English.

Most of the study participants attended government schools, with 2 students indicating that their schools were poorly funded. One student indicated that his school was a so-called "Quintile 1" school (i.e. extremely poorly funded).

The majority of participants took Accounting as a subject to Matric, and the majority of these students achieved a C aggregate (or above) for Accounting. All students achieved a C aggregate (or above) for English, but for the non-English speakers, this would have been a second-language module.

55% of the participants' parents (either one or both) have some form of tertiary education. However, 58% of the participants have siblings who have attended or are attending university too.

Most participants chose the B.Comm (Accounting) degree as their first choice to study at university. However, 33% of the participants are repeating Auditing 3B.

The majority of participants indicated that they find audit procedures the most challenging topic in the Auditing 3B syllabus.

Interestingly, only 3 of the participants were able to identify their learning style. The rest of the group did not appear to understand what was meant by learning style.

Only 2 of the participants do not plan on entering a training contract with an Auditing firm (in order to qualify as a Chartered Accountant). But, the majority do not plan to remain in Auditing Practice once they have completed their training contracts.

4.6 THE AUDITING 3B PROJECT SIMULATED LEARNING EXPERIENCE

All students registered for Auditing 3B were required to complete a group-based project, in the form of a simulated audit, during the second semester of the year. To enable me to study auditing students' learning in a simulation-led learning experience, I ran my study alongside this class project.

The PwC project used for the Auditing 3B group project

The case study used for the Auditing 3B group project was developed by Pricewaterhouse Coopers, one of the so-called "Big 4" international auditing firms. The case study is utilised by PwC as part of their training programme for new first-year trainees. The case study was considered appropriate for Auditing 3B purposes because it was developed by the training division of PwC and has been evaluated several times by trainees. We believed that this would address all inconsistencies and problems that were present in the case study. We were satisfied that it would be set at the appropriate level, providing students with a challenging but attainable experience. In addition, the PwC case study has been used by the majority of the SAICA-accredited universities as part of the

undergraduate auditing programmes to provide students with a practical approach to auditing.

4.6.1 A timeline of the simulated audit learning experience, and the related research study

The start of the project was delayed for approximately one month as a result of student unrest and protests on campus (related to the #FeesMustFall campaign and various other student related matters). The student unrest resulted in lectures being suspended, which in turn resulted in a delay of the start date of the project.

Pricewaterhouse Coopers (PwC) wanted to address the students before they started on the project. This could not take place during the lecture suspension period, and we were also not permitted to distribute the project material to students during this period.

The problem with delaying the project was that student Duly Performed Certificates (which provide them access to year-end examinations) had to be finalised by the end of October 2018 in order for examinations to be written in November. This created additional time pressures, as students only had 4 weeks in which to complete the project, and write their final assessment for the module.

The timeline for the “Auditing 3B project” simulated audit learning experience is provided below:

Timeline of the Simulation Experience and the Research Study Process	
Date	***Task***
13 September 2018	• PwC representative addresses Auditing 3B student cohort in Westville • Researcher addresses Auditing 3B student cohort in Westville to ask for volunteers for study
14 September 2018	• PwC representative addresses Auditing 3B student cohort in Pietermaritzburg • Researcher addresses Auditing 3B student cohort in Pietermaritzburg to ask for volunteers for study
20 September	• Researcher has selected volunteers for study, and has informed participants via WhatsApp. • Participants confirm willingness to participate

28 September 2018	• Pre-briefing meeting, and Session 1 (Formal meeting of groups to work collaboratively on their projects)
	  • Westville: 9h00 – 11h30
	  • Pietermaritzburg: 13h00 – 15h30

5 October 2018	• Session 2 (Formal meeting of groups to work collaboratively on their projects)
	  • Westville: 9h00 – 11h30
	  • Pietermaritzburg: - study group did not meet; road works on the N3 between Durban and PMB

12 October 2018	• Session 3 (Formal meeting of groups to work collaboratively on their projects)
	  • Westville: 9h00 – 11h30
	  • Pietermaritzburg: 13h00 – 15h30

16 October 2018	• Final submission date of group projects
17 October 2018	• Administering of questionnaire to Auditing 3B student cohort in Westville
19 October 2018	• Administering of questionnaire to Auditing 3B student cohort in Pietermaritzburg (administered by the Pietermaritzburg Academic Trainee on behalf of researcher)
19 October 2018	• Formal debriefing of study participants, and focus group interviews in Westville and Pietermaritzburg

4.6.2 An analysis of the "Auditing 3B project" simulated audit learning experience, in accordance with the Keskitalo Model

I now provide an outline and analysis of the study's simulation experience in accordance with the Keskitalo model (discussed in Chapter 2). The rationale for using this particular model was twofold. Firstly, it provided a detailed framework for the entire simulation process, and took into account the many different tasks and processes that are essential to develop a meaningful learning experience. Secondly, Keskitalo provided guidance on how to utilise the model from a research perspective to assess the quality of learning that results from the simulation. The model assisted in the achievement of both teaching and learning, and research objectives.

The learning process is described in terms of the headings *Introduction, Simulator and Scenario briefing, Scenarios,* and *Debriefing* phases, with related pre-simulation activities and post-simulation activities. Keskitalo (2015) suggested that the use of such distinct phases could provide structure for the learning process. The model also draws attention to matters that require both facilitator and student attention prior to and after the simulation activity.

The socio-cultural context and the theoretical underpinnings of the model (namely, the characteristics of meaningful learning) were described in Chapter 3, and I now address the learning process.

The Keskitalo model addresses student-related activities and facilitator activities at each stage

4.6.3 The simulation experience

1. Pre-activities

    - *Facilitator-related activities:*

My activities were extremely limited here. The decision had already been made to utilise the PwC simulation project as academic staff agreed that it would provide students with the necessary exposure to a real-life audit, and I was satisfied that the project addressed the practical aspects of an audit adequately.

- *Student-related activities:*

At this stage, students' experience was limited to lectures and tutorial questions, but the lectures and tutorial questions provided valuable theoretical grounding for the content that was to be discussed in the Auditing 3B project.

2. Introduction – Activating prior knowledge and setting the ground

    - *Facilitator-related activities:*

The PwC representative addressed the student cohorts (in Westville and in Pietermaritzburg) to provide context for the simulation project. She provided outcomes for the project that PwC would like to see, including (1) the development of soft skills that are considered critical to the Profession (including oral and written communication skills, and critical thinking skills), (2) practicing how to use technology (e.g. computers, computer programmes such as MS Word and MS Excel), and (3) learning to work with a team of people.

The representative also provided an introduction to the simulation (providing details of the company, the industry in which it operates, and the year-end under audit etc.) and a brief overview of the audit process. However, she did not provide any examples of how to perform procedures, how to prepare audit working papers etc.

She briefly outlined the questions that students needed to answer for the project, and indicated what the deliverables would be at the end of the project – these included completed audit programmes, working papers to support the work done and the conclusions reached the summary of unadjusted audit differences schedule, the report to management, and the MS PowerPoint presentation.

In closing, the representative provided some background to her own experience as a student and trainee accountant.

The relevant module lecturers then addressed the student cohort, letting them know that the documentation necessary to complete the project was now available on the electronic student platform (known as Learn). Students were also informed that they had been allocated to groups on a random basis (5 students per group) – this information was

also available on Learn. They were also given the details of the "Project Champion" on each campus who would be available to answer all project-related questions. On Westville campus, the Project Champion was the Academic Trainee (a former student who is doing the first year of his training contract in academia – with very little practical experience) and in Pietermaritzburg, the Project Champion was the module lecturer, a qualified chartered accountant with relevant practical experience.

For the broader student cohort, this was all assistance received before being asked to start the project.

- *Student-related activities:*

Students were invited to attend the presentation and to ask questions related to the project and to practical auditing in a wider context.

3. Simulator and Scenario Briefing – Familiarisation

- *Facilitator-related activities:*

At the first meeting with the simulation study groups, I briefed the study participants prior to starting with the simulation itself.

I followed the followed approach during the simulation pre-briefing:

I introduced myself to the study participants and welcomed them to the study. I explained that the purpose of the study was twofold – firstly, it formed the basis of my PhD study, and secondly, that it would provide assistance in assessing whether a practical simulation-led project would assist students to bridge the divide between their theoretical knowledge and the practical skills that they would need when they go out into their training contracts.

Having already randomly allocated students to project groups, I informed students of their group allocations and allowed students to introduce themselves to their new group members.

Next, I asked the study participants to complete a biographical questionnaire for purposes of my research study.

We discussed the importance of such practical projects and I outlined the learning outcomes that I would like to see come to fruition, namely to provide students with a taste of what a real audit would look like, to assist students in bridging the gap between theoretical knowledge and a practical understanding i.e. providing students with the opportunity to see how theory will be applied in practice, to develop soft skills that are critical to the Profession (including oral and written communication skills, critical thinking skills, problem-solving skills), practicing various technologies, and learning how to work in a team.

I provided an outline of the project, reviewing what each project question required the students to do. In reviewing the questions, I attempted to activate students' prior (theoretical) knowledge that would be needed to attempt the questions. I made reference to the relevant chapters within their textbooks to provide a basis for the practical implementation.

We spoke about the various documents that would need to be prepared, but I did not provide students with examples of what the documents and working papers would need to look like. The rationale behind this approach was that they would research this for themselves during the simulation experience.

In addition to the audit processes and questions to be attempted, I also sought to deepen students' understanding of the desired learning process that should be present within a simulated learning experience. I alerted them to the change from a lecturer-centred approach to a student-centred approach in which the educator is there to facilitate students' understanding, but that the student is going to go on a journey of discovery that is about more than just getting a mark that will form part of the year's assessment. I encouraged them to discuss matters with their group members, as it is in the discussion and grappling with problems that the learning takes place.

I also addressed specific aspects of the learning process – in particular the processes of feedback and reflection, and the debriefing. I indicated that, during sessions, I would be

available to answer their questions. However, I encouraged them to try to address their own concerns and problems. I suggested that this approach would be more beneficial to their understanding and development in the long-run.

We spent some time discussing the process of reflection, and I provided guidance on how to initiate successful self-reflection. I described the approach to reflection developed by Ash and Clayton (2004). (Refer to Appendix 3), and provided them with notebooks to be used as personal reflection journals.

I described the debriefing process in detail too, indicating that the session would be led by the facilitator (myself), with opportunities for comments, inputs, and requests for clarifications. I provided a cautionary note about the pitfalls of group work, and we spoke about how to overcome the problems associated with groupwork. In closing, I provided students with a schedule of formal study-related meetings for the project.

- *Student-related activities:*

Students were given the opportunity to ask questions and to consider how their theoretical knowledge could be linked to the project.

4. Scenarios – Guiding and Participating

Before considering the actions of the simulation participants and the simulation facilitator, I provide a detailed (but summarised) account of the simulated audit that the simulation participants were exposed to. :

The simulated audit client is a pharmaceuticals company called Clockwork Pharmaceuticals Limited. The company engages in the importation, distribution, and sale of pharmaceutical products.

The participants in the simulation assume the role of audit clerk (a role that they will perform daily when they enter a training contract with an audit firm after having completed their university education). During the simulation, the students are referred to as audit clerks (or clerks) – to enhance the experience. The narrative of the simulation provides context for the audit, and the simulation participants (the audit clerks) are immersed in a realistic audit setting.

The audit clerks are provided with the following documentation in respect of the audit for the year ended 30 June 2018:

- The annual financial statements (in draft format) for the year then ended.
- The detailed trial balance for the year then ended, extracted from the computerised general ledger, and shown in MS Excel format.
- Detailed background information related to the client that will allow the participant to understand the context of the audit.
- The audit's risk assessment documentation that will provide guidance on where the assessed risks are to be found for purposes of the audit.
- Audit programmes and various source documents in respect of the following sections of the audit
    - Planning-related matters
    - Cash and Bank
    - Inventory
    - Accounts Payable
    - Payroll
    - Finalising the audit

The audit clerks are required to complete various audit procedures and answer questions related to the various sections of the audit outlined above.

The questions are as follows:

Question 1: Planning of the audit

This question requires the audit clerk to complete some of the planning procedures for the audit, specifically the materiality calculation. The audit clerk is provided with a materiality template that must be completed, after having referred to supporting documentation that will influence their decision-making processes.

Question 2: Cash and Bank

This question requires the audit clerk to complete the audit programme in respect of Bank and Cash. This question also requires the audit clerk to prepare working papers as

needed in support of the audit programme, to list matters (arising out of the audit procedures) that need to be brought to the attention of management (in the report to management), and to prepare journal entries related to misstatements discovered during the completion of the audit procedures. The journal entries are to be included on the "Summary of Unadjusted Differences" (a template of this schedule is included in the documents provided to the participants).

Question 3: Inventory

This is the largest section of the audit. This is as expected – as the audit client is a pharmaceuticals company, inventory will be the most material balance on the balance sheet, and the bulk of the audit risk related to this client will be inventory-related.

The audit clerk is required to complete all outstanding audit procedures in respect of inventory, and is provided with an audit programme that must be followed. The audit clerk is required to prepare all accompanying working papers, and list all matters that need to be brought to the attend of management (in the report to management), and to prepare journal entries related to misstatements discovered during the completion of the audit procedures. The journal entries are to be included on the "Summary of Unadjusted Differences" (referred to above as well).

The audit clerk is provided with detailed inventory records in MS Excel format (approximately 3,000 line items). Manual interrogation of the inventory records would not be appropriate, and the audit clerk is required to interrogate the inventory records using their MS Excel skills. (This provides an opportunity to develop their computer skills which will also be utilised extensively when they enter a training contract after university).

The inventory section of the audit is the most complex section of the audit, and contains several practical matters that require the participant's attention. While students (here referred to as audit clerks) are familiar with audit risks specifically related to inventory, they may not have been exposed to risks that are specific to a particular type of client (i.e. pharmaceutical company), and they will need to apply their theoretical understanding of risk, assertions, and accounting treatment in order to address the risks adequately. The

risks and problems in the audit will also test the audit clerk's ability to think critically about what evidence is needed.

- ***The pricing of medicine*** – the pharmaceutical industry in South Africa is heavily regulated and subject to intense scrutiny from the South African Department of Health. Prices are controlled, and the industry is subject to a single exit price (SEP) mechanism, which regulates the maximum price that a medicine may be sold for. This information will need to be applied when the participant considers the policy of carrying inventory at the lower of cost and net realisable value. The audit manager has provided the SEP list of all medicines, and participants will have to apply prices contained on the list.
- ***Receipts and Issues of inventory*** – the audit clerk is provided with systems documentation that details the processes and controls in place at the client for the receipts and issues of inventory. This too is a high-risk area, and the audit clerk must apply his/her understanding of internal controls to the practical circumstances presented. Various sources documents utilised during the process are also provided; these must be considered during the completion of the audit procedures related to this aspect of inventory. This section allows audit clerks to explore how tests of controls may be integrated into the audit, instead of the general substantive approach.
- ***Damaged inventory*** – this aspect of the audit of inventory is practical, and requires the audit clerk to consider how to gather audit evidence that will support or refute the client's accounting treatment of the issue. The audit clerk is provided with an email sent by the audit manager (to the participant) which details a scenario that took place when one of the engines of the warehouse's cooling facility was damaged due to a power surge. The audit consequences relate to the valuation of the inventory, as the inventory housed in the facility have been damaged, and must be written down to recoverable amount. While this task is the responsibility of the client, the auditor must ensure that the appropriate accounting treatment has been applied. The inventory is also imported, and forward cover has not been taken out to guard against exchange rate fluctuations; this therefore adds additional risk related to the valuation of Accounts Payable at

year-end in respect of the supplier. The audit clerk will also have to consider insurance implications of the damaged inventory, and how this will impact the net realisable value of the damaged inventory.

- ***VAT increase from 14% to 15%*** - there has been a VAT increase during the financial year that has not been accounted for appropriately at the client. The audit clerk will need to ensure that this matter is corrected accounted for.

In addition to important information related to the various problems detailed above, the audit clerk is also given misleading and superfluous information. This will allow the audit clerk to develop the ability to discern between important and unimportant information that may be presented to him/her.

This question requires the audit clerk to complete the audit programme in respect of Inventory, as well as working papers as needed in support of the audit programme, to list matters (arising out of the audit procedures) that need to be brought to the attention of management (in the Report to Management), and to prepare journal entries related to misstatements discovered during the completion of the audit procedures. The journal entries are to be included on the "Summary of Unadjusted Differences" (a template of this schedule is included in the documents provided to the participants).

Question 4: Accounts Payable

The audit clerk is required to complete the Accounts Payable testing. There are two outstanding tests that the clerk must attend to – the three-way match control test, and specific procedures related to the completion of the substantive testing programme.

The term "three-way match control test" is not a term that the participants will be familiar with, as a different term is used during lectures and in their textbooks. However, the documentation and procedures are familiar; this provides participants with the opportunity to extend their understanding of terminology and to understand how to apply principles in the context of the audit.

The substantive testing procedures relate to the damaged inventory (referred to in Question 3 above), and provide participants with the opportunity to link aspects of the financial statements and understand the inter-connectedness of the financial statements.

This question requires the audit clerk to complete the audit programme in respect of Accounts Payable, as well as working papers as needed in support of the audit programme, to list matters (arising out of the audit procedures) that need to be brought to the attention of management (in the report to management), and to prepare journal entries related to misstatements discovered during the completion of the audit procedures. The journal entries are to be included on the "Summary of Unadjusted Differences" (a template of this schedule is included in the documents provided to the participants).

Question 5: The Summary of Unadjusted Audit Differences

Following on from Questions 1 – 4, the audit clerk is required to prepare the Summary of Unadjusted Audit Differences schedule.

Question 6: Report to Management

Following on from Questions 1 – 5, the audit clerk is required to list matters (arising out of the audit procedures) that need to be brought to the attention of management. The audit clerk is required to prepare a formal report suitable for entering into discussion with senior management of the audit client.

Question 7: Presentation in MS PowerPoint

The audit team is required to prepare a presentation in which salient aspects of the audit are addressed. The audit team is required to discuss and defend their audit treatment of various matters highlighted in the project.

- *Student-related activities:*

During the Scenarios stage of the model, the participants participate in the simulation. They are immersed in the audit process and carry out audit procedures as they would if they were performing a real-life audit.

- *Facilitator-related activities:*

During this process, I encouraged the participants to engage with each other, to ask each other questions about aspects of the work that they did not understand, and to share their understandings. I also encouraged them to ask me questions too. But, I encouraged them to try to resolve their own problems before turning to me for assistance. I was present at all times during the simulation sessions, and moved from group to group (remaining in the background though) to see if my assistance was needed.

5. Debriefing – Facilitating and Reflecting

The debriefing session was held after the students had submitted their projects.

The debriefing sessions provided the opportunity to interview the study participants about their learning experiences too, and accordingly, the debriefing sessions and the focus group interviews were one and the same.

- *Student-related activities:*

The Keskitalo model provided guidance on student-related activities at this stage of the process. The author suggested that participants engage in comprehensive evaluation, reflection, and critical analysis of the learning process, the knowledge, and the learning environment. She also suggested that participants should set new learning goals that can be utilised in the future.

- *Facilitator-related activities:*

The Keskitalo model suggested that the facilitator should guide students' reflections and provide individual guidance and feedback, where needed.

In order to achieve these objectives, the following approach was adopted.

I met with the study participants to discuss how they had experienced the simulation project. They were asked to reflect on their experiences during the simulation sessions, and encouraged to discuss their individual and group experiences.

I posed the following questions, with a view to getting students to open up about their experiences in the simulation, and to encourage reflection. I hoped that they would discuss problems that they had experienced which would provide the opportunity to provide insights and correction if need be:

i. What was the most / least valuable experience in the project?
ii. What was effective about your performance in the project?
iii. What was ineffective about your performance in the project?
iv. What did you learn that you did not know before?
v. What specific problems did you encounter? How did you address these problems?
vi. What lessons did you draw from the project experience?
vii. What surprised you about the project?
viii. How did this project differ from traditional tests and exams, and which do you prefer?
ix. Based on what you have learned, what will you do differently in the future?

The participant responses to these questions (and other related questions) form (in part) the basis for the analysis of students' experiences – for purposes of this study.

6. Post-activities

- *Student-related activities:*

The Keskitalo model provided guidance on student-related activities at this stage of the process, with the author suggesting that participants should integrate new knowledge and skills into their real world experiences or new scenarios.

- *Facilitator-related activities:*

The Keskitalo model suggested that the facilitator should evaluate the learning process that took place.

I used this opportunity to reflect deeply about the entire learning experience; the outcomes of which will inform the analysis of students' experiences for purposes of this study.

4.7 FACILITATOR'S DUAL ROLE AS INSIDER-RESEARCHER

Generally, insider-researchers are those researchers who choose to study a group to which they belong, while outsider-researchers do not belong to the group that they are studying (Unluer, 2012). An insider-researcher is familiar with the group to be studied (Saidin and Yaacob, 2016).

In order to make their research credible, it is crucial for social researchers to clarify their roles, especially those who are using qualitative methodology, as greater familiarity with the study group could lead to a loss of objectivity, with concerns about "prejudice" and "truth" being raised too (Unluer, 2012). It could also be argued that the insider-researcher could be influenced by his similar background to the participants which could, in turn, influence the interpretations of the data in his study (Saidin and Yaacob, 2016). Furthermore, the authors raised concerns that the researcher might be biased by his past experience regarding the topic. This is in contrast to an outsider-researcher who has no previous background about the topic, thereby making him more objective about things that the participants have said during the research.

There are both advantages and disadvantages to being an insider-research, and it is important to address and overcome the disadvantages to ensure credible insider research (Unluer, 2012).

I now demonstrate and discuss the advantages and disadvantages of being an insider-researcher by considering the following themes (Unluer, 2012):

- My role as a researcher
- The collection and analysis of the data
- Ethical issues
- Reporting the data

4.7.1 My role as a researcher

Since my research setting was my working area, I collected the data as an insider-researcher participant observer. Most of the advantage resulting from a facilitator-research position came from the fact that I was already an insider, an accepted member of the academic team in the Auditing discipline within the School. Being accepted meant

that I was already friendly with the rest of the members of the Auditing team, and I was able to utilise the Auditing 3B group project for research purposes; an outsider would probably not have been able to do so. Being the academic leader of the Auditing discipline meant that I do have power and authority over the staff, which could potentially affect the data collection process negatively.

4.7.2 The collection and analysis of data

Since the purpose of a case study is to examine the participating individuals, programmes, or the process deeply, case studies include an intensive process of collecting the research data via a number of sources. In this case study, the research data was collected through participant observations, semi-structured interviews, questionnaires, participants' journals, and the researcher's journal.

There were several advantages and disadvantages of data collection for this study as an insider-research.

Many advantages of being an insider-researcher have been discussed in the literature. Examples include, speaking the same insider language, understanding the local values, knowledge and taboos, knowing the formal and informal power structure, and obtaining permission to conduct the research, to interview, and to get access to records easily facilitate the research process (Unluer, 2012).

For my research project, I made good use of these advantages in collecting data (Unluer, 2012). I was able to book venues in which to hold my meetings, which an outsider might not have achieved because venues are scarce on campus, and I knew the person who controls the allocation of venues. Knowing the Auditing 3B module coordinators on both the Westville and Pietermaritzburg campuses provided me with access to the student cohorts to find volunteers for my study. Being colleagues with the module coordinators (as well as their line manager) my requests related to the project were never rejected; this is something that an outsider might not have experienced. The module administrators showed respect for my research and assisted me where they could. My academic peers gave importance to the study, sharing information as it became available and allocating valuable class time to me to allow me to address the class.

I had several spontaneous conversations with my Auditing 3B colleagues, and was able to get their input about how the project was progressing. They were happy to share their insights with me too. These spontaneous conversations enriched the data gathered, providing context for students' experiences.

However, there were also some disadvantages related to being in an insider position. My proclivity to be somewhat biased during the study was a concern, and I had to fight this tendency frequently. This tendency revealed itself in several different ways, including making assumptions about the meaning of events and not seeking clarification, assuming that I already knew the participants' views and issues, and being too close to the situation which obscured my view of the bigger picture while I was collecting data (Unluer, 2012). Essentially, I ran the risk of projecting my own experiences with similar learning experiences onto the study participants. I tried to overcome these concerns by taking a preventative approach (Unluer, 2012).

Concerned about making assumptions about events, I became purposeful in my dealings with everyone related to the study. Where I believed that I was making assumptions about goings-on's, I asked follow-up questions to confirm my understanding of the matter at hand.

Addressing my presumptions that I already knew participants' views (having already experienced similar learning activities during my training contract), I forced myself to stand back and observe what they were doing. Only once I could see what they were grappling with did I intervene to ask appropriate questions. This was something that took a lot of effort on my part.

Being too close to the situation was also problematic for me. The former student in me wanted the participants to tackle the project in a particular way (my way), and when they did not do so, I was tempted to react angrily. It was difficult to try to understand why they reacted in the way they did, instead of assuming that I understood their motives.

4.7.3 Analysing the data

The literature recommends that the more a research is able to overcome his or her biases as an insider, the more he or she will be able to come up with rich data (Unluen, 2012).

In order to arrive at study participants' stories about their experiences with the simulation, I utilised the In Vivo coding approach (Saldana, 2016) which provided me with structure, forcing me to focus on what the participants had said before attempting to interpret their thoughts. This assisted me to interpret the data without bias.

4.8 DATA COLLECTION AND ANALYSIS

4.8.1 Data collection – student participants

The data collection in case study research was typically extensive, drawing on multiple sources of information (Creswell, 2007). Data was collected during two phases. Firstly, data was collected by way of participant reflection journals during the running of the simulation. I kept a researcher reflection during the process too. After the completion of the simulation process, data was collected from the two focus groups' interviews. I also collected data from the wider student cohort using a questionnaire, to facilitate a comparison between study participants' learning experiences and those of students in the wider student cohort.

1. Written reflections

I requested students to complete a reflective journal after each simulation session. These journals were used to gather data on the research topic. The reflective journal is a retrospective account of things that have happened during the research activity (Denscombe, 2010). The journals were not treated as 'fact' but, following Denscombe's approach, they were viewed as a "version of things as seen by the writer, filtered through the writer's past experiences, own identity, own aspirations and own personality".

All study participants were provided with a notebook in which to reflect on their experiences in the simulation experience. As previously outlined, I used the approach to reflection developed by Ash and Clayton (2004). While all thirty-five students had a notebook, not all study participants returned the notebook for research purposes. I only received 22 journals back from participants (Westville: 10; Pietermaritzburg: 12).

While I emphasized the need to reflect effectively (that is, in the manner explained to the study participants at the start of the sessions), several of the participants chose not to

participate in this aspect of the study, which was disappointing. While the reflection process is essential to the learning process, it was difficult to gauge whether study participants understood the importance of this process.

2. Questionnaires – wider cohort (Auditing 3B)

All students in the Auditing 3B class were requested to complete a questionnaire related to their experiences with the auditing simulation project. After the students had handed in their projects, I was given the opportunity to address the classes (at the start of a lecture) to ask them to complete the questionnaire. As this took place quite close to the end of the semester, lecture attendance was poor, and the number of students that completed the questionnaire was low. The questionnaire consisted of open-ended questions, and the purpose was to collect qualitative data that would assist in the analysis of the study group data.

3. Focus groups / semi-structured interviews

Focus group interviews were used to gather data on the research topic. The use of these focus groups allowed for the exploration of attitudes and perceptions, feelings and ideas about simulation (Denscombe, 2010; Wahyuni, 2012), and participants were encouraged to pass on their knowledge through conversations held during the interview process (Wahyuni, 2012). Generally, the interaction between participants in such a situation can also assist the researcher to understand the reasoning behind the views and opinions expressed by group members (Denscome, 2010). However, care must be taken to encourage all participants to talk, and it may be necessary to monitor individuals who dominate the conversation (Creswell, 2007).

The purpose of the focus groups was to probe the learning that took place during the various simulation sessions, and to follow up on questions posed in the written questionnaire (referred to above). The interviews were semi-structured in nature, and as such, the planned questions were merely initial/starting questions. This approach allowed for follow-up questions in response to students' comments/answers to the initial questions.

There were two focus groups, one in Westville and one in Pietermaritzburg. The group in Westville consisted of 10 participants, and the group in Pietermaritzburg consisted of 15 participants. While 15 students may be considered too large, students were eager to participate in the discussion, and I allowed this in order to obtain data from as many students as possible.

In this study, the possibility of bias arose from the power relationship between the participants and the interviewer (Creswell, 2007), as I am a senior member of staff within the auditing discipline. This may have led them to provide answers to my questions that they believed I wanted to hear. To mitigate this, I reminded them regularly to be truthful in all their responses, and reiterated the fact that they were free to leave the study and related interviews at any point, should they wish to do so.

4.8.2 Data collection – facilitator's self-study of practice

While I started out wanting to understand students' experiences of learning in audit simulation pedagogy, as the process progressed, I identified a need to understand my own experiences of the simulation as its facilitator. As reported in chapter 2, the literature identified the importance of the facilitator in the simulation process. This, along with my own growing conviction that the facilitator is the cornerstone to the success of the process, I came to the realization that the facilitator's experiences of learning in the simulation process should be investigated too, as it would enrich the research achieved.

Such a change in approach is acceptable, particularly in qualitative research, for example Creswell (2007) suggests that the nature and direction of qualitative research develops as the research process unfolds, rather than being "tightly prefigured". He further argues that the nature of qualitative research is such that research questions may need to be changed as the researcher develops a more intimate understanding of what is needed. In addition, Creswell underscores the importance of the qualitative researcher's process of self-reflection during the research process. He suggests that the researcher remains aware of her own role in the process, noting that "such introspection and acknowledgement of biases, values, and interests (or reflexivity) typifies qualitative research today".

I developed an introspective account of my experience as facilitator of the simulation-led learning experience. This aspect of the data collection process is described at length in chapter 7.

There were several advantages to being an insider-researcher. Firstly, as a CA (SA) and auditing lecturer, I had a greater understanding of the academic and professional culture being studied. This allowed me to interpret data in a more informed manner. Secondly, as a lecturer within the auditing discipline, the students were familiar with me. This eased possible initial tensions between researcher and subjects, and allowed for a more natural social interaction between me and the study participants. Finally, I believe that having an established relationship with the participants encouraged both the telling and judgement of truth, on the part of all parties concerned (Bonner and Tolhurst, 2002).

However, I also had to be mindful of the pitfalls of being an insider-researcher. Most importantly, greater familiarity could have led to a loss of objectivity on my part and result in me unconsciously making wrong assumptions about the research (Unluer, 2012). From the outset, such loss of objectivity was top-of-mind. As reported above, as a student, I experienced many of the same frustrations in respect of my auditing studies, and I had to guard against letting my own sentiments cloud my ability to interpret the data in an appropriate manner. Throughout the process, and particularly during the data collection phase of the study, I asked participants to confirm my understanding of their comments.

4.8.3 Qualitative data analysis

I used the approach suggested by Saldana (2016) to analyse the date for the study. I used two coding methods: In Vivo Coding and Emotion Coding.

In Vivo Coding has also been called “literal coding” and “verbatim coding”. Here, a code refers to a word or short phrase from the actual language found in the qualitative data record (Saldana, 2016). It is appropriate for virtually all qualitative studies, but particularly for beginning qualitative researchers learning how to code data and studies that prioritise and honour the participant’s voice (Saldana, 2016).

Emotion Coding taps into the inner cognitive systems of participants. It quite simply labels the feelings that participants may have experienced. It is appropriate for virtually all qualitative studies (Saldana, 2016).

During the analysis phase, I searched for patterns in the data and for ideas that would help to explain why those patterns were there in the first place (Saldana, 2016).

I used the Keskitalo (2015) approach to analyse the data. Keskitalo utilised the characteristics of meaningful learning as a framework to analyse data. Aspects of students' stories were allocated to the appropriate characteristic to provide an understanding of how the simulation experiences supported the various characteristics of meaningful learning. The outcomes of this analysis are described in detail in chapter 5.

4.9 REFLECTIONS ON METHODOLOGY AND METHODS, AND CONSIDERATION OF CHALLENGES AND COMPROMISES

I now provide a reflection on the methodology and methods used during the study, considering too the challenges faced during the study, and the associated compromises that were made during the study.

4.9.1 The simulation instrument

While the simulation instrument provided was deemed suitable for the simulation experience, some concerns became apparent during the study. Unlike in previous years, PwC did not provide a memo detailing important aspects of the audit that would only really have been known to the person developing the case study. Although the memo would not have been available to the participants/students, it would have provided the lecturers (and myself) with the necessary background and understanding of the audit client. In a real-life audit, the clerks would be able to approach their manager for explanations to assist with the audit. Had this background information been available, the role of audit manager would have been played by the lecturers or me (as study group facilitator). As neither the lecturers nor myself had developed the simulation instrument, we had to make judgement calls on significant matters and ensure that students (across both campuses) received such additional information. This required a lot of behind-the-

scenes work on the part of the lecturers and me in order to ensure that we understood the audit scenario in the same way.

4.9.2 Reflection journals

While I emphasized the need to reflect effectively in the manner explained at the start of the study sessions, several students chose not to participate in this aspect of the study, which was disappointing. These students identified time constraints (arising out of other academic commitments) as the primary reason for not reflecting as requested. Instead of using these journals for reflection purposes, they used them as notebooks in which to make notes about the simulation. While these notebooks did not provide any reflection data, they did provide insight into how the participants approached the simulation. Their notes were a window into how they linked concepts, how they identified important aspects within the audit working papers and the overall audit scenario, and what questions they were asking themselves and their fellow group members. Although not reflection in the manner expected, these notebooks did assist in developing an understanding of how the participants approached the simulation.

4.9.3 Group cohort questionnaire

All students in the Auditing 3B class were requested to complete a questionnaire related to their experiences with the auditing group project. After the students had handed in their group projects, I was given the opportunity to address the classes to ask them to complete the questionnaire. As this process took place towards the end of the semester, many students had decided to forgo lectures in favour of studying at home for their year-end examinations. Attendance at the lectures (on both campuses) was thus poor, and the number of students who completed the questionnaire was low too.

Fortunately, those students who did complete the questionnaire did so diligently, and the questionnaires contained detailed answers to the questions. Upon later analysis, it was evident that student responses were consistent amongst the respondents and across the

campuses. Therefore, even though the response rate was poor, I did not believe that I had to compromise here.

4.9.4 Participation in focus group interviews

While most students were willing to answer questions in detail, some of the students (particularly the male participants in Pietermaritzburg) were reluctant to participate in the discussion, and I had to rely on the remaining participants who were present. On several occasions, it also became apparent that the participants had not understood my question, and I had to re-phrase the question. This was a little problematic, as I did not want to be seen to be leading them in a particular direction.

4.9.5 Running the study across two campuses

As the study ran on two campuses, several challenges were encountered during the running of the simulation.

Firstly, finding appropriate venues in which to meet with the study participants was challenging. Few appropriate venues (flat venues with movable desks) were available on either of the two campuses. A compromise was made in Westville, with a study group of only 15 students being used, where in Pietermaritzburg the study group size was 20 students. While this resulted in one group less in the study group, it was acceptable, as there were still 7 groups participating in the study.

Secondly, the only day on which the study groups would meet was a Friday. This required me to meet with the Westville study group in the morning, and then drive through to Pietermaritzburg to meet with their group in the afternoon. On one occasion, construction work on the freeway prevented me from travelling to Pietermaritzburg, and we missed a session. Although the groups did meet, I was not present to gather data.

Thirdly, the need to meet on a Friday also limited the length of each session. Longer sessions with each group would have provided more research opportunities and related data.

While these matters complicated the data collection approach, such compromise was necessary. There was not a feasible alternative, and I had to accept this fact. The outcome of the simulation and the related data collection was successful.

4.9.6 The collection of observable data on learning

One of the most significant challenges encountered during the study was the collection of observable data on learning. This proved difficult, and alternative approaches were devised, with resultant compromises too. The study participants worked primarily in electronic format (on their laptops). During the simulation sessions, they did not print out working papers or schedules, and I could therefore not inspect documents for evidence of how they had carried out procedures or how they had interpreted theory in a practical setting. I adopted an interrogation-type approach in which I focused on the "why" and "how" aspects of what they were doing. This allowed be to develop an understanding of what they were doing. I focused on understanding how the audit documents created a context and the documents assisted them in performing procedures instead of just being able to read off a list of procedures. My questions focused on the practical application of theory.

4.9.7 The quality of data collected

The quality of data collected was encouraging though, even before the analysis stage. It was evident that similar issues were being raised and addressed on both campuses. Similarly, a quick review of the responses to the cohort questionnaire revealed in-depth answers that suggested that the respondents had provided considered responses to the questions posed.

4.10 TRUSTWORTHINESS AND LIMITATIONS

In planning an inquiry, a researcher is inevitably asked how validity, reliability and generalisability will be built into the design of the study (Henning, 2011). The four criteria of research trustworthiness developed by Lincoln and Guba (1985) are widely used to evaluate the quality of qualitative research (Wahyuni, 2012).

Briefly, the terms may be defined as follows: *Credibility* refers to the accuracy of data to reflect the observed social phenomena, and is concerned with whether the study actually

measures or tests what is intended. *Transferability* refers to the level of applicability of the study into other settings or situations. *Dependability* refers to the ability to promote replicability or repeatability, and concerns taking into account all changes that occur in a setting and how these affect the way research is being conducted. *Confirmability* refers to the extent to which others can confirm the findings in order to ensure that the results reflect the understandings and experiences from observed participants, rather than the researcher's own preferences (Wahyuni, 2012).

I addressed these matters in the following way:

With regards credibility, applying the approach suggested by Shenton (2004), I made use of several provisions to promote confidence that I had accurately recorded the phenomenon under investigation. I adopted well-established research methods, made use of triangulation, made use of tactics to ensure honesty from informants when contributing data by providing each informant with the opportunity to refuse to participate in the project at any stage, and wrote thick descriptions of the phenomenon under investigation to describe the actual situations being investigated.

In respect of transferability, as the findings of a qualitative study are specific to a particular setting, it is impossible to replicate the findings and conclusions to other situations and populations (Shenton, 2004). However, it is not impossible to apply a qualitative study in a different setting (Wahyuni, 2012). Following the approach suggested by Shenton (2004), I provided detailed information regarding the research site, the number of participants involved in the study, the data collection methods that were employed, the number and length of the data collection sessions, and the time period over which the data was collected.

With regards to dependability and the ability to promote replicability or repeatability, I followed the approach suggested by Shenton (2004) again, and presented detailed and step-by-step explanations of the research processes undertaken, as well as providing the main instruments used to gather empirical data.

In order to achieve confirmability of the study, I utilized triangulation. Shenton (2004) suggests that steps must be taken to ensure that the study's findings are drawn from participants' experiences and ideas, rather than from the preferences of the researcher.

4.11 ETHICAL CONSIDERATIONS

During this study, every effort was made to ensure compliance with the University of KwaZulu-Natal's Ethical Policy. The identity of all participants remains anonymous. All recorded information has remained confidential, and nobody other than me and my supervisor has had access to such data. The data has be stored safely and destroyed once transcribed. All participants were asked to complete an Informed Consent document, in which the full extent of their participation was outlined. They were given the option to withdraw from the study at any time, and this did not impact on their Auditing 3B overall results in any way.

As the study included students registered at UKZN, I first had to request permission from the University Registrar who is the gatekeeper at the site where the research was conducted. Once I had received permission from the University Registrar, I submitted an application to the University's Ethics Committee and was granted ethical clearance to conduct the research (Appendix I).

4.12 CONCLUSION

Consistent with a case study research design, multiple data sets were gathered which provided rich data from which deep insights into the research phenomenon were gained and used for triangulation purposes to enhance the trustworthiness of the findings. The data sets consisted of: written reflections, focus group interviews, and written questionnaires. Consistent with a qualitative case study of this nature, coding, content and thematic analysis techniques were used to analyse and interpret the data. Finally, the steps taken to ensure trustworthiness of the findings were explained as well as the study's limitations and steps taken to ensure that the research was conducted in an ethical manner.

The next chapter, Chapters 5, analyses and interprets the simulation experience data collected in respect of the study participants.

CHAPTER 5

DESCRIPTIVE ANALYSIS – STUDENTS' STORIES

5.1 INTRODUCTION

In this chapter, I tell the students' stories about their learning experiences during the simulation. While the focus of the chapter is the study groups' experiences, I draw on the wider student cohort's experiences too, in order to provide support and to supplement the study groups' experiences.

I have analysed the students' experiences using the approach proffered by Keskitalo (2015), and in accordance with the headings provided in Table 3.1 (Characteristics of Meaningful Learning, and their practical implications). This allowed me to adopt a structured approach when analysing students' experiences, which ultimately provided a richer understanding of how they experienced the simulation.

The chapter is necessarily long, as I have chosen to present the findings in one extended chapter. As the findings form part of one larger approach, it would have detracted from the findings if I had separated them into smaller, distinct chapters.

5.2 MEANINGFUL LEARNING CHARACTERISTICS: EXPERIENTIAL AND EXPERIMENTAL

5.2.1 Limited previous experience

As will be evident from the stories that are told in this chapter, the majority of the students had very little (or no) practical experience. Their previous experience with Auditing was limited to textbook knowledge, the pictures that their lecturers had attempted to paint for them, and their tutorial questions. They had little practical context on which to draw.

This state of affairs contributed greatly to students' struggles with the project. Their ability to engage with the practical aspects of Auditing was somewhat limited and the project resulted in heightened stress levels.

However, one student told a story of how his experience was different. This story succinctly explains that previous experience is at the heart of learning within a simulated environment.

5.2.2 The impact of previous experience with the project – "a picture in my mind"

The student's recollection of how his previous experience with the project (in a previous year) had prepared him for the current project provides evidence of the role that previous experience can play. His previous experience became a point of reference, a mental image that he could revisit as and when needed. The previous experience provided him with an alternative approach to tackling the project's tasks. Instead of sticking rigidly to an audit programme, the student was able to audit more intuitively. The experience allowed him to start moving tentatively along the novice-expert continuum.

> "*I had a picture in my mind of what working papers are*
>
> *I was not confused about them in the way that the rest of the group was*
>
> *Instead of going through the audit programme, I worked better by making notes of any issues and risks that I had picked up" (Pietermaritzburg study group participant)*

The student was no longer dependent on words alone to make sense of the audit. He was able to link mental pictures to the words, and think about how the audit procedures were performed. The mental pictures provided context, and enabled him student to consider how something needed to be done. In addition, the repetition of the project provided him with the opportunity to become better with each subsequent experience.

5.3 MEANINGFUL LEARNING CHARACTERISTICS: EMOTIONAL

Students' emotions are an external force that undoubtedly impacts their ability to learn effectively from the simulation experience.

5.3.1 Anxiety and stress brought on by mounting academic pressures

From the outset, the majority of the students experienced anxiety about the timing of the project and that it coincided with other tests and projects that they were expected to complete also.

Comments such as

> *"Introduce this at the beginning of the semester" (Wider student cohort questionnaire)*
>
> *"Give us more time" (Wider student cohort)*
>
> *"I would make the dates more realistic" (Wider student cohort)*
>
> *"Balancing this project with the accounting project was difficult" (Wider student cohort)*

highlighted students' frustrations about the project.

In addition, they revealed that if the project had not counted towards their assessment, they would not have invested as much time and effort in completing the task.

> *"Because I was quite busy with other modules' work, I would not have given it a good attempt". (Wider student cohort)*
>
> *"We were very pressed for time and other projects. So I would have prioritised other work" (Wider student cohort)*
>
> *"It would have been less stressful and it would not have been prioritised over studying". (Westville study group student)*

Such anxiety and potential apathy towards the project raised alarms. Questions such as whether this would lead to an unwillingness to give the project its rightful place in their studies were asked.

Students' comments also pointed to the fact that such an interactive, experiential learning experience was new to students, and that it may require an adjustment to their

approach to studying. It would almost certainly require them to make more time in their study programmes to meet the project's obligations. It would appear that the project's requirements were not viewed in the same light as "studying", suggesting the need for a change to students' mind-sets, in relation to the importance of teaching and learning and assessments.

Following on from the realisation that the introduction of such a project would probably demand more time from students is the concern that this would increase the pressure on students who were straining under an already full curriculum.

The majority of the negative sentiments towards the project originated from students in the wider student cohort (that is, not students from the study group). This gave pause for concern; why were these students unable to see the value of the project? One plausible explanation was the substance of the pre-briefing (the PwC presentation) received by the wider student cohort. Students commented that the pre-briefing presentation was not sufficient, and that it did not provide them with the tools to attempt the project successfully. This will be discussed in more detail below.

Many students did not appear to understand the importance of the project and its place within the Auditing academic space. It was clear that they viewed the project as separate from their studies, indicating that they would forgo the learning experience in favour of their studies. They struggled to understand the significance of the experiential learning event, and its potential impact on their future careers. Students' struggles in this regard also pointed to the fact that academic staff should not assume that students will seamlessly take to this mode of learning.

Significantly, the study participants did not express such concerns. While this may have been a result of a perceived power relationship between myself and them, this may have been as a result of the more in-depth pre-briefing session that they were exposed to. In accordance with the Keskitalo model, a detailed pre-briefing session was held during which the links and associations between the theory and the practical application of the theory were made explicit.

Approaching this from a different perspective, it may be argued that students need to be placed under a certain amount of pressure in order to develop their coping mechanisms for the Auditing profession, where they will frequently be called upon to manage more than one task at a time. However, the need to learn this skill at university may also be questioned in light of our overall mandate, which is to meet the needs of all of our students. It may be argued that students could learn how to manage more than one task at a time later – for example once they enter their training contracts.

5.3.2 Feelings of betrayal and anger

> *"Frustration, betrayal!!!!!!!!!! Beyond words*
>
> *My part of the inventory audit has been referenced to someone else" (Pietermaritzburg study group participant)*

This study group participant experienced betrayal by a group member, someone that she should have been able to trust and rely upon in the context of the project. The anger that she felt as a result of this betrayal overwhelmed her, possibly quite unexpectedly. She had felt a sense of ownership with respect to the work that she had done, and now someone else had taken credit for that. While the experience left the student disheartened, it provides an example of a workplace reality that the simulation sought to expose students to – the fact that colleagues may wilfully take credit for work that they did not do. The lesson to be learned here relates to how to cope with emotional "betrayal", how to respond rather than react, and how to better prepare for such (inevitable) occurrences.

5.3.3 A student with a different perspective

In complete contrast to the overwhelmingly negative emotions experienced by some, one study group participant had an epiphany:

> *"In the beginning it was about the marks, and then it became personal. Someone wanted to change my work. I had worked hard, and now someone wanted to change my work! I am surprised at how personal this project has become to me". (Westville study group participant).*

In contrast to the aforementioned student, this student chose to see the fact that someone wanted to take credit for her work as something positive. She associated her feelings (anger and irritation) with personal growth and learning how to assert herself in a work context. She recognised that the project had become valuable to her and that it was contributing to her academic progress. The experience would have, undoubtedly, enhanced her learning experience.

5.3.4 Language barriers: anger, frustration, isolation

While only one student shared her feelings in this regard, it is impossible to say with any certainty how many other students experienced similar concerns and fears.

> *"Only English second-language speaker in my group*
>
> *Nothing more frustrating than not being able to express myself*
>
> *The language barrier will always be an issue*
>
> *Once again I cannot explain myself*
>
> *Not entirely sure why I am here*
>
> *Someone help!" (Westville study group participant)*

The student's distress is tangible, and would have undoubtedly impacted on her ability to engage effectively in group discussions and learn collaboratively within her assigned group. While the student was clearly distressed, this was not intended. The simulation had sought to expose students to practices common in the workplace where clerks are often sent to clients with other clerks that they do not know well; students were allocated to project groups on a random basis to expose them to this practice. The programme also sought to expose students to an environment similar to ones they would encounter in Practice, where they would have to work with confident English first-language speakers, and find ways to manage themselves in such a context.

It is, however, evident that this approach failed to meet the needs of all of the students; this student felt neglected and alone. In seeking to expose students to a real-life experience, the overall objective of the project – to find a way to help students engage

with Auditing on a deeper, more practical level – was overlooked, and this student's learning experience was impacted.

5.4 MEANINGFUL LEARNING CHARACTERISTICS: SOCIO-CONSTRUCTIVE AND COLLABORATIVE

Prior to the simulation experience, students were almost solely exposed to a lecturer-focused learning strategy. In lectures, students sat passively while facts were provided by expert lecturers. There was no reason to question anything, and they were not actively encouraged to look further afield for answers. In tutorials, although they were provided with ostensibly practical examples of how to address auditing problems, the approach remained predominantly theoretical. Problems were clearly defined and questions were posed in single, manageable requirements.

This approach to learning is problematic in a simulated learning environment where students are asked to create new knowledge by building on their existing understandings. As the students' existing knowledge was purely theoretical in nature, that is what they kept looking for; they did not know anything else. It was their only point of reference.

In the current simulated experience, while the rationale behind the use of a simulation learning experience was made explicit, students were not provided with examples of how to develop working papers or answer the questions. The argument was made that that students needed to experiment with the scenario and find the answers for themselves. However, this decision was met with some unhappiness – particularly from students in the wider student cohort. Students argued that they needed a more detailed explanation of what was required for the project.

> *"I think having clear guidelines would make the project more enjoyable or alternatively, provide us with an example of working papers on an audit of another company so that we would have a better idea of what to do" (Wider student cohort)*

> *"Would have liked it to include more information on how to approach the project, and some feedback from people who had previously done the project so that we have an idea of what to expect" (Wider student cohort)*

"They could have talked more about the actual questions of the project" (Wider student cohort)

The talk did not explain to us how to do the project" (Wider student cohort)

"Too broad – should have been more in-depth as most students don't have work experience" (Wider student cohort)

"Would have liked them to give guidance on what to do, since we have never done such a practical project" (Wider student cohort)

"We were not shown how to prepare a working paper" (Wider student cohort)

"Needed a clearer explanation of what was actually required" (Wider student cohort)

The tone of students' comments in this regard was (almost) angry, and conveyed their deep sense of helplessness. The majority of students were concerned at the lack of guidance, and this would definitely have hindered their ability to learn from the simulation experience.

The simulation had taken them out of their comfort zone; de-stabilising them and creating anxiety. In response, they had reached out for the familiar. They asked for guidance, and for someone (the lecturer, the facilitator) to take the lead in the learning experience, just as they had always done. The students were simply not prepared to take the lead during the learning experience.

Statements such as those below illustrate their apprehension about having to adopt an entirely new, foreign approach to learning:

"Normally given the percentage"

"We were told in class"

"The materiality template was very different to the theoretical materiality steps that were given to us, and taught in lectures"

While the programme sought to guide students towards a new way of developing their understanding, the tools they needed to achieve this were not provided. While the achievement of student-centred learning should be the ultimate goal, related interventions cannot be abruptly imposed as this creates dissonance amongst the students. By compelling the students to make the transition from a lecturer-focused approach to a student-centred one without the necessary scaffolding in place, their ability to learn was adversely impacted. They lacked the practical mental pictures (that is, points of reference relating back to previous experiences in the mind's eye) that they could draw on in order to tackle the project successfully, preventing them from crossing the zone of proximal development successfully. This aspect of the simulation learning process affected both study group participants and students in the wider student cohort, as both groups of students came into the experience with the same previous experiences – experiences that were primarily theoretical in nature.

The lack of meaningful practical knowledge as a starting point to the collaborative learning process would have hindered students' learning, irrespective of the quality of the collaborative process that was put in place.

Students discussed the fact that the project was a group project at length. There were conflicting viewpoints about the appeal of such an approach, with many points raised.

The idea of working together in groups was attractive to all students. They recognised the benefits of working together and enjoyed the sense of comradery that groupwork offered.

> *"Working on my own showed me how much easier it was when your team mates are around to help" (Westville study group participant)*

> *"Collaborating with team members, I was surprised at how much more effective it is when you work together because each person brings different strengths to the table" (Pietermaritzburg study group participant)*

They recognised that groupwork could alleviate some of the anxiety that they were feeling as a result of new the approach to learning. Students recognised that their fellow

group members felt just as confused as they did, and that the group was able to provide emotional support at a time when they felt ill-prepared for the tasks at hand.

> *"The ability to collaborate was important – we were able to feed off of others' skills" (Westville study group participant)*

> *"It helped to know that there was some sort of support; I didn't feel as alone" (Pietermaritzburg study group participant)*

Many of the wider cohort students reported that they had enjoyed working with fellow students that they did not know well. This phenomenon appeared more prevalent on the Westville campus where the class is significantly larger and where it is conceivable that students do not know all of their classmates.

> *"Generally as a class, we stick to people that we know, so being allocated to a group of people we don't know was quite enjoyable" (Wider student cohort)*

> *"It took me out of my comfort zone by interacting and working with new people, instead of familiar people" (Wider student cohort)*

> *"Having to work with new people that you don't know. I think it builds up your communication skills and teaches you how to work in a group" (Wider student cohort)*

Students in the wider student cohort reported that the groupwork approach created opportunities for them to support each other during the learning process too. This phenomenon of groupwork was particularly important to such students because their formal support structure (their project champion) was not present as frequently as in the study group scenario. The groupwork approach provided an alternative to the facilitator-approach.

> *"If we struggled with anything, we could ask the group for assistance. All members were willing to work hard and offer assistance if needed" (Wider student cohort)*

"Everyone pulled their own weight and everyone offered to help when needed" (Wider student cohort)

"Thankfully my group was easy to work with" (Wider student cohort)

"Learned a lot from these members as their thinking / approach to questions was very different to mine. We got along and it was fun" (Wider student cohort)

"Other group members have different interpretations and ideas than you do" (Wider student cohort)

"Pooling different ideas and perspectives to a question was useful" (Wider student cohort)

But some students told of conflict that had arisen within their groups that could have been avoided if a group project had not been utilised. Several students suggested that, going forward, students should be allowed to select their own group members.

"Can't choose who you worked with – different personalities" (Westville study group participant)

"No, because of conflict and misunderstandings that arose" (Westville study group participant)

"Working in groups sometimes brings conflicts that you can't resolve and end up agreeing to something that you don't believe in, just for the sake of finishing" *(Westville study group participant)*

"Students must pick their own group members" (Wider student cohort)

"Should be allowed to choose your own group, because not everyone works to maximum effort." (Pietermaritzburg study group participant)

"More time should have been given. Since this project counts a lot towards our final marks, students should be given the opportunity to choose their own groups, thus ensuring that hardworking students are not forced to work with those who are not so serious about their work" (*Pietermaritzburg study group participant)*

Following on from the previous discussion related to language barriers created by the random allocation of students to groups, it is worth reiterating the fact that while the reason behind allocating students randomly to groups was thought to be sound, it is evident that this approach failed to meet the needs of all of the students. Although the objective was to expose the students to practices common in the workplace, the overall objective of the project was not taken into account, namely to find a way to help students engage with Auditing on a deeper, more practical level. In a bid to create a real-life world for students to experience and experiment in, situations were created where students felt uncomfortable. This too could have adversely impacted their learning experiences.

While it is (almost) regrettable that students encountered conflict, conflict within a social environment should be expected; to disagree is human. Thus far, students had not been exposed to many instances of academic or professional conflict, and they would have had limited opportunities to develop the necessary skills to cope with such instances. The simulation provided students with a valuable learning opportunity to start developing such skills, and in a peculiar way, having to face conflict head-on was part of the learning strategy. The simulation provided as safer environment in which to encounter conflict than in a real-world setting, where conflict could have more severe repercussions.

While not all of the groups elected to work collaboratively, several study groups recognised the importance of working together. They understood that collaborating does not mean allocating tasks to individuals (who then work alone) only to come together again to collate the various efforts and submit a single, group project. They identified that true collaboration requires working together on tasks, discussing problems as they arise, and reaching mutually-agreed decisions and answers.

> *"Communication and understanding of other team members' opinions" (Pietermaritzburg study group participant)*
>
> *"Decided to work through the project together – each opinion and outlook counts" (Westville study group participant)*
>
> *"The group worked together for all tasks. This allowed us to tap into each other's strengths. It was faster and more efficient" (Westville study group participant)*

"We collaborated a lot. If I didn't know something, someone else would" (Westville study group participant)

"Group discussed all the tasks, but worked alone. This did not work well – we would do it differently next time" (Pietermaritzburg study group participant)

The opportunity to collaborate also provided students with the ability to adopt a detective-like (exploratory) approach to their learning. Together, they were able to search for understanding, solutions, and meaning. Such an approach also allowed them to move along the lecturer-led / student-led continuum and to learn more effectively.

"We wanted to wrestle with problems in order to find solutions – puzzles" (Westville study group participant)

"It was like a puzzle – I would look at what I know, and then go and speak to others to try to figure out where everything fits" (Pietermaritzburg study group participant)

"Can discuss and ask questions throughout the project"(Pietermaritzburg study group participant)

While a collaborative approach was preferable, deadlines and time pressures presented hurdles to groups' abilities to continue working collaboratively. In order to meet deadlines, groups had to sacrifice a more effective learning strategy in order to complete their tasks timeously.

"We decided to do the whole project together, but faced time constraints. So we decided to split the questions up" (Westville study group participant)

In addition to working separately on questions (instead of in a group-based context), many groups (particularly those in the wider study cohort) also elected to meet very infrequently. This was not as relevant to the study groups, as they were required to meet at least once a week for purposes of this study. Some groups reported that they completed the project almost exclusively via WhatsApp and emails, meeting only once to allocate tasks to the group members, and then met again to compile their reports.

"We met through email and WhatsApp" (Wider student cohort)

"Not often, mainly WhatsApp" (Wider student cohort)

"We did not meet much – used emails, DropBox, WhatsApp" (Wider student cohort)

"No, we never got time to know each other and to learn from each other. We just divided up the work, and attempted it individually" (Wider student cohort)

"No, we didn't have enough time to meet" (Wider student cohort)

"It is difficult to communicate your opinion on matters when you don't see group members too often" (Wider student cohort)

The study groups had spoken at length about their experiences of collaborating their efforts to develop superior answers to the project questions, and how they had been able to rely on their team mates when they did not know something. It was not possible to experience these benefits when the group did not prioritise their meetings. Some of the groups indicated that their sole means of communication was WhatsApp. This too was disappointing but significant; where meetings were forgone, the project became less effective.

It was also clear that groups on the Pietermaritzburg campus met more frequently than their Westville counterparts. This may be attributed to the fact that the campus is smaller, and students tend to live in closely proximity to others. Students are geographically more dispersed in the greater Durban area which could have impeded their ability to meet frequently outside of university hours.

"Met weekly" (Wider student cohort)

"3 times a week, and WhatsApp" (Wider student cohort)

"Met 2 to 3 times a week, and WhatsApp" (Wider student cohort)

As evidenced above, the preferred mode of communication was via WhatsApp (a free-to-download messenger app for smartphones), with the vast majority of groups electing to

stay in contact in this manner. Being the technologically-savvy generation that they are, this approach was both understandable and expected. It was apparent that students believed that communication via WhatsApp was both acceptable and best practice.

> *"In constant communication with my group through WhatsApp this weekend. We guided each other through the templates" (Westville study group participant)*

> *"The class WhatsApp group sent notes, helpful tips and hints for Excel. Each team helped the next, as we were all clueless about what needed to be done". (Pietermaritzburg study group participant)*

However, while the app provided students with an easy way to remain in constant contact, the approach removed the ability to engage in meaningful face-to-face conversations as promoted by Collaborative Learning principles. The app limited opportunities to wrestle together with concepts, to find answers to puzzling questions, and to generally find a way out of the chaos of the project. It removed the ability to engage with each other, talking amongst themselves to find answers.

The atmosphere within the individual groups appeared to influence the success of the learning that took place. Some groups upheld the principles of groupwork, electing to support each other, and demonstrating levels of maturity far beyond their years. Under such circumstances, the group nurtured each member, a skill that will become highly desirable in the real world.

> *"People were so patient. I had to write two aegrotats. My team was supportive and took the workload off my shoulders and upon themselves. I was so grateful" (Pietermaritzburg study group participant)*

Students alluded to reasons for this phenomenon, citing communication, humility, and working for the greater good as reasons for being able to achieve this outcome.

> *"It is a skill to make a point to someone without making an enemy of that person" (Pietermaritzburg study group participant)*

"Misunderstandings can happen easily and cause conflict that could have been avoided" (Pietermaritzburg study group participant)

"In our group, no-one came in thinking that they knew everything – humility!" (Pietermaritzburg study group participant)

In contrast, in other groups the prevailing attitude was one of negativity and disapproval. Such circumstances destabilised students, leading to conflict and less effective learning opportunities.

"Group members were not serious about this project … there were many conflicts" (Westville study group participant)

"I became frustrated when team members were silent or did not contribute" (Wider student cohort questionnaire)

"You couldn't choose the people you work with" (Wider student cohort)

"Working in a group was challenging" (Pietermaritzburg study group participant)

Students in the study groups revealed details of conflict within their groups. However, conflict was expected, and differences of opinion will arise. It is in the way that such conflicts are addressed that determines the success of the group work situation. This was evident in the study groups where students spoke of humility and kindness to their group members; this appeared to distinguish a good experience from a bad one.

In the wider student cohort, students spoke of disinterested students and how this created friction within the group. While this matter had not been raised by the study groups, the wider student cohorts in both Westville and Pietermaritzburg spoke of such concerns.

"People not interested in the project, and handed in below average work" (Wider student cohort)

"Some members didn't contribute enough" (Wider student cohort)

"My members were not serious about this project, not hardworking, and would get offended and feel "demoralised" when asked to do their work. There were many conflicts" (Wider student cohort)

"Some did not take the work seriously" (Wider student cohort)

5.5 MEANINGFUL LEARNING CHARACTERISTICS: ACTIVE AND RESPONSIBLE

Students spoke of the active nature of the project, and how this motivated them. They compared the active learning strategy employed in the simulation to lectures, noting that this approach was preferable. The active approach needed in the project provided them with context and they could visualise what a real audit would entail. Auditing took on a more realistic feel, and it became interesting.

"The most valuable experience was just being able to do the work instead of reading" (Westville study group participant)

"Auditing had become interesting. In lectures, it is dull. Now, I wanted to be involved. I look forward to working on real audits" (Westville study group participant)

Instead of having information transmitted to them during a lecture or a tutorial, the simulation provided the students with the opportunity to physically engage with the audit tasks in an authentic, real-like environment. They were able to inspect documentation, thereby creating visual cues for concepts and terms, and perform procedures as would be done in the real working world. The simulation provided students with the opportunity to move from merely knowing something to being able to apply that theory practically.

The simulation experience provided students with a glimpse of the real world of auditing. They recognised that, before the simulation, they had only been exposed to the theory. While they knew what the title 'auditing' referred to, they were unable to perform (or, 'do') an audit. The simulation provided the opportunity to actually perform procedures that had previously only existed on paper for the students (that is, in theory).

The simulation-led active learning experience empowered and excited students. For the first time, they felt motivated to learn and understand because they were interested and

engaged. This is a far cry from their extrinsic motivation that was present during the rote learning of procedures; they learnt procedures because they needed to pass an exam, not because they wanted to develop their understanding.

Students revealed how the project had affected them personally. Their comments revealed how the project has assisted with their personal growth and the development of an understanding of the importance of accepting the role of responsible professional.

One student spoke of how his actions had caused stress to the rest of this group. He felt that he had let the group down, and this troubled him. The lesson learned here is that actions have consequences and that in a professional group setting, others must be taken into account too.

> *"I neglected my leadership, which led to the group's stress, and panic … No excuse is acceptable, I let the team down" (Westville study group participant)*

Another student shared her experiences of how she had become invested in the project, and that she felt responsible for the work that had been assigned to her. The responsibility that she had felt towards the sections assigned to her had spurred her on to work hard and provide the best work for the group. Inadvertently, she had understood the work tasks can become an extension of the individual who had performed the tasks, and that it is important to give of one's best at all times. This is a hallmark of a successful professional.

> *"It surprised me how personal it became. …. In the beginning it was about the marks; then it became personal. Someone wanted to change my work. I had worked hard, and now someone wanted to change my work!" (Westville study group participant)*

One group spoke of how they had, of necessity, come forward to accept responsibility when their group leader let them down. They spoke of their anger towards the group leader, but also of a sense of comradery between the remaining group members to complete the tasks that they had been assigned. They displayed fortitude and resilience, two qualities that will serve them well in Practice and in the wider working world where

team work is valued. In an audit environment, where most audits are performed in a teamwork setting, the team's performance is judged collectively, and the individual is only as good as his team. Understanding this is essential to success in an auditing environment.

> *"The group leader let us down, and didn't complete her sections. The rest of team stepped up because it was a group assignment and needed to be done" (Westville study group participant)*

5.6 MEANINGFUL LEARNING CHARACTERISTICS: REFLECTIVE AND CRITICAL

5.6.1 The journey to knowledge starts with small steps

The simulation experience culminated in a post-simulation debriefing and focus group discussion about the students' learning experiences during the simulation. It became clearer that learning within the context of a simulation is both complex and multi-faceted. Learning does not always come in grand gestures; it often comes in a whisper and may be a small change in the student's understanding that then becomes the gateway to further knowledge discoveries. It is important not to discount those small victories along the way.

While students' learning was inhibited by several external factors, learning did occur (albeit less remarkable than initially hoped for). Students provided glimpses into their experiences, providing answers to the primary research question, and offering explanations for why the simulation unfolded in the manner that it did.

The study participants struggled in their attempts to reflect formally in their reflective journals, citing work pressures as the primary reason for this failure. Although guidance on how to reflect had been provided, very few of the study participants reflected in this manner. Nonetheless, their journals provided valuable insight into their thoughts, anxieties, fears, and triumphs. While their struggles to reflect intentionally on their experiences in the simulation may have impacted their learning adversely, their reluctance to reflect was rooted in their pressured simulation experience and their full curriculum. At the time, they simply did not have the capacity to engage in reflection in the recommended manner.

During the simulation debrief and focus group discussion, study participants provided insights into their learning experiences in several areas:

5.6.2 The concept of materiality

Study participants spoke at length about the calculation of the materiality figure. While the calculation is quite trivial in the broader perspective of the entire audit, students spent a lot of time on this aspect of the audit.

One of the study participants quipped ironically

> *"We care too much about the "nitty gritty" intricate matters, which shouldn't be given so much time and concern" (Pietermaritzburg study group participant)*

The students' focus on a small, inconsequential aspect of the audit reveals their inability to see the so-called bigger picture, and calls for an awareness of the need to refrain from getting locked into the minute details of the audit, at the expense of developing a holistic understanding.

5.6.3 Application of theory in a practical setting

Study participants recognised the need for such an intervention – to develop their understanding of how to use theory as intended. Despite several challenges, there was also some evidence of students moving beyond a purely assessment-based focus. Students began to appreciate the need to link a university education to its intended purpose; that learning is not just for learning's sake. With support, this fledgling realisation could be the start of a philosophy of lifelong learning.

> *"It was a wonderful experience. It gave me the practical experience of doing audit work. This was also a glimpse of what to expect from a work point of view" (Westville study group participant)*

> *"Just being able to do the work instead of reading" (Pietermaritzburg study group participant)*

Students' inexperience in respect of the practical aspects of Auditing was evidenced by their appreciation of now having seen what Accounting / Auditing documentation looked

like. For many students, the project provided the first opportunity to create a mental picture (for future reference) of such documentation.

> *"Just knowing what the documents looked like was helpful" (Pietermaritzburg study group participant)*

Being able to link names of documents to the physical documents created context for learning. Such mental pictures provided students with the ability to consider how documentation could be utilised to generate audit procedures, instead of relying on a list of procedures that had been provided by the lecturer. They began to understand that documentation provides information that can be used to prove or disprove their client's assertions.

Students also recognised that their reliance on their lectures for all their Auditing knowledge had led to them being completely dependent on their textbooks. They admitted to learning audit procedures verbatim without much understanding. Having been exposed to the auditing project provided them with an alternative approach to developing their understanding. They also valued the experience because they no longer just accepted procedures as fact; the project provided them with the opportunity to discern why a procedure was needed, and how it was best performed. The project provided insight into the practical operations of an audit.

> *"Now we no longer just parrot-fashion learn; we have understanding" (Pietermaritzburg study group participant)*

> *"Before this, we were just learning it from a textbook" (Westville study group participant)*

> *"Learning why and how made the difference, and created a deeper understanding of concepts". (Westville study group participant)*

It is in the actual performance of an audit procedure that a connection is made between what must be done (that is, the theoretical purpose of a procedure) and the reason for the procedure (namely the "why"). Without connecting the theory to practice, the circle of learning cannot be closed.

"Just being able to do the work instead of just reading" (Westville study group cohort)

The wider cohort of students on both campuses also appreciated the fact that the project allowed them to apply their theoretical understanding in practical settings, and that it provided them with insights into the real world of work that they would soon be joining.

> *"It was a wonderful experience. If gave me the practical experience of doing an audit. It gave me a glimpse of what to expect from the work point of view" (Wider study cohort)*
>
> *"The project exposed students to what we can expect in the workplace. It put the theory we study into practice and exposed us to an actual audit scenario" (Wider study cohort)*
>
> *"The project helped me to realise what actually happens in practice" (Wider study cohort)*
>
> *"It's practical, making it easier for me to understand what we are doing" (Wider study cohort)*

This was encouraging as, even though the vast majority of the students expressed (almost) anger about the fact that they had to participate in this project and that it interfered with their perceived real academic endeavours (that is, tests and examinations), there was an understanding that it is important to development an understanding of how auditing theory should be applied in practice. Exploring ways to provide students with the benefits of the project without compromising their ability to succeed with the rest of their academic tasks is essential if students are to be convinced of the need for a groupwork project that simulates a real-life audit.

5.6.4 Scepticism and judgement in an audit context

While students had already been told of the importance of scepticism and judgement to an auditor, simply knowing what the concepts were would not have provided a profound understanding of their significance in an auditing context. However, being bombarded with numerous documents and explanations proved to be the catalyst in unlocking

students' understanding of these concepts. Students began to adopt a more questioning attitude within the audit. They recognised that audit problems are commonly ill-defined and that standard answers are seldom sufficient. They had started to think like real auditors.

"Don't take things at face value"(Westville study group participant)

"Question everything!" (Pietermaritzburg study group participant)

This was undoubtedly a significant revelation and a major learning point for students. This breakthrough only came about as a result of the practical application of Auditing theory. Had students only been exposed to the traditional lecture-based approach, this concept would probably still only exist theoretically in their understanding.

5.6.5 Turning bad experiences into successful learning opportunities

Two study group students spoke of how everything went wrong during their project experience. These stories serve as examples of how such misfortune can still provide valuable learning experiences. Significantly, these stories provide evidence of the fact that, in addition to providing students with exposure on how to bridge the gap between auditing theory and practice, the simulation also provided students with several opportunities to learn social skills that will be invaluable in the working world.

The first student shared that he had let his group down when he put his father's needs ahead of the group. He expressed that he had experienced shame and humiliation and felt that he had let his team down; they, in turn, had reacted with anger to his actions. The learning opportunity here lies in the fact that these circumstances reflect the realities of life, that alternative plans may be needed in order to achieve stated goals. Furthermore, the team could reflect on whether they had handled the situation correctly. The attitudes displayed by the students could also be compared to the Pietermaritzburg group (referred to above) that had supported their group member while she wrote aegrotats.

The second student expressed anger and disappointment at her group leader, commenting that the leader had not completed her assigned tasks, preferring to leave the

rest of the group to complete the tasks. The group then completed the tasks so that they could submit the whole project. The circumstances provided a valuable learning opportunity for the group. By completing the outstanding tasks, they demonstrated that they understood the meaning of the words “team work”. They also displayed a sense of cohesion within the group and a good work ethic, both important skills to carry forward to the real world. While the group leader disappointed the student, being disappointed by a leader may become a reality in the working world. Being exposed to this during the simulation provided yet another important learning experience.

5.6.6 Making mistakes

While students acknowledged making many mistakes, they recognised the importance of making mistakes during the simulation. They saw the simulation as a safe space in which mistakes were permissible.

> *“We made mistakes!” (Westville study group participant)*
>
> *“Using mistakes to learn, to change my approach going forward” (Westville study group participant)*
>
> *“Happy to make the mistakes here, instead of in Articles, because pf the greater impact there. Here the stakes are lower” (Pietermaritzburg study group participant)*

Making mistakes is the essence of learning. As new competencies and skills are developed from experiences, it is inevitable that mistakes will be made. However, failure (a mistake) is only a gift is the student sees it as an opportunity rather than as a penalty. Importantly, the simulation provided students with the space to stumble, but also to understand how to rectify their mistakes. Furthermore, the simulation created a space in which the students became aware of the consequences of when mistakes are made in Practice.

Students experienced the simulation in complete contrast to a lecture. During a lecture, information is transmitted to the group, to be accepted without question; questions and dissent are discouraged. Here, while the learning is neatly packaged, it is passive and ineffectual.

In complete contrast, simulation-based learning is messy, convoluted, and hands-on. Students preferred to wrestle with the contents of the simulation on their own, even though they understood that initially they did not have the expertise to do so. They recognised that it was in the wrestling/muddling that the learning occurred. These challenging experiences moulded their mistakes into abilities; something that they would not have achieved had the facilitator just given them the answers.

While they may not have enjoyed being thrust into activities for which they were inadequately prepared, many of them recognised the purpose of this approach – that it led to direction and focus in the learning process. They recognised the value of repeated mistakes in a safe environment. The experience of making a mistake and rectifying it allowed them to internalise the learning, making it their own and taking it with them to the next experience.

5.6.7 Being unsure of where to start – creating a stumbling block to learning

Study group students and students in the wider student cohort spoke often of being *"overwhelmed",* of having "*no idea where to start",* and that they *"weren't sure".* Their confusion may be attributed to the change in teaching strategy. Students were accustomed to the lecture and tutorial approach in which questions were structured and organised with facts neatly laid out, and with the question's requirements being easily discernible. In contrast, during the simulation, they were faced with large volumes of unfamiliar documents and ill-defined problems that could be addressed in several different ways *("things could be said or presented in many different ways"*). The presence of ill-defined problems required students to reflect-in-action in order to arrive at the most suitable course of action.

While it is true that time constraints contributed to their inability to engage in meaningful reflection, there were other student-initiated factors that impacted this ability.

> *"The confusion we had was about how to approach the project. There was a lot of documents to handle and the majority of time was wasted due to the fact that we didn't know where to start" (Westville study group participant)*

When confused, students chose to request assistance from students at the same academic level or one level above who were also confused *("asked other groups, but all were equally confused").* While this approach resulted in a sense of camaraderie in the midst of the confusion *("Soon this section became a huge issue, and everyone was trying to help each other"),* their approach contributed to their confusion. The principle of the Zone of Proximal Development provides that in order to make progress in the development of understanding, students need to consult with a more competent peer or a lecturer. Their choice of advisors contributed to the fact that they did not necessary negotiate the zone of proximal development as desired.

While many students wanted to grapple with the facts of the simulation, it was apparent that these students did not want to do so, believing that it should be possible to complete the tasks without spending too much time on them (*"a lot of time was wasted during the session – we felt like we were floundering"*). They failed to recognise that so-called time-wasting was an integral part of the learning process. They failed to recognise the need to inch forward slowly, all the while reflecting on what they had done while finding the pieces of the puzzle. Their impatience cost them dearly.

When questioned about having a facilitator more readily available to students (as was the case with the study groups), students in the wider student cohort were divided in their opinions.

Those students in the Westville wider student cohort who disagreed with having a facilitator available to assist argued that they wanted to find their own way in the confusion and that this was the foundation of effective learning.

> *"Better to work on own. Able to identify own weaknesses" (Westville study group participant)*
>
> *"If discover on own, won't ever forget" (Westville study group participant)*
>
> *"Forced us to network outside our own group for help" (Westville study group participant)*

In contrast, those who wanted a facilitator stated that

"The project was quite overwhelming and one could only manage, but consulting with members from other groups who sometimes did not know the answers" (Westville study group participant)

"It would have helped me to understand how to approach the questions" (Westville study group participant)

"To guide us and help us on the approach of questions" (Westville study group participant)

The students in Pietermaritzburg expressed similar sentiments to their Westville counterparts. The "no's" suggested that *"My group provided sufficient assistance",* while the "yes's" suggested that

"*We had never worked on something like this, and we were thrown into the deep end with barely an idea of what to do" (Pietermaritzburg study group participant)*

"We had many confusions and felt as though we had been thrown into the deep end. We didn't need solutions, but guidance on what to expect as we had never performed an audit before" (Pietermaritzburg study group participant)

"We would have been guided along doing the correct thing, and they would have cleared up our confusion" (Pietermaritzburg study group participant)

The disparity in opinions about the need for a facilitator that could assist students more effectively suggests that facilitators should be available, but that students should have the option to use him/her. However, while students cannot be forced to consult with a facilitator, they should be made aware of this person's availability.

5.6.8 Too much work to do in the time that is available

Study participants and students in the wider student cohort were unanimous in their concerns about the availability of time to complete the project effectively.

"It was placed around the same time as all our other tests and projects – so found it a bit hard to focus 100%." (Westville study group participant)

"I did not enjoy that this project was time-consuming, which caused me to fall behind with my studies. (Westville study group participant)

"What I didn't enjoy about this project is that it took up so much time, time to study for other modules – ended up falling behind. I couldn't understand how to go about doing it because we hadn't been given a practical example. It was emotionally draining too" (Westville study group participant)

"The timing prevented us from dedicating enough time to it and also our modules" (Pietermaritzburg study group participant)

"*Doing four modules with this isn't easy" (Pietermaritzburg study group participant)*

"Sick, no time to work, starting now, don't want to let the team down" (Wider student cohort)

"Difficult working with such a big assignment so late in the semester" (Wider student cohort)

"Would have learned a whole lot more if I only had to focus on the project" (Wider student cohort)

"Very time consuming. Lots of work. More demanding than lectures" (Wider student cohort)

5.6.9 Finding a way through the chaos

The students' approach to resolving practical problems, related to matters such the need to develop their MS Excel skills further, is evidence of their Millennial Student status (that is students born between 1982 and 2004). They were comfortable with technology and looked to the internet first for guidance.

"YouTube videos" (Westville study group participant)

"Used Google and peers" (Pietermaritzburg study group participant)

"Used YouTube and Google" (Pietermaritzburg study group participant)

"Referred to tutorials on how to use Excel VLOOKUP and referred to different websites too" (Westville study group participant)

While struggling to make sense of Auditing documentation and procedures, they are comfortable with technology and have found ways to facilitate their learning in ways that make sense to them. The disadvantage with this approach to learning is that they are, for all intents and purposes, novices who need assistance at some point in the process.

5.6.10 Perseverance

"Nonetheless" (Westville study group participant)

"Must be willing to put in the hours" (Westville study group participant)

"Expect some pressure" (Pietermaritzburg study group participant)

"Realised that I had done the templates incorrectly, and re-did them – for the third time" (Pietermaritzburg study group participant)

Despite feeling overwhelmed and destabilised by the project, most students persevered. At the heart of everything, they understood the need for the project. Even the broader student cohort (who complained frequently about the volume of work and the tight deadlines) tried to complete the tasks. While this may be attributed to their focus on the assessment aspect of the project, this stance had another important effect: it forced them to participate. While the level of their participation may not have been as required, their participation did allow them to get a taste of what a real audit would entail. They will not be completely unprepared when they enter a training contract. To that end, the project achieved its educational objective.

5.6.11 Only one answer – or so we thought

"We were concerned that our way wasn't correct, and that we would fail. In tests, there is only one way, the solution" (Westville study group participant)

"It bothered me that the problem wasn't defined in terms of a "Required" (Westville study group participant)

"Doing inventory, we compared what we had done to other groups, and there were many differences" (Pietermaritzburg study group participant)

Students raised concerns about whether their answers to the project were "correct". Their response was to be expected. Thus far, in Auditing (and related Accounting modules), a suggested solution had been provided for each tutorial question and for each test or examination question. They had been trained to expect a neatly packaged solution that is closely aligned with the scenario presented in the question. The scenario is relatively straightforward and the requirements ("the Required") are well-defined. A suggested solution is possible under these conditions. The problem is compounded by the SAICA Initial Test of Competence (ITC), which follows a similar approach. It is unfortunate that the ITC is the primary driver of students' efforts, and until SAICA's examination strategy is revised, this approach will continue.

In sharp contrast, the real world is messy and complex, and problems are never well-defined – on the contrary, they are ill-defined with several possible approaches to resolving a problem. That is the reality that the simulation sought to replicate. However, the scenario destabilised the students, resulting in them searching for the familiar – the neatly packaged test question scenario.

In reality, the end result (the so-called solution) was not the purpose of the project. The overall objective was to develop a practical understanding of the practical processes that constitute an audit. It was not actually important whether the students arrived at the right answer. The unnecessary pursuit of the right answer muddied the waters, causing students to divert their attention from the real issues; this practice hindered learning too.

It is the students' lack of context, or background, which creates the impression that there is one perfect answer to every auditing problem.

"We don't have a background in this; we didn't know how to tackle something like this. It was outside of our comfort zone" (Westville study group participant)

But, it is precisely the lack of context (or background) that demands the iterative process of confusion, questions, and answers. The simulation was intended to disrupt students'

understanding. It is in the disruption and confusion that individuals drive themselves forward in order to escape that confusion, and move onto the next stage of the Kolb experiential learning theory model. Without such confusion, mistakes would not be made, and lessons not learned.

5.6.12 Little victories en route to the final destination

Having performed audit procedures practically, students are now able to create mental pictures that they can access at any time. Confusion creates opportunities for the student to reflect on and visualise how to perform a particular procedure, to identify what relevant documentation looks like, and to consider how procedures should be performed. In turn, such mental models can be accessed during another experience and used to improve understanding and performance.

> *"I was able to recall what I did in the project – recall and visualise" (Pietermaritzburg study group participant)*

Another positive effect of the simulation concerned students' enhanced confidence in their own abilities.

> *I felt so much more confident" (Westville study group participant)*

> *"I can put myself in a situation and think about what I would do" (Westville study group participant)*

Limited experience and limited understanding had previously resulted in students' learning schedules of audit procedures that could be repeated verbatim in tests and examinations. The simulation provided an alternative to such a lecture-driven strategy. Now, having been encouraged to experience what audit procedures actually consisted of and to understand the reasons for such procedures, students could now begin to understand at a deeper level, leading to improved confidence in their own abilities.

5.6.13 The use of a practical understanding in tests and examinations

Although the students believed that the simulation experience would contribute positively to their future careers, they also recognised that the current assessment

strategy does not make provision for a more practical approach. When asked whether they believed that the project would assist them in tests and exams, some said it would, but several students indicated that they did not believe that it would.

> *"Not at al. Because the tests and exams are set in a way that is very different and this is unlikely to help" (Wider student cohort)*

> *"Not really. The exam is more textbook stuff" (Wider student cohort)*

> *"No, it helped me transform my theoretical knowledge of auditing into a practical but in exams, they want the theoretical stuff" (Wider student cohort)*

> *"No, auditing they teach and ask different thing. When you give what they taught, they say you copy the standards, which is not true because the paper they give are misleading" (Wider student cohort)*

> *"Not really, the approach of the project was a lot different to the theory we are tested" (Wider student cohort)*

> *"No -auditing is theory and will still have to learn just as hard as I would have had we not had the project" (Wider student cohort)*

This realisation on the students' part may also have contributed to their failure to apply themselves completely during the project. They did not believe that the project would assist them immediately. They would rather focus on their exams in order to pass. It would appear that they felt that understanding Auditing in a practical setting would not be of any benefit if they did not actually pass their exams.

While the simulation stimulated students' interest in practical auditing, they remained wary of whether this practical approach would be valuable for assessment purposes. They recognised that while the simulation could contribute positively to training contract

experience, such a practical approach may not yield returns during their university studies.

The students remained cynical about the *status quo* of the university's assessment strategy. Experience had taught them that a more practical approach would not be required during an examination or test. They understood that what would score marks would be a list of procedures 'rote-learnt' from Jackson and Stent (their prescribed text).

They also recognised that should the assessment strategy be changed to align with a more practical approach to auditing, this would necessitate a change in the way that auditing is taught. They alluded to the need to move away from a purely theoretical lecture and tutorial approach. This challenge confused students, prompting them to look at their lecturers for ways to resolve the theory-practice debate.

5.7 MEANINGFUL LEARNING CHARACTERISTICS: COMPETENCE-BASED AND CONTEXTUAL

The project provided students with many opportunities to develop diverse competencies (referred to as pervasive skills by SAICA) that are essential in Practice and the wider working world. The theoretical nature of Auditing at university (as seen in a predominantly lecture-based approach) resulted in students who possessed very few of these skills. However, the project provided students with the opportunity to work in a real-life context and to develop these critical skills.

In the project environment, the need for such pervasive skills developed organically even though students had little experience with such skills. It was as if they knew what skills would be needed. Importantly, the skills that the students learned to apply in the project were skills that they already had and used regularly in their day-to-day lives. However, as they were only accustomed to a lecture-based learning strategy, they would not previously have associated these skills with their development as practical auditors.

Students embraced this aspect of the project, and displayed initiative as they investigated ways to develop the skills needed in the project, turning to technology and actively seeking out ways to develop these skills. They utilised the Google search engine and YouTube videos that demonstrate how to perform some of the practical skills. Instead of

looking to others to provide them with this information, they created their own understanding, personifying constructivist principles. In this sense, the project awakened a desire to learn, which is critical to the development of a life-long learning ethos.

5.7.1 Time management

Several students pointed to the volume of work that needed to be completed in a short space of time, understanding the need for proper time management skills for the successful completion of the project.

> *"Time management is very important because it will allow you to complete your tasks efficiently and in a timely manner" (Wider student cohort)*
>
> *"Time management!" (Westville study group participant)*
>
> *"Definitely time management" (Pietermaritzburg study group participant)*

While time management skills are important within the university context, students had not been exposed to successful time management skills in a practical context, where time management entails more than just completing tasks. In a practical audit context, this entails not only the successful completion of various tasks but also the ability to adhere to a time (hours) budget per task, as well as the ability to attend to several different clients' work at the same time.

5.7.2 Communication skills, teamwork, and patience

Several students identified the importance of the skills triad of communication skills, teamwork, and patience.

> *"Communication skills, teamwork, patience, being willing to assist others with tasks" (Westville study group participant)*
>
> *"I have come to learn that teamwork places an important role in the workplace" (Westville study group participant)*
>
> *"I have learned this through communication and understanding of other team members' opinions" (Pietermaritzburg study group participant)*

"The significance of learning is gaining a better understanding of the Required, and tackling differences of opinions" (Pietermaritzburg study group participant)

Students appreciated that successful teamwork demands more than a self-seeking attitude focusing on their individual learning. Indeed, a selfless attitude is the catalyst for learning. A collaborative learning experience is, in essence, symbiotic in nature; where helpfulness triggers help. Successful team work has the potential to plant the seeds of an altruistic ethos in students.

They recognised that others' opinions are essential to the learning process, and the failure to acknowledge this will result in the collapse of the learning experience. Differences of opinion are viewed positively as they create opportunities for discussion and better solutions. But they also require humility and the willingness to be patient with others, to listen and cooperate for the good of the corporate experience.

5.7.3 The potential to develop individually during a collaborative experience

Seemingly, in complete contrast to this argument, one student indicated that the project had allowed her to develop her ability to think and develop independently – despite the fact that the project was collaborative in nature.

"Working on this project has allowed me to expand my knowledge, apply what I had learned theoretically to the audit, and has allowed me to grow individually while working with others" (Pietermaritzburg study group participant)

However, the two arguments are inextricably linked. The ability to recognise the need for personal, individual growth within the context of a collaborative exercise is significant. It is within the group context that students are able to share ideas conversationally and help teammates who are struggling with a concept or procedure. It is an essential part of the learning process. However, while learning is facilitated through a collaborative process, students are still responsible for their own, individual learning; the internal process of learning is essentially a solitary journey. This is aligned with Kolb's experiential learning theory.

At some point in the learning process, the focus moves from the group to the individual, and real learning takes place as a result of internal introspection (reflection) that the student must engage in on his own. In accordance with Kolb's experiential learning theory, a link must be made between new understandings (that have been developed as a result of the project) and individual's pre-existing knowledge and understandings. This is an internal process that cannot be completed by the group. It is only when the individual student acknowledges this role in the learning process that real, deep learning can begin. Individual growth can be seen in the context of enhanced knowledge and understanding.

5.7.4 The need for tolerance (that is, acceptance) and the ability to deal gently with conflict

"Tolerance is a really important factor regarding group work" (Pietermaritzburg study group participant)

"I learned that you can't choose who we work with, and that we don't always get the team that we want. I learned how to work with new people and what to expect from them" (Pietermaritzburg study group participant)

"I did learn to work together and to have tolerance" (Pietermaritzburg study group participant)

Within the context of this project, students were assigned to groups. While the argument has already been made that this may not have been the most appropriate method to assign students to groups, this was the reality of this project. However, there were some positive consequences of this approach and these consequences will stand the students in good stead out in the real working world.

Students recognised the need to be accepting of others, and that, in the given circumstances, this was the most appropriate stance to adopt. The ability to learn to work with others paved the way for both effective collaboration and successful individual learning.

The enormity of this realisation should not be downplayed, as it will have repercussions that will reverberate throughout students' future lives and careers – on the international

front, and particularly in the South African context where tolerance and acceptance is so bitterly needed. It could well be that developing tolerance is the most important skill to develop out of this project.

While tolerance was critical, disagreements and arguments were bound to take place too. However, the ability to deal with conflict in a humble and gentle manner stood some groups in good stead, allowing them to resolve problems without unnecessary anxiety.

> *"It is a skill to make a point to someone without making an enemy of that person" (Pietermaritzburg study group participant)*

The ability to wrestle with a problem and to speak one's mind allowed these groups to work together to find answers to their questions. In accordance with constructivist principles, students were able to develop their own understanding in a collaborative environment, albeit with several disagreements *en route* to solving problems and developing understanding.

5.7.5 Succeeding while living in a pressure cooker

> *"The project prepared me mentally for how to deal with a lot of pressure" (Pietermaritzburg study group participant)*

Time pressures, unfamiliar team mates and a new learning strategy are some of the stressors that the students faced during this project. While some of them struggled to overcome the pressures, some embraced the opportunity to learn how to cope mentally. This skill will also serve them well in their studies, in life, and in their careers.

Mental fortitude cannot be developed in a lecture venue, it needs something more, something that can actively test them – such as the project. The students would not have set out to develop this strength; it would have developed in parallel with other skills. The realisation, that they were stronger for the experience, would have come towards the end of the project, when in reflection, they realised what they had achieved because they had persevered.

5.7.6 Applying one's mind, critically evaluating a scenario, and problem solving

"I didn't always know what was required. I had to develop problem-solving skills; to think about what I needed to do" (Westville study group participant)

The lecture-based model had not made adequate provision for students to develop critical thinking and problem-solving skills. Lecturers provided the necessary theoretical content and tutorials provided well-structured scenarios with well-defined problems and questions. Under such conditions, students do not really need to distinguish between relevant and irrelevant information in order to evaluate information to solve the stated problem.

Here, the project mimicked the real-world expertly. In a real audit, the student would be inundated with information, some of which would be helpful to the audit, and some of which would be a distraction. The project provided them with the opportunity to practice how to distinguish between the two kinds of information. The scenarios were not neatly packaged with route markers to provide guidance on how to proceed, and students need to evaluate the scenarios critically with a view to finding a way to gather the evidence needed to support decisions and conclusions reached in the audit.

5.7.7 Computer skills

Students enjoyed the computer aspect of the project.

"How to use CAATS" (Westville study group participant)

"Excel and typing skills" (Westville study group participant)

"Working with Excel formulae" (Westville study group participant)

"Using Excel formulae to analyse data" (Westville study group participant)

"Definitely Excel. Learned things that I never knew a computer could do for me" (Westville study group participant)

Excel! (Pietermaritzburg study group participant)

The importance of computer skills cannot be emphasised enough into today's world. Without appropriate computer skills, students would be at a distinct disadvantage, and it was encouraging to see how they embraced this aspect of the project.

All students had some computer-based training to reflect on for purposes of this project, as all of them had been required to take a computer module during their degree. This provided them with previous experience on which to reflect during the project, and it was possible to see how they reacted differently when they had previous experience with an aspect of the work. This may be contrasted with how they reacted to having to perform audit procedures with absolutely no previous, practical experience. In this regard, they were not novices, but the project provided them with the ability to engage with the experiential learning cycle again, and move along the novice-expert continuum.

5.8 MEANINGFUL LEARNING CHARACTERISTICS: GOAL-ORIENTED AND SELF-DIRECTED, AND INDIVIDUAL

Neither the study group participants nor the wider student cohort groups provided a significant contribution to the understanding of how these characteristics contributed to their learning. This is consistent with Keskitalo's (2015) findings. The author suggested that students should be probed more in future research to address these aspects of the meaningful learning characteristics, and the same may be said for the current research.

5.9 STUDENTS' EXEPRIENCES WITH THE DEVELOPMENT OF PERVASIVE SKILLS

Although Keskitalo's (2015) approach does not make specific reference to pervasive skills, the approach highlights the importance of the development of pervasive skills in a simulation learning experience. Drawing on the components of her approach, students' experiences with the development of essential pervasive skills become evident.

The simulation experience provided participants with opportunities to develop pervasive skills in a positive way, as well as opportunities to experience the converse, where there was a breakdown in the skills, - provided them with opportunity to see what could have when things go wrong – impetus to develop and utilize skills

In addition to the skills identified by Barac and du Plessis (2014), the ability to treat others in a professional manner, management and supervision skills, and IT skills came to the fore during the current simulation.

The simulation experience provided participants to ***treat each other professionally***. The experience highlighted the need to act in a respectful, patient, and tolerant manner. Furthermore, the experience provided the opportunity to experience the effect of failing to treat each other respectfully and professionally. Students spoke with regret of conflict situations.

The experience provided students with a multitude of opportunities to develop their ***team work abilities and skills.*** The simulation provided them with opportunities understand the mechanics of a group environment as well as the dynamics within a group that can contribute or detract from a successful group project. Participants identified collaboration and the opportunity to learn from others as positive attributes of a group setting. But they also experienced the conflict that is all too prevalent in a group setting.

The simulation placed students under severe time pressures, providing them with many opportunities to develop their abilities to **manage time effectively.** They recounted tales of how the simulation and other academic responsibilities had overwhelmed them, forcing them to find ways to meet all their deadlines. They spoke of having to organize tasks more logically in order to respect deadlines.

An important professional skill is the ability to **gather or develop accurate and relevant information and ideas** in order to complete tasks. Students spoke of being overwhelmed by the number of documents that they needed to scrutinize in order to settle on an appropriate approach. They spoke of developing the ability to locate the “puzzle pieces” needed to find answers to the questions posed.

Students were provided with the opportunity to begin developing their **critical thinking skills.** Using computer skills, they found more efficient ways to interrogate and analyze the overwhelming amount of information that they were provided with. They learned that mistakes could provide the impetus needed to move forward to a suitable solution,

and they recognized the need to develop strategies that would turn perceived problems into solutions.

Students' **problem solving and decision making skills** were also developed during the simulation experience. They learned to adopt a detective-like approach, to wrestle with problems until the answers came into focus while drawing on ideas and information from various sources. They learned to explore a variety of possible solutions, recognizing that every problem has more than one possible approach and solution. They had opportunities to exercise professional judgement and skepticism during the decision making process, allowing them to select the most appropriate courses of action.

Students learned the value of **effective communication** in a professional setting. Students had the opportunity to develop both their oral and written communication skills during the simulation. They learned to take others' opinions and views into account while completing tasks and making decisions, as well as learning how to state their own views and opinions. They identified the benefit of constant, effective communication when seeking to complete tasks timeously and effectively, and noted the role of effective communication in mitigating the risk of conflict. They also had the opportunity to draft written professional reports and to prepare presentations for a professional audience.

The use of a group work setting also provided students with the opportunity to play a **management and supervisory** role in the simulation. This provided students with examples of what they perceived good management and supervision to be, as well as examples of poor management and supervision. This allowed them to reflect on how they would manage and supervise in future professional roles.

Students received valuable opportunities to develop their **information technology skills.** They explored tools that would allow them to complete their tasks more efficiently, and understood the importance of IT particularly in an audit setting. Their previously developed IT understanding could now be used practically in the settings for which they were intended.

5.10 SUMMARY OF FINDINGS ARISING OUT OF STUDENTS' STORIES

The above findings point to many different and varied findings. Accordingly, a summary of the main findings is now presented in order to provide clarity in respect of students' experiences in the simulation-led experience.

- Students' limited previous experience impacted their experiences in the simulation.
- Students' academic pressures (from Auditing and their other modules) impacted negatively on their willingness to participate fully. Factors such as timing of the project and other module commitment were cited.
- The project was perceived as a separate commitment, and not as important as their other study commitments.
- The simulation project provided students with the opportunity to learn how to cope with their emotions as well as others' bad behaviour.
- Language barriers and the fact that students were allocated to groups impacted negatively on the learning process too.
- Students experienced feelings of helplessness at the start of the project. They wanted assistance in the form of guidance and examples of what needed to be done.
- They struggled to apply their theoretical knowledge practically.
- Working in groups provided emotional support and allowed the students to meet new people. Working in groups also provided them with opportunities to learn how to deal effectively with conflict. The group work approach also allowed students to approach their tasks collaboratively in a detective-like manner.
- Time pressures impacted students' abilities to work effectively in groups, with many of them getting little opportunity to communicate face-to-face.
- The active nature of the project allowed students to experience the "doing" nature of a simulation, as well as the opportunity to "visualise" auditing.
- The project assisted students to start taking responsibility for their own learning, instead of relying on a lecturer.
- Learning can come in the form of a series of small discoveries and changes to an internal frame of reference.

- Formal reflection posed a problem for the students who cited time pressures as the primary reason why they didn't engage fully in reflection.
- The project provided them with an opportunity to see the "bigger picture" and to stop focusing on small details in the audit.
- The students appreciated the fact that they were exposed to audit documentation. This allowed them to develop mental images of what the documentation looked like and the information contained in them. The documentation provided valuable context for them.
- Students began to understand the importance of scepticism and professional judgement in an audit context. The life-like experience of the simulation allowed for the development of this underrating.
- Students made lots of mistakes. The safe space of the simulation allowed them to improve and recover after stumbling.
- Many of them experienced a sense of being overwhelmed at the start of the project. They had not been exposed to so much information, documentation etc. and they felt ill-prepared.
- They sought help from their team mates, when they should possibly have gone to a lecturer or facilitator to get better assistance.
- While many enjoyed grappling with the problems in the simulation, some felt that this was a waste of time. They did not understand that such time-wasting and grappling is at the heart of learning in an active environment.
- While many complained, many persevered through the project, coming out at the other end having learned something new.
- The fact that there is more than one answer to a problem or more than one way to approach a task was surprising for many of the students.
- Some of the students realised that the approach used in the simulation would probably not be useful in a test or exam setting.
- Several pervasive skills were developed during the simulation.

5.11 CONCLUSION

The next chapter, Chapters 6, provides an introspective analysis of my role as simulation facilitator.

CHAPTER 6

DESCRIPTIVE ANALYSIS – AN INTROSPECTIVE REFLECTION

6.1 AN INTROSPECTIVE REFLECTION OF MY ROLE AS FACILITATOR IN THE SIMULATION-LED LEARNING EXPERIENCE

The following is an introspective account of my experience as facilitator of the simulation-led learning experience. While the study focused on students' experiences in the simulation, my reflections are interwoven with student experiences, and it is difficult to separate my and their experiences as they speak to the same questions.

The purpose of this account is threefold. Firstly, it has allowed me to reflect on my experiences, providing me with an opportunity to consider how I would change my approach for future simulations to provide an improved experience for the students. Secondly, it can offer guidance to other novice facilitators who have chosen to implement such an initiative, with the hope that their first experience will be more fruitful. Thirdly, the study may contribute to the knowledge of simulation pedagogy, particularly as it pertains to auditing education.

6.1.1 My journey towards simulation

My interest in simulation-led learning stems from my own experiences as a student. Auditing lectures were extremely theoretical in nature, and little guidance was offered on how to approach tutorials. Although tutorials were intended to expose us to more practical scenarios, they were also theoretical, and we did not really get to see how auditing is practised in the real working world.

When I entered my training contract, I did not feel adequately prepared for the real working world. I was extremely nervous and did not know what to expect. Almost immediately, I was expected to get involved in an audit, and I felt overwhelmed. While I had learnt the theory of auditing, I did not know how to apply it in a practical environment. Not having much choice, I persevered, grappling with the issues, finally starting to understand how to utilise the theory practically.

Soon I began to see another, more accessible side of auditing. I could see what the source documents actually looked like (whereas previously they had just been words to me), and finally I saw how an audit procedure was used to gather audit evidence. At last, I had a context for the theory that we had learnt at university, and I could visualise the procedures.

When I entered academia, one of my primary goals was to spare students the anxiety that I had experienced as a student, and I worked hard to bring the working world into the classroom. I talked about current events that were auditing-related, and I tried to explain concepts from a practical perspective. Unfortunately, as the majority of our students are full-time students, they have very little business context on which to draw.

I began searching for alternatives to the standard lecture and tutorial model that is prevalent in most accounting programmes. Anecdotally, most CA (SA)s would agree that auditing becomes 'real' when they enter practice (during their training contracts). After having made the decision to explore student learning within the context of a simulation-led experience,

I began looking for an audit simulation to use for the study and I quickly realised that I would need to develop such a tool myself. This was a daunting task, in light of my already heavy teaching load, with limited hours available for the development of such a tool.

Quite fortuitously, my colleagues lecturing Auditing 3B had been granted permission by PricewaterhouseCoopers to use their in-house training audit tool as a group project. I approached my colleagues who agreed to allow me to run my study in parallel with their group project. Reflecting on the choice to use the PwC instrument, it would probably have been wiser to develop an audit simulation myself. This would have allowed for a more in-depth analysis of our educational needs and goals, as well as more intimate knowledge and understanding of the simulation instrument itself. This approach would also have allowed us to tailor the simulation as the need arises. However, as this was the first time we were using this pedagogy, it was easier to use an already-developed simulation, and this allowed us to assess the value of the instrument without too great an investment on our part.

6.1.2 Reflecting on the simulation experience

The Auditing 3B lecturers were excited at the prospect of providing their students with a simulated, practical audit where they could develop links between auditing theory and practice. While their intentions were good, they had very little experience in simulation pedagogy, and they did not know how to present the simulation to elicit the best learning from their students. I would speculate that this would be the experience of most auditing lecturers running a simulation within their modules.

The vast majority of our students are full-time students. This means that they do not have a contextual understanding of the formal working world in which practical auditing takes place. The only connection that these students have to auditing is that which is learnt at university – which is far removed from practice. It becomes the academics' responsibility to paint the picture of what a training contract experience will look like, and then explain how a simulation experience will assist in making the connection between auditing education at university, and practical auditing in the real working world.

While the simulation experience had its challenges, it did result in learning, and I believe that it should be continued in years to come. Upon reflection, there are several matters that should be considered going forward though.

6.1.3 Tussling with my own questions about the simulation

6.1.3.1 An already-full academic programme

In our zeal to provide students with a real-like audit experience, the Auditing 3B lectures and I failed to take students' other commitments into account. This, in addition to delays caused by student-led protests, created anxiety amongst the student cohort. This anxiety translated into apathy and disinterest in relation to the project.

I would argue that the simulation provided students with a valuable learning opportunity and a window into the world of a professional auditor. However, I think that many of the students would disagree, arguing that these skills can be learned later. I find that I must remind myself that my role as educator is to prepare the students for the real working world, and that to do that, I may have to ask them to do things that they will not enjoy.

For all the protestation and anger, the experience is a sound one, and one that fulfils an important role – to provide students with context, and to start the transition to student to graduate professional.

6.1.3.2 A solely lecture-based teaching strategy

The blame for the students' perceived inability to transition seamlessly to an active learning strategy must be laid at our feet. We adopted a purely lecturer-based teaching strategy that stifled students' abilities to adopt a more in-depth approach to their studies. They were accustomed to accepting lecturers' opinions at truth, and they were not encouraged to question anything. Their calls for examples and guidance should have been anticipated, in light of their previous exposure to auditing.

Students struggled to reconcile their experience of auditing at university with what they had been told about an authentic auditing experience that would take place in the real working world. Since their experience of auditing was very theoretical in nature, it did not provide them with the ability to negotiate the move to practical auditing.

The lecture and tutorial approach used in class has conditioned students to rely solely on their textbooks; they do so without much consideration. They have become accustomed to absorbing the lecturer's facts. As the lecturers refer to the prescribed textbook frequently, the textbook has become their primary point of reference.

The textbook provides a 'perfect solution' and the students have come to believe that this is the only correct answer. Being full-time students, these students lack the practical experience that would allow them to adopt a more practical, logical approach. Bound to their textbooks, these students lack the confidence to suggest an alternative approach to an auditing-related question. This approach has left little opportunity for creative approaches to solving problems. The textbook plots the course, and the students are not comfortable deviating from this set course. The textbook approach does not provide opportunities to generate unique or creative solutions to problems; there is no room for a different approach when following the textbook religiously.

6.1.3.3 Student-led versus the creation of a more supportive, nurturing environment in which students can thrive

Central to the debate about the effectiveness of a simulated learning experience is the decision about whether to provide students with scaffolding in order to make the transition from passive recipient of knowledge to active constructor of their own knowledge, or to let them struggle alone learning lessons along the way. In light of capacity constraints and a lecturer-focused teaching strategy, an argument may be made that scaffolding (in the form of guidance and examples) is called for. In contrast, the learning that students achieve when working without such assistance can result in significant improvements to their understanding of auditing in a practical context. It may be argued that it is in the making of mistakes that the learning actually occurs.

This debate may be addressed in terms of the literature or in terms of what would happen practically in the real working world. The literature argues that the lecturers should consider the needs of the students, and that this may differ depending on the cohort of students in question. With this in mind, and with other considerations in mind too, it would seem that limited scaffolding would enhance the learning experience rather than detracting from it. Although addressing the matter from a different perspective, a practical answer would also argue in favour of scaffolding. In the context of a real audit, a junior member of the audit team would not be required to cope alone, senior, more experienced clerks and managers would be available to consult with. This would be tantamount to scaffolding.

A large proportion of our students are second-language English speakers who have to translate everything in the simulation to their preferred language, and then attempt the tasks. As there are many auditing terms that simply do not have isiZulu equivalents, this task is all the more difficult. Expecting students to lead the learning under such trying circumstances is possibly (probably) too much to ask. I would suggest that a more supportive approach would be preferable. The creation of a supportive environment in which the student feels more relaxed would enhance, not detract, from the learning. It would also assist in developing a more trusting relationship with these students.

6.1.3.4 Choosing their own groups

Many students disagreed with the principle of being allocated to groups. They argued that being allocated to a group of strangers prevented them from engaging with the project effectively.

While this approach is more realistic, in light of what they will encounter in Practice, allowing them to choose their own groups may lead to a greater willingness to participate, which could have a positive effective on the learning achieved. Maybe such a compromise would be an acceptable one. The majority of the other pervasive skills can still be acquired, even in a group that students elected to form part of.

6.1.3.5 Language matters

Another factor that has an impact on teaching and learning at UKZN is language. Although UKZN is an English-medium university, English is not the first language of the majority of our students. In KwaZulu-Natal, the predominant language is isiZulu. In auditing, comprehension of specific auditing terminology is essential, and even first language English speakers struggle at first. In this respect, the Black African students are clearly at a disadvantage. Learning is simply a slower process, as the student must first translate the phrase into isiZulu in order to understand what is actually needed. Learning is just harder for these students.

The question of language is closely linked to calls for students to choose their own group members. It is probable that isiZulu-speaking students would form groups consisting solely of isiZulu speakers, which would allow them to converse solely in isisZulu. While this would address language concerns, it would not address concerns about what such students would do when they enter the working world where English is the predominant language. Again, academic staff would need to discern what is most important – succeeding at university, or coping in the real world. Arguments could be made in favour of each side of this matter.

6.1.3.6 The provision of a suggested solution to the project

Students were not provided with a suggested solution to the project. While they did not motivate in favour of one, the question remains as to whether this would enhance or detract from their learning.

In light of their previous tutorial experience where suggested solutions are provided for all tutorial questions, the failure to provide a suggested solution was an unexpected move on the part of the Auditing 3B lecturers.

While the project included many different ill-defined problems, there were many aspects that could have been detailed in an assessment memo, and that students could possibly have benefited from upon reflection.

6.1.3.7 The relevance of this type of assignment in light of the current assessment policy

Several students questioned the relevance of this type of assignment in light of the prevailing assessment policy at UKZN and for the SAICA ITC. The current assessment policy is theory-driven, and questions presented in a similar vein to current tutorial questions. It may be argued that while the simulation project will benefit students when they enter the working world, it will not assist them significantly during tests and examinations. The scenarios and the questions are too different.

At the heart of this debate lies whether we are preparing the students to pass exams or to enter the real working world reasonably prepared. While not pertinent to the current study, SAICA is currently reviewing their examination policy to become more practical in nature. It would thus seem that this provides the answer to the question of whether the assignment is appropriate.

6.1.3.8 Time management and the ensuing chaos

The simulation participants complained repeatedly about limited time available to work on their tasks. While the simulation's timing was poor, with students having several other assignments to complete, the chaos that ensued was representative of the real working work, where trainee accountants often have to juggle several clients' work at once. Participants were thus provided with a valuable learning opportunity here too. In the

relatively safe space of the audit simulation, they could experiment with different time management approaches that would allow them to manage their time effectively.

Although the project was supposed to be collaborative in nature, with students working closely to complete tasks, time available to complete the project was limited. As a result, many groups adopted an individual approach only meeting to collate their individual efforts. Such an approach is not conducive to effective learning within the simulation context.

Unfortunately, the current project is representative of a typical academic year at UKZN, where students grapple with competing assignments and tests continuously. There is never a good time to run such a project; there will always be something else that needs to be attended to.

Concerns about whether this type of project is the best way to utilise limited time available abound, with similar concerns being raised about whether something can be done to run the project during the mid-year holiday, for example.

6.1.3.9 Finding a way to develop enthusiasm amongst all students about the value of the simulation

Many of the broader Auditing 3B cohort appeared to take the project too lightly. Many appeared to complete the project as soon as possible so that they could get back to their studies. To them, the project appeared to be an unnecessary distraction from the real work of studying. They displayed very little interest in exploring the educational and practical value of the simulation/project.

In a class the size of Auditing 3B, it is not possible to provide a regular on-site facilitator to guide them through the simulation/project, and students need to work independently. In turn, this requires students to be intrinsically motivated and enthusiastic. Here too, the lecturers are going to have to provide the impetus for students to take an interest in the project.

6.1.4 CONCLUDING ON MY EXPERIENCE WITH SIMULATION

Having analysed and interpreted both the students' and the facilitator's experiences of simulation-led learning, the consolidated findings will be discussed in the context of the literature reviewed and conceptual frameworks developed in Chapters 2 and 3 respectively.

CHAPTER 7

DISCUSSION OF FINDINGS

7.1 INTRODUCTION

The purpose of this chapter is to position the study participants' consolidated findings that address the key research question identified in chapter one, in the context of the literature reviewed and conceptual frameworks developed in chapters two and three respectively. In this way, the findings will be discussed in relation to the extant literature on auditing simulation.

The key findings have been grouped according to meaningful learning characteristics; this was thought appropriate at it allows for a seamless flow from Chapter 5's analysis and discussion.

7.2 THEME 1: PRIOR EXPERIENCE AS STARTING POINT FOR EXPERIMENTATION OF REAL-LIKE EXAMPLES

The students reported a dependence on prior theoretical knowledge, which ostensibly affected their ability to experience the simulation positively. The fact that their prior knowledge was almost solely theoretical created problems from the outset. They lacked relevant prior (practical) knowledge (Zigmont, 2010) to engage successfully with the simulation experience, and struggled to make the transition from passive student (who was provided with the knowledge necessary to engage with tutorial questions) to more active participant in the learning process. When faced with this challenge, they searched for the familiar – guidelines and examples of how to tackle a practical audit. They looked to the facilitator to lead them through the process, in the same way that would have happened in a lecture or tutorial context.

Students' previous knowledge and experiences are acknowledged as a resource for learning (Zigmont, 2010; Kolb, 1984), with Ausubel suggesting that "the most important single factor influencing learning is what the student already knows" (Cadorin, Bagnasco, Rocco, & Sasso, 2014). Ausubel's understanding of knowledge construction is consistent with the constructivist perspective of learning, with both approaches suggesting that

knowledge construction occurs when the student is able to relate new, relevant information to existing knowledge in a connected and coherent way (Vallori, 2014). Their inability to easily make this connection between existing knowledge and the simulation lay at the heart of their anxiety.

While the constructivist theory of education appears to suggest that the transition from passive to active student is a seamless one, Tam (2005) argued that the operationalisation of such principles is not as simple as it may first appear, and that the principles do not automatically translate into practical ones that can guide the learning process seamlessly. In a similar vein, Zigmont (2010) observed that the challenge for educators lies in "how to activate relevant prior knowledge and elicit participants' experiences, to allow the student to explore the old and the new side by side".

The current findings support Tam's (2005) and Zigmont's (2010) concerns. While assumptions were made that their theoretical knowledge would provide a suitable basis to undertake the simulation project, this was proven incorrect. The students did not know how to make the connection between theory and practice, and their theoretical experience was too different from the simulation for them to use that knowledge effectively as the starting point for learning and they struggled to make sense of the simulation experience. Such a disconnect also points to another concern, namely the over-reliance on a lecture-based teaching strategy that has left students paralysed in the face of any other teaching strategy. Students' struggles also point to an unwillingness to grapple with the information provided. Their previous experiences consisted of knowledge transmission in neatly packaged portions, with minimal effort on their part.

Vardi (2008) argued that the facilitation of learning varies greatly from participant to participant, and he suggested that the appropriate approach should be dictated by the individual participants' needs. He urged facilitators to provide participants with individual attention, which would allow for such a tailoring of needs. This advice appears sound in the current study. A better understanding of students' teaching and learning experiences would facilitate an understanding of students' strengths, weaknesses, and misconceptions which could then be incorporated into the teaching and learning strategy to be employed.

The account of the student who was repeating the project supports this stance. The student spoke of how his previous experience with the project had provided him with suitable previous experience to use as a starting point for learning. This student's experience support's the constructivist theory of learning's principles and Kolb's (1984) experiential learning theory. It may be argued that effective learning within a simulated environment does not happen after one simulated learning experience; it is in the repetition of the activity that learning occurs. Each Kolbian cycle provides the student with better prior experiences as a starting point for active experimentation.

The study's findings in relation to students' requests for guidance and examples of how to proceed are supported by the Novice-to-Expert theory. Dreyfus (2004) noted that, at the novice level, an individual's behaviour is rules-governed, with him or her needing structure and rules to guide performance. Such understanding is consistent with the students' needs for guidance and examples. In a practical audit setting, they are complete novices, and it may be argued that it was unfair to assume that they could seamlessly adopt a more practical approach – without suitable scaffolding.

The Novice-to-Expert theory also provides a theoretical perspective on why the repeating student's experience in the simulation appears so different. The theory provides that the progression from novice to advanced beginner is characterised by repeated application of the facts and rules to real situations. It is in the repetition that the individual begins to associate the facts and rules with the context in which the tasks are located. In turn, it is this association that can then be taken forward to new situations (as experience) (Honken, 2013). This is akin to Kolb's (1984) experiential learning theory which provides that repeated experimentation becomes the prior experience for the following activity.

Knowles's (1985) contribution to Adult Learning theory provides that adults focus their attention on learning activities that have immediate relevance to their circumstances. This understanding provides context for the fact that students appeared disinterested in the project, indicating a preference to study for tests and exams. It is not that they will never see the importance of developing a practical understanding of auditing, their tests and exams are simply more important right now. With limited time available, they would like to prioritise their studying over the project.

7.3 THEME 2: STUDENTS EXPERIENCE THE WHOLE GAMUT OF EMOTIONS

In their struggle to find a way out of their chaos, they experienced a range of emotions that negatively affected their ability to learn effectively. Their initial confusion was compounded by the knowledge that they had a limited amount of time to complete the project, and that this activity had appropriated valuable time that could be used for other academic activities, such as studying for tests and exams. This anxiety translated into apathy, anger, and an unwillingness to engage properly with the project. In complete contrast, one student embraced the experience finding joy in how significant the project had become to her. She managed to translate the anger, felt at someone taking credit for her work, into personal growth and development. As anticipated, one student (possibly many more) grappled with the issue of language and finding ways to remain relevant in her group.

According to Keskitalo, Ruokamo, & Vaisanen (2010), simulation-led learning is designed to generate emotional responses. Emotions affect motivation and also have an impact on how students act in the learning environment and on what they remember later (DeMaria et al, 2010). Students' emotions play a role in their ability to learn effectively during the simulation (Jones, Reece, & Shelton, 2014).

While students ran the gamut of emotions during the simulation experience, this was a positive consequence of the simulation. The simulation provided them with ways to make sense of their emotions and to learn from their experiences. Feeling these emotions in the safety of the simulation experience provided significant learning opportunities. Instead of being exposed to such powerful emotions during their first real audit experience, the simulation allowed them to do so now and to find ways to deal with the emotions more effectively in the future.

7.4 THEME 3: PREVIOUS KNOWLEDGE AND SKILLS AS A STARTING POINT IN COLLABORATIVE LEARNING

Keskitalo (2015) argued that students evaluate and accommodate new ideas on the basis of their previous knowledge; that they try to build on what they already know. However, the students held that their previous knowledge was too removed from the simulation experience and they struggled to make the link between their theoretical understanding

and the practical setting of the simulation. This has been addressed in detail under Theme 1 above.

Their lack of meaningful practical knowledge as a starting point for the collaborative learning process would have hindered their learning, irrespective of the quality of the collaborative process put in place.

The implementation of collaborative learning principles proved complex too. Although many of the groups (particularly the study groups) recognised the importance of collaborating with their group members, many did not.

Working collaboratively had many positive learning-related benefits. It provided students with the opportunity to pool their knowledge and understanding, and develop their individual understandings of concepts. Importantly, working collaboratively provided students with the opportunity to develop their problem-solving skills. No longer provided with the answers, they had to find the answers themselves which required a change in their approach to learning; of necessity, learning became more proactive, more intentional. Collaborative learning could be referred to as scaffolding, providing students with support as they started on this difficult journey of learning actively. They could rely on their fellow group members to grapple with the issues alongside them. It also provided them with the opportunity to learn how to behave in a group where they did not know everyone or where they did not get along with everyone, and where there was conflict. Essentially, the project's group context mimicked real-life audit environments.

In contrast, many groups failed to utilise collaborative learning effectively, which had adverse effects on the quality of their learning. Conflict and a lack of interest on the part of group members contributed to a less than optimal learning experience.

The above observations are consistent with Collaborative Learning theory principles. Collaborative Learning theory provides that students should adopt a student-centred approach to learning, an approach that allows them to become active in the learning process. At the heart of Collaborative Learning theory lies the need to communicate; it is in the talking that learning takes place. When students meet face-to-face, they are able to share ideas, grapple with problems, and develop better solutions to questions posed.

Where students do not meet face-to-face, the benefits of group work appear to have been forgone.

7.5 THEME 4: ACTIVE ROLES AND ACCEPTING THE ROLE OF RESPONSIBLE PROFESSIONAL

The current study provided students with an insight into the real world of auditing, and they were able to see how a real audit would unfold. Students were afforded the opportunity to see how auditing theory is utilized in the context for which it was intended. Instead of just reading about audit procedures, the simulation allowed them to actively engage with audit tasks in an authentic, real-world-like environment. This finding is consistent with that of Steenkamp and Rudman's (2007) study, where students identified practical exposure to realistic audit situations, and the practical application of auditing theory, as benefits of the pedagogy. Similarly, Burdon and Munro (2017) concluded that simulation allows the participant to relate theory to real life and that this supports the theory learned in lectures. Rudman and Terblanche's (2012) study participants indicated that they learnt more from their simulation experience, than from lectures, because they actively participated in the activity and that they now understood aspects that they would otherwise not have. The ability to transition from passive recipients of information to active participants in the learning process is consistent with student perceptions described by Olusegun (2015). Avramenko (2011), Rudman and Kruger-van Renen (2014), Adams and Mabusela (2013) reported similar findings in this regard.

Prior to their exposure to simulation pedagogy, students had lacked understanding of what a real audit would entail. They had not had exposure to a real audit and the related documentation that is used and developed during an audit. Accordingly, the words used to describe audit procedures lacked context, remaining just words on a piece of paper, and students had no option but to memorize these procedures so that they could give them back during a test or exam. They lacked a deeper understanding of how to perform a procedure, and what that procedure would achieve. It is this deeper understanding that would have allowed them to recall procedures by referencing procedures actually performed. Steenkamp and Rudman's (2011) study participants described this aspect of simulation-led learning as being able to think about what they had done during the simulation, instead of just learning audit procedures "parrot fashion". This finding is also

aligned to Morrow's argument that one of the primary stumbling blocks to gaining epistemological access to the Discourse of auditing is students' schooling background which promotes rote learning and does not allow for the development of critical thinking (Carelse, 2011). This adds support to the need for a concrete experience (such as simulation) to break the cycle created by rote learning.

The current study was strongly aligned with constructivist principles, as participants referred to its ability to provide them with the opportunity to construct their own opinions, thoughts, and beliefs about concepts and audit procedures. During a traditional lecture, students are forced to accept their lecturer's understanding, and they are seldom given the opportunity to interrogate that understanding. This had the effect of limiting the depth of students' understanding, forcing students into surface-learning approaches, such as rote learning. This finding confirmed Auman's (2011) findings. Closely aligned to this was the finding that study participants indicated their ability to take responsibility for their own learning, instead of passively absorbing a lecturer's words and ideas. This finding was consistent with that of Rudman and Terblanche (2012) who reported that simulation (or role play, in the case of Rudman and Terblanche) encouraged students to be active participants in their own learning. The current study's participants contrasted the active nature of simulation with the passivity of the traditional lecture approach, echoing Rudman and Terblanche's (2012) findings.

Closely aligned to constructivist principles and in accordance with Kolb's ELT, the study participants reported that the simulation afforded them the opportunity to develop their own understanding of theoretical principles and to integrate new understandings and experiences into their previous understandings of Auditing theory, thereby allowing them to expand on or correct their existing knowledge to accommodate new understandings developed during the simulation. Previously, students relied solely on knowledge and understanding conveyed to them in a lecture setting. This provided little opportunity to interrogate the lecturer's understandings of theoretical principles and concepts. In contrast, the simulation provided students with the opportunity to make mistakes while actually performing tasks, to question why they had made that mistake, and to restate their knowledge and understandings to take into account a deeper, more accurate

understanding into account. A deeper understanding could be developed by amending or correcting the student's previous understanding.

Having participated in a simulation, study participants now understood that becoming an auditor requires more than an understanding of auditing theory, it requires an ability to perform practical audit procedures too. The finding related to symbiotic relationship between theory and practice is consistent with Rudman and Terblanche's (2011) findings, who reported on the importance of being able to relate theory and technical knowledge in auditing to real-life business situations or practical problems.

Importantly, through the simulation, the study participants were able to develop a "bigger picture" view of an audit. In a lecture context, students studied topics in isolation, resulting in a narrow outlook and an inability to see how distinct aspects of the financial statements are closely linked. The integration of topics was not stressed. In practice, the opposite is true: all topics are integrated, and a detailed understanding of such integration is essential. The simulation facilitated a breaking down of learning silos, replacing them with a strong root system that linked diverse concepts and topics. In the practical application of audit procedures, students were able to see how a procedure related to, for example Cash at Bank, will impact Accounts Receivable too. The basic, yet misunderstood, accounting principles become self-evident in a practical auditing setting. Rudman and Kruger-van Renen's (2014) and Rudman and Terblanche's (2012) findings also spoke to a development of a wider perspective of auditing. In addition to breaking down silo-based learning, the simulation also created opportunities for students to think differently when developing solutions to problems. The simulation required students to think creatively, developing solutions that they had not necessarily been exposed to during lectures. Rudman and Terblanche (2012) referred to this ability as being able to evaluate a situation from more than one perspective.

Notably, the simulation proved to be an empowering and exciting experience for students. They derived enormous implicit satisfaction in successfully completing the audit tasks. In a passive lecture setting, students could only recite what audit procedures were needed in a particular setting. Now, they were able to actually perform those procedures using auditing-related documentation. Written procedures came alive; students were

able to understand what was needed to draw an audit conclusion. The study participants had crossed the bridge: they were now real auditors. This realization excited and invigorated them. These findings are similar to the findings of Adams and Mabusela (2013) who suggested that students enjoyed the experience so much that they actually forgot that they were learning; learning actually became fun.

Students also revealed how the project had affected them personally. Their comments revealed how the project has assisted with their personal growth and the development of an understanding of the importance of becoming responsible in a professional context. Students reported that the project had provided them with the opportunity to put their own wants and needs aside in the interests of the group and to work hard to achieve the group's stated goals.

7.6 THEME 5: "DEBRIEFINGS ARE INTENDED TO SUPPORT REFLECTION" AND CRITICAL THINKING OVER THEIR OWN LEARNING

Critical reflection on the learning process may be considered the most critical phase of simulation-led learning, as it enhances students' learning (Keskitalo, 2015). According to Hughes and Scholtz (2015), actually experiencing the simulation is only part of what is necessary for real learning to be achieved. In addition, it is essential for students to be able to assimilate what they have learned into their body of knowledge. The authors stressed that the ability to reflect effectively is key to learning, as this will allow students to internalise and translate experiences into knowledge.

Although study participants were given the opportunity to reflect during the simulation experience, the vast majority of them struggled to do so effectively. Insufficient time available for reflection, difficulties in making positive links between theory and practice, the struggle to embrace a more student-centred approach, and a general attitude that the simulation was not as important as upcoming tests and exams all contributed to students' negative reflective practices. This outcome supports Heyler's (2015) observation that the practical application of reflection can be problematic.

While the ability to transition seamlessly into the new student-focused learning strategy appeared plausible to the lecturers and the simulation facilitator at first, it is apparent that this was unrealistic. The fact that students struggled to make connections between

theory and practice is a testament to the hold that the lecturer-focused approach to teaching had over them. This required a more empathetic approach to this learning crisis – something that must be addressed in the next round of the simulation. As with students' revised approaches to the simulation (in the next round of simulation), the lecturers will benefit from a revised understanding on how to approach the process.

Students' reflective journals and the debriefing process revealed that students had not been transformed into competent auditors as a result of the simulation as initially hoped for. However, while the learning was not neatly packaged and predictable, pockets of real learning did occur, with much of the learning related to the development of pervasive skills and life lessons that will become valuable to the students when they enter Practice. It would therefore seem that the simulation had succeeded in its ultimate goal of assisting to create a better prepared workforce (Gopinath and Sawyer, 1999) who had, amongst others, improved their computer skills and their communication skills.

While the simulation had not succeeded in transforming participants into accomplished auditors, their exposure to a practical audit challenged their previous understanding of what auditing entails practically, allowing them to review what skills and responses are needed in a practical audit (Fook, 2002). This fledgling understanding of an audit may now be developed in the next round of Kolb's (1984) cycle of experiential learning. The learning outcomes of this simulation could become the inputs from the next experience. Simply because this simulation experience did not have all the desired outcomes does not mean that it was unsuccessful. Significantly, the limited outcomes support Kolb's (1984) theory, namely that learning is an iterative process that continues well beyond the initial experience. Learning is not achieved by experiencing one simulation alone.

While much of the learning was somewhat patchy, students did begin to see the need to develop a holistic understanding of the audit process, instead of allowing them to become embroiled in the minute detail of the audit. While they did not fully embrace the new active teaching strategy, they did begin to see the need to connect university knowledge to its intended purpose (that is, practical auditing), starting on the journey towards a philosophy of lifelong learning.

Students valued their newly-found ability to recognise audit documentation and its relevance during an audit. They began to create mental images of such documentation for future reference. They began to understand how their dependence on textbooks and rote-learning had limited their ability to transition from passive recipient of theory to active auditor. Importantly, the project had provided them with a glimpse of what a real audit would look like, and they began to understand the need to apply theoretical knowledge.

The primary finding here relates to the fact that reflection and related learning does not take place in a vacuum. Reflection does not always take place as desired and learning does not always take the expected form. Although the simulation experience did not result in all desired learning outcomes, it was still a success and study participants did learn several things. The newly achieved learning outcomes may now be considered existing knowledge that could be built on during the next round of simulation experience.

Several learning theories are relevant to the discussion of how (and whether) critical reflection enhanced student learning. While Schon argued that students should be encouraged to reflect thoroughly on all tasks throughout the experience that they were engaged in, this is also an example of where the operationalisation of principles is not as simple as first envisaged (see Tam, 2005). Although speaking of the operationalisation of constructivist learning principles, Tam's argument that education theories and principles do not automatically translate into practical ones that can guide the learning process seamlessly, may be applicable here too. Here, factors unrelated to the reflection process hindered students' attempts to reflect, suggesting that plans must be made to create space for reflection e.g. prioritising the group project within academic activities, shifting students' mind-sets to ensure that they see the importance of the project. Rutten (2014) argued that the responsibility for the creation of appropriate learning opportunities lies with the facilitator, and that it is up to the more experienced facilitator to guide and drive the learning process.

7.7 THEME 6: ACQUIRING DIVERSE COMPETENCIES IN REAL-LIKE SITUATIONS

As already recognised, students' abilities to transition from a theory-based approach to a more practical approach were fairly limited at this stage. In contrast they developed a

multitude of pervasive skills and life lessons. The simulation experience had immersed the students in a micro world (Wynder, 2004) where such skills and competencies could naturally come to the fore.

Students embraced this aspect of the simulation experience, possibly because it provided a distraction to the weightiness of having to translate theoretical understanding into practical auditing skills. This aspect of the learning process appeared to develop in parallel to the more weighty auditing aspect.

The development of such pervasive skills and life lessons should not be underplayed. Weaver and Kulesza (2014) emphasised that today's graduates need more than traditional technical auditing skills. Graduates and new entrants to the workplace require skills such as critical thinking, problem-solving, and well-developed communication skills in addition to essential accounting and auditing skills.

Students reported the development of essential practical skills such as time management, communication skills, the ability to work in a group setting, the need to display patience and tolerance towards other group members, the ability to deal with potential conflict in a gentle manner, the understanding of the importance of remaining sceptical during the audit process, the ability to work under pressure, problem-solving, personal development, and computer skills. While these skills may never be assessed in a university test or exam, that does not negate their importance. Such practical skills are essential to prospective employers (Weaver and Kulesza, 2014) and will set the student (graduate) apart from his or her counterparts.

Study participants displayed initiative, finding ways to develop these skills, including watching YouTube videos to develop necessary computer skills. The manner in which study participants developed these skills is consistent with several education theories: they employed self-directed learning principles and were able to adopt a student-centred approach here, choosing to construct their own knowledge actively. In accordance with Adult Learning theory, they understood the need for (for example) computer skills that they did not possess. They prioritised this need and displayed initiative, and investigated how to develop these skills using YouTube instructional videos.

Students' displays of initiative with regards finding ways to develop practical skills (e.g. YouTube videos) was in complete contrast to their calls for guidance on how to perform audit procedures and develop working papers. Just as there were many videos on YouTube providing guidance on MS Excel skills, so too were there many examples (via Google) on how to prepare working papers etc.

7.8 CONCLUSION

Two important findings have emerged from this study, which do not appear to have been reported previously. The first finding relates to the importance of what the student knows at the start of the simulation experience. Prior knowledge has the potential to influence a student's ability to learn in simulation more than any other factor. This is particularly relevant where the student has previously only been exposed to a lecturer-led teaching strategy, and may necessitate initial scaffolding in the form of examples and guidance on how to proceed in the simulation.

The second new finding relates to the understanding that while reflection is the cornerstone of the learning process within a simulation experience, it does not take place in a vacuum; with several external factors influencing students' abilities to reflect effectively. Closely aligned to this finding is the fact that learning in a simulation does not always present itself in the expected format. The learning achieved within simulation may not be useful to students immediately, and they may only reap the benefit of the simulation experience later when out in the real working world.

The study also highlighted and confirmed the importance of providing students with the opportunity to actively engage with auditing concepts and principles, instead of relying solely on a lecture-based approach. The ability of the simulation to develop students' pervasive skills was also confirmed and highlighted by the current study.

Having positioned the case study findings in the existing literature, identifying similarities and highlighting new insights, the next chapter concludes the study and discusses its implications.

CHAPTER 8

CONCLUSIONS AND IMPLICATIONS

8.1 INTRODUCTION

Having discussed the findings in the context of the literature and the conceptual framework, in this chapter I provide an overview of the research conducted, including key findings that address the critical research questions posed in chapter one. This is followed by a representation of the findings in the form of a key which highlights the interrelationships within a simulation-based learning experience, barriers to and enablers of the teaching and learning pedagogy. Thereafter, the assertions implications are discussed and attention drawn to the study's limitations and possible future research opportunities, before final conclusions are drawn.

8.2 OVERVIEW OF THE STUDY

8.2.1 Background, rationale, and critical questions

There have been many calls for change in the way that accounting programmes are presented to students (AAA Future Committee, 1986; Lin, Xiong and Lui, 2005; Seigel, Omer& Agrawal, 1997; Chapman and Sorge, 1999; Steenkamp and Rudman, 2007). At the heart of these calls lies the gap that exists between what accountants and auditors do in practice, and what accounting education teaches (AAA Future Committee, 1986). While this phenomenon was identified some forty years ago, it is still relevant today.

Several reasons for the growing gap between education and practice have been offered. The primary concern relates to students' inability to apply their theoretical knowledge in a practical, real-life setting (Chapman and Sorge, 1999). Other concerns relate to most students' lack of exposure to the business world (Arens, May & Dominiak, 1970; Siegel. Omer & Agrawal, 1997; Crawford, Helliar, Monk & Stevenson, 2011) and the growing need for graduates to possess various soft skills (Weaver and Kulesza, 2014).

The manner in which schools of accounting present their academic programmes is significantly affected by their association with SAICA. SAICA is the foremost professional accounting body in South Africa, and is responsible for accrediting universities with the

ability to prepare students for the SAICA qualifying examinations. Without SAICA accreditation, it is conceivable that UKZN's school of accounting would cease to exist, as students would not attend a non-accredited university.

In response to calls for a more practical approach to auditing at university that will assist in developing skills needed for the real world, many have opted to use simulation. Simulation pedagogy has the potential to develop students' abilities to apply their knowledge in a practical setting, thereby diminishing the gap between theoretical auditing and auditing in practice.

With simulation, the emphasis is on the application of theory, rather than on the theory itself (Chapman and Sorge, 1999). Simulations also create opportunities to develop students' higher-order thinking skills that are essential for professional accounting practice (Springer and Bothwick, 2004). There have also been arguments in favour of using simulation in the auditing discipline to develop skills that will allow graduates to move seamlessly into a practical setting (Williams and Kollar, 2009).

It was against this backdrop that I became interested in developing an alternative approach to teaching auditing in our School, one that would take cognisance of concerns from the wider accounting and auditing communities and one that would improve our standing in the accounting and auditing community. The overarching objective of this study was to explore students' experiences of learning in a simulated audit environment, as well as facilitator experiences of teaching and learning in a simulated audit environment.

The overarching critical research question that guided my study was:

1. What are students' experiences of learning in audit simulation pedagogy?

In addition to this question, two sub-questions informed the overarching critical question:

2. How do students learn during an audit simulation?
3. Why do students learn in this manner during an audit simulation?

8.2.2 Literature overview

A wide range of accounting education literature was reviewed in order to gain insights into the different aspects of simulation pedagogy, the various influences on the creation of an effective learning environment and learning outcomes, as well as the challenges encountered in implementing the pedagogy.

The literature provided an array of definitions of what is meant by the terms “simulation” and “simulation-led learning”. In the context of auditing education, simulation may be used to developed students insights into the practical application of auditing theory (le Roux and Steyn, 2007). The purpose of utilizing a simulation within the context of auditing education is to expose students to the practical aspects of an audit, and to allow them to develop a deeper understanding of their theoretical understandings. The term “pedagogy” places simulation firmly within an educational context for the study, with pedagogy referring broadly to the theory and practice of education, and how it influences the growth of learners.

The literature highlighted the role that the simulation facilitator plays before, during, and after the simulation experience. The role of the simulation facilitator is multi-faceted and the manner in which he sets about performing such tasks directly influences the quality of learning achieved as a result of the simulation. Significantly, the facilitator assumes responsibility for the creation of suitable learning opportunities (Kille, 2002) and guides the learning experiences that occur during the simulation experience (Gopinath and Sawyer, 1999; Katula and Threnhauser, 1999). While the roles taken on by the simulation facilitator emphasise a student-centred learning approach, central to the process of learning within simulation is the facilitator’s provision of feedback to simulation participants which stimulates participants’ reflection and possible correction of behaviour (Vardi. 2008).

In contrast to the abundance of research related to the role of the facilitator, less has been reported in respect of the role that the simulation participant plays in the creation of an effective learning experience. Here too, researchers have sought to develop an understanding of participant characteristics and related matters that influence the quality of learning that occurs during simulation. Most significant to the effectiveness of the

learning process is the participant's perception of the simulation as a safe place in which to experiment and make mistakes while learning. Participants' motivation for participating in the simulation as well as their emotions has also been identified as influential in the learning process.

Closely associated with the role that the participant plays in the simulation learning process are the concepts of team work and collaboration and their effect on the learning that takes place during simulation. Conflict within the group setting and a general dislike for group work has been found to hinder successful learning within such an environment. Although collaborative learning is considered a suitable methodology for use in simulation because it addresses several key participant learning objectives (Auman, 2011), group composition, intra-group conflict and dislike of the concept can influence how effectively groups function and learn together.

In order for simulations to provide students with the opportunity to face real-life problems, the learning must take place in an environment that is reflective of the real world (Lainema and Lainema, 2007), and the environment must present authentic tasks by focusing on learning and skills in contexts that reflect the way knowledge will be used in real life (Brown, 1998).

The literature suggests that, particularly within the field of business education, little attention has been paid to the development of the simulation experience itself. In contrast, in the medical education discipline, this aspect of simulation-led learning has been highlighted and explored in detail. Two frameworks/models were identified from a review of medical education literature that guide the design, implementation, and assessment of the simulation experience. The Jeffries (2005) framework identifies five components (the teacher, the student, educational best practice, the design and implementation of the simulation, and outcomes) that influence the learning experience. In turn, the Keskitalo (2015) facilitation, training, and learning model blends principles of adult learning, Vygotsky's ZPD, Kolb's (1984) ELT, and characteristics of meaningful learning to create a model that is a more holistic and meaningful approach to teaching and learning (Keskitalo, 2015).

The ultimate objective of a simulation learning experience is the transfer of theory to daily practice and the avoidance of incorrect action in the future (Breckwolt, Gruber, and Wittman, 2014). This would suggest that the ultimate goal of an auditing simulation is a better-prepared workforce (Gopinath and Sawyer, 1999). Although several structures and processes contribute to such knowledge transfer, the quality and depth of participant reflection is central to achieving this goal (Lizzio and Wilson, 2007). Successful reflection is contingent upon the provision of adequate feedback and a detailed post-simulation debriefing by the simulation facilitator.

While simulations are frequently used in an education context, there is an ongoing debate about the efficacy of the pedagogy, with many arguing that few of the claims related to the benefits of the pedagogy have actually been substantiated. Much of this debate emanates from disagreement about how learning within the simulation should be described and assessed. Concerns have been raised that reliance should not be placed on participants' testimonials and self-reports of learning, with researchers instead calling for an approach that allows participants to demonstrate their understanding and knowledge, and to apply their knowledge, problem-solving skills, and cognitive development (Ash & Clayton, 2004) instead.

The literature reviewed draws attention to the issues that are pertinent in current discussions relating to simulation-led learning experiences, providing guidance and structure to the current study. The literature highlighted several important aspects of simulation-led learning, including the overarching role played by the facilitator, the characteristics of the simulation participant, and the development of the simulation itself. The literature reviewed signposted the conflicting views on learning within simulation, and drew attention to the need for possibly adopting a more inclusive viewpoint of what learning comprises in simulation-led experiences. While the auditing simulation literature had provided limited assistance in developing a detailed, appropriate simulation experience, the literature reviewed provided this understanding, with both the Jeffries framework and (particularly) the Keskitalo model providing guidance in the development of the simulation. The literature reviewed highlighted the learning process that takes place within a simulation-led environment, drawing attention to feedback, reflection, and debriefing of participants. This aspect of the literature augmented the framework and

model described, providing a deeper understanding of the roles that feedback, reflection, and debriefing played in a simulation-led experience.

8.2.3 Conceptual framework

The conceptual framework that I used to guide the study consisted of several elements. Underpinning the framework was the educational philosophy that consisted of two elements, the constructivist theory of learning, and the socio-cultural theory of learning. The design and implementation of the simulation-led learning experience were informed by constructivist learning theories. General constructivist principles assisted in creating an appropriate learning environment within which to teach the practical application of auditing concepts and skills. In addition to these general constructivist principles, three constructivist models/concepts (experiential learning, Schon's reflective practitioner, and the Dreyfus five-stage model of adult skill acquisition) were closely aligned to the study, and provided deeper insights into the learning experience.

Ausubel's (1968) characteristics of meaningful learning were used to create a sound basis for learning. The characteristics draw on several learning theories, rendering them helpful in the creation of learning experiences that had the potential to be more holistic and meaningful. I applied the approach previously used by Keskitalo (2015). In developing his simulation-based learning experience, Keskitalo sought to answer two fundamental questions in respect of each of the characteristics of meaningful learning: *how* could the characteristic be understood and implemented within a simulation-based learning experience, and *why* it was important to take the characteristic into account. The answers to these questions assisted in developing a sound basis on which to build the simulation-based learning experience.

Kolb's (1984) highly influential ELT also formed part of the conceptual framework. The ELT is an effective and credible framework (Healey & Jenkins, 2000) and has been used frequently as a framework for understanding how learning from experience occurs (Carroll, 2009). The ELT was used to explain the various stages of the learning process and the ways in which information is received and processed (Akella, 2010). The ELT consists of four stages, each of which represents a way in which learners respond to a learning situation.

Kolb's ELT comprises four stages. The concrete experience provides the basis for the learning experience. Here, learners are personally and actively involved in the learning experience. During the reflective observation stage, the learner will attempt to make sense of the concrete experience that he participated in. The process of reflection provides the learner with the tools to divide up their experiences

Despite being a description of the learning process in general, the ELT emphasises the need for both experience and reflection (Akella, 2010). Without appropriate reflection on the experience, learners would be doomed to make the same (or similar) mistakes again. The process of reflection formed an integral part of the study's conceptual framework and lay at the heart of the learning process within the simulation-based learning experience.

Rounding out the conceptual framework are the educational theories of active learning, adult learning (andragogy), self-directed learning, and collaborative learning. These theories provided critical insight into participant responses and motives during the simulation experience.

8.2.4 Research methodology

The case study research that I conducted was exploratory in nature and framed within an interpretivist paradigm. Accordingly, the data gathered and the analysis techniques employed were qualitative in nature (Creswell, 2007; Wahyumi, 2012).

Study participants were drawn from the Auditing 3B cohort located on the Westville and Pietermaritzburg campuses of UKZN. I selected a purposive sample of 15 students in Westville and 20 students in Pietermaritzburg. The sampling technique allowed me to hand-pick study participants based on their possession of particular characteristics and/or knowledge being sought. In this way, I was able to gather a sample that was satisfactory for my specific needs (Cohen, Manion & Morrison, 2011).

Multiple data sets were gathered, consisting of the following: participant and facilitator written reflections, focus group interviews, and questionnaires.

Several challenges were addressed during the gathering of data:

Firstly, the preparers of the case study used for the group project (PwC) did not provide a detailed memo that should have provided a detailed background and understanding of the audit client and the circumstances surrounding the audit. Such information had to be developed by the lecturers and myself. This information should have been provided by the person who developed the case study; he or she had intimate knowledge of the scenario.

Secondly, several of the study participants did not reflect on their experiences, as requested for study purposes. While this limited the amount of data collected from student reflective journals, they did use their notebooks to document their thoughts and understandings of the project and their role in it. This provided insight into how they approached the project, and the data could be used for study purposes.

Thirdly, the response rate to the cohort questionnaire was low as attendance at lectures had become poor towards the end of the semester, with students opting out of lectures in favour of studying for examinations. Rather fortuitously, those students who did complete the questionnaire did so in a lot of detail, and responses were pleasing.

Fourthly, some of the students appeared reluctant to participate in the focus group interviews that took place along with the debriefing sessions. I had to rely on the rest of the groups for data. Some of the participants also struggled to understand my questions, and I was concerned that, in an effort to make myself understood, I would lead them in a particular direction. I remained cognisant of this throughout the interviews.

Fifthly, several challenges were encountered due to the fact that the study was run across two research sites (Westville and Pietermaritzburg). Challenges such as finding appropriate venues and only being able to meet on a Friday impacted the study.

Sixthly, it was difficult to gather observable data on learning as students worked primarily in electronic format. I adopted an alternative approach to inspecting their work for evidence of learning – I asked “how” and “why” questions and focused on how they applied theory in practice.

Having converted all data into text, I then employed the approach suggested by Saldana (2016) to analyse the data for the study. I employed coding, content and thematic analysis to analyse the data.

To enhance the credibility of the findings, careful attention was given to issues related to transferability, credibility, dependability and confirmability, as discussed in detail in Chapter Four.

Ethical requirements were adhered to by gaining approval for the study from the relevant UKZN committee, (Appendix 1), and informed consent was obtained from each study participant (Appendix 2).

8.2.5 Review of findings

The overarching research question is

1. "What are students' experiences of learning in audit simulation pedagogy?"

In addition to this question, three sub-questions inform the overarching question, providing a framework within which to answer the overarching question:

2. How do students learn during an audit simulation?
3. Why do students learn in this manner during an audit simulation?

It was apparent that while some of the students (both study group participants and students from the wider student cohort) enjoyed the project, finding it helpful in developing an understanding of what auditing really entails, many students did not share this viewpoint.

In order to understand this anomaly, it is worthwhile to reflect on what learning looked like to students prior to the introduction of this simulation-led learning experience.

Students had only been exposed to a lecturer-focused teaching strategy. They attended lectures during which the lecturer approached topics from a theoretical perspective, in order to provide them with conceptual knowledge of auditing that were then used to attempt tutorial questions. Tutorial questions were case studies set in the real world. The tutorial circumstances were clearly defined and easily understood, and questions were

clearly defined too. Assessments were similar to tutorial questions. Students were provided with suggested solutions to all tutorial and assessment questions, and they were directed to one or two textbooks for answers to all their questions. They were not required to dig too deeply to find the answers as their lecturers had already done this and were willing to provide all the answers to all their questions. It was possible to pass the module comfortably by adopting a rote-learning approach, where a detailed, in-depth understanding of concepts and audit procedures was not needed.

Students' learning experiences in the simulation were very different. During the simulation, students learned primarily as a result of having made mistakes during the simulation experience. In a sense, mistakes were an inevitable and necessary part of the learning process, as they had not been provided with any supporting material (notes, examples of how to perform procedures, examples of working papers etc.). But, knowing that they needed to submit the group project, the students had no choice but to attempt the project. This required them to step outside of their lecture-based comfort zone; they could no longer rely on the lecturer to provide the answers, they had to find them for themselves.

Their first attempts at a task, however poor, resulted in new knowledge which could then be assimilated into their prior theoretical knowledge to provide a (slightly) deeper, (slightly) more practical understanding of auditing. Such revised knowledge became the basis for their second or even third attempts at a particular practical task. Each iteration of the learning cycle resulted in a (slightly) better understanding of auditing theory in a practical setting. This will continue throughout the student's / auditor's academic / professional career as he/she builds on his/her existing knowledge base.

The genesis of this learning experience was the change in teaching strategy. Students were no longer provided with the answers. They had to take responsibility for their own learning, and find ways to construct their own knowledge. They had no choice but to grapple with the tasks, trying to piece together the pieces of the puzzle, relying at first purely on theoretical knowledge and later on a combination of theory and new practical understanding. Slowly they inched their way out of the chaos zone and towards a zone described as cosmos (space, the heavens) by Silen (2000). Even though they protested at

not being provided with support (e.g. guidelines, examples of working papers), this actually supported their learning. If they had been given support, they would not have made as many mistakes and it is possible that their learning may have been stifled.

Even though they did not explicitly engage with the reflective aspect of Kolb's (1984) experiential learning model as had been anticipated, they did engage in reflection – albeit subconsciously. Having completed a task incorrectly, they were able to reflect on mistakes made, which allowed them to find alternative approaches to their assigned tasks, and they could move closer towards an appropriate solution to the problem at hand.

Actively engaging in the learning process resulted in a slow, cumbersome learning process which students did not enjoy. They had become accustomed to the fast, surface learning approach from lectures. In contrast, the active learning process that required them to grapple independently was slow and they became frustrated with their lack of (or slow) progress. They made mistakes and needed to find out why they had made these mistakes. Learning became an experience that was created by the individual's meaning making process; it was not handed to them during a lecture.

The freedom to learn in this manner was made possible by the environment in which the simulation took place. The simulation allowed students to proceed at their own pace. They were able to repeat tasks and procedures. The lack of examples and guidance on how to proceed in the simulation environment encouraged (if not demanded) learning through mistakes.

The opportunity to collaborate with their peers in a group work setting also provided the opportunity for appropriate learning. While the students came into the experience with little relevant experience to draw on, each one brought at least some understanding. The group work setting allowed them to share their understandings. Others' understandings could then be incorporated into their own, in order to construct new or revised knowledge and understanding.

Learning in a group work (collaborative) environment provided students with the opportunity to interact with each other, to disagree, to ask follow up questions. Such an

exchange of knowledge and understanding became minute iterations of Kolb's (1984) experiential learning cycle, with experiences resulting in new understanding of concepts and new opportunities to experiment with new understanding.

Working in a collaborative environment also provided opportunities for crossing the zone of proximal development. Working in a group work setting allowed them to tackle tasks that they would not have been capable of on their own. The collective scaffolded the individual's understanding, providing support and guidance.

They also learned because of the active approach followed during the simulation. Students were exposed to documentation and activities that they were not familiar with. This allowed them to develop mental pictures of what relevant documents looked like, as well as run mental "motion pictures" that could provide a context for later procedures that they needed to perform. The active nature of the learning process also prompted them to ask the "why" questions. They could no longer just absorb lecturers' facts. Instead, they needed to understand why a particular procedure was needed. The "why" led to a deeper understanding of the procedure and provided an understanding that could be carried forward to another learning site.

The authentic nature of the simulation contributed significantly to students' experiences of learning. The simulation provided students with a realistic representation of what an audit experience will entail. It evoked many of the same emotions that a real audit would, allowing the students to experience these (often negative) emotions in the relative safety of the simulation. The often-time negative emotions could be reflected upon, allowing students to consider how to address such emotions more professionally in future.

The authentic nature of the audit also provided students with a different perspective of an audit, providing context and forcing them to look beyond "topics" that were discussed in lectures in isolation of other "topics". The simulation sought to develop their understanding of the "big picture" of an audit.

In addition to the development of technical knowledge in a practical context, students also developed essential practical/pervasive skills. Here too, they entered the learning experience with little or no prior relevant knowledge, and they had to take responsibility

for the development of these skills that had been embedded in the simulation case study. For computer (MS Excel) skills, this meant finding tutorials on YouTube, and for communication and decision-making skills, this meant learning by trial and error too.

Upon reflection, it is possible to see that learning was possible and that it did take place. However, the students did not appear to believe that their learning in the simulation experience was significant or valuable. The process was so different to their previous passive experiences where they were "given" the answers, where problems were not ill-defined, and where solutions were provided to all questions posed. To this group of students, anything less than the yardstick of passive learning would not constitute learning in their eyes.

8.3 TRANSFERENCE AND PATTERNS

The development of a theory or a model that addresses student learning in simulation is not appropriate here. However, Saldana (2016) suggests that the development of a key assertion is both suitable and desirable. Such an assertion allows for what was observed during this study to be considered in comparable Auditing simulation experiences elsewhere. Such an approach creates the opportunity to progress from the particular (namely, the current study) to the general by predicting patterns of what may be observed and what may happen in similar, future contexts.

It is with this in mind that factors that have impacted students' abilities to learn effectively within simulation are now laid out, with a view to providing guidance to others embarking on a similar simulation-led learning experience.

8.3.1 Learning through practical application cannot be a once-off, novel experience

As observed, a simulation-led learning experience does not result in an immediate and significant improvement to students' practical auditing skills; this kind of learning experience should not be a once-off, unique experience. For simulation to be effective and achieve its stated objectives, it needs to be integrated methodically into the auditing module. Instead of a stand-alone project, such practical application of auditing theory must be frequent, ongoing, of sufficient intensity and applied at the appropriate level to ensure that effective learning can take place.

7. However, the practically of this approach calls for more research on how to best achieve such integration into the curriculum, especially on how the online space may be better utilised for this kind of learning.

8.3.2 Clear expectations and the identification of benefits accruing to students

The (current) simulation experience was extremely disconcerting to many of the students. The teaching strategy was completely unknown and they could not see a clear path towards successful completion of the project. This resulted in many of them wanting to withdraw from the experience, noting that they did not know how to start and what to do.

Where students are exposed to different teaching strategies, particularly ones that demand more of them and have significantly different expectations in terms of time and effort, these teaching experimentations must be approached realistically in terms of how the teaching strategy may be received or rejected by the students. In order to ensure that students engage productively in the classroom, facilitators must create clear expectations and constantly point to the benefits that will accrue to the student from engaging with this type of learning.

The simulation facilitator must display a deep conviction that this teaching strategy is powerful and that it is appropriate. Their enthusiasm for the strategy needs to shine through as they engage with the students, allowing them to win over the students, convincing them as to the rewards that this approach might bring.

8.3.3 Lobbying for space and time in an already-full academic programme

Instead of a suitable timeslot in an already-full academic programme in which to address a simulation-led auditing experience, the simulation teaching strategy cannot be perceived as something separate that is done as an aside; it needs to be seen as a central strategy and one that the academic staff believe in wholeheartedly. Simulation as a teaching strategy can only gain acceptance if used frequently and if its benefits are readily discernible and quantifiable. Lobbying for space and time within the academic programme needs to be a non-negotiable that may require challenging the inflexibility of the university's timetabling system that favours face-to-face lectures.

8.3.4 "Friend-based" groups cannot be legitimised

In the wake of many students arguing in favour of being allowed to self-select project groups, it may seem like an acceptable compromise in order to garner student support for the teaching strategy. However, if auditing lecturers wish to remain true to "real-life like" benefits that simulation might offer, there can be no compromise in terms of group selection. In the real working world, corporations employ people from all walks of life (different races, religions, nationalities etc.). If the simulation is to assist students to develop sought-after pervasive skills (that are also advocated by SAICA), then facilitators need to make every effort to approximate reality. Contrived "friend-based" groups may only serve to dilute the full learning experience that might otherwise accrue to the students.

8.3.5 English as the primary means of communication

In a context like South Africa, where multiple languages are valued, English still remains the main language of communication. Simulations and other group activities provide students with different English language abilities, a powerful space in which to explore and make meaning in English. However, in order to encourage students to participate, the facilitator must state clearly that English language competence is not a reflection of the student's cognitive ability.

The role of the auditing lecturer is central to this discussion. Instead of trying to assist non-English speakers to overcome their language concerns by making allowances for them, auditing lecturers should rather assist them to develop their English competency. Auditing lecturers should consider themselves language and writing teachers, with part of their role being to induct auditing students into the world of auditing discourse and language. They need to assume responsibility for developing students' abilities to use auditing language as required by auditing convention. While the focus, in this regard, will be on non-English speakers, an assumption cannot be made that English first language

speakers automatically understand the conventions of writing as required by the auditing profession; they too may need assistance.

8.3.6 Finding value in the new teaching strategy

Instead of a lecturer espousing the benefits of simulation, something more is needed in order to get students to value a new teaching strategy (such as simulation). There is empirical evidence that indicates that this approach has merit. Accordingly, lecturers could draw on such research to draw attention to the success of this kind of teaching, as well as signalling the challenges that students might face, in order to make them aware of this early on in the process.

8.3.7 Moving beyond a purely lecture-based programme

In order for students to perceive simulation as more than just a unique, once-off event, the entire auditing programme should be seen to consist of more than just a lecture-based approach; the lecture-based approach should be just one of several teaching methods that are employed in the programme. If students experience multiple approaches to teaching from the start of their university careers from all of their lecturers, this would become their expectation, their norm. This would necessitate programme leaders taking the reins, driving the orientation forward, choosing to stay the course even though only marginal gains may be made in the short-term. In order to inculcate the need for greater focus on a variety of teaching approaches, the ongoing dominance of lecture-based teaching should also be researched.

8.3.8 Learning is a process that includes trial and error

Students must be willing to grapple with the information given, to find ways to solve the problems provided in the scenarios and to understand that small changes can have big consequences in terms of opening learning pathways. However, lecturers cannot assume that students will do this of their own accord. Simulation facilitators need to alert students to the fact that learning might not be instantaneous, that anxiety, confusion, and an initial not knowing how to proceed is a necessary part of the learning process, and that learning is a process (not a discreet/once-off event). The simulation facilitator must alert students that while such anxiety and frustration can be initially disconcerting,

repeated trial and error will lead to discovery and breakthrough, and that this eventuality can be rewarding.

8.3.9 Calls for a restructuring of the ITC examination format

Facilitators must recognise the influence that the format of assessments has over the student's willingness to engage on a meaningful level with the simulation-led learning experience. As long as assessments remain grounded in theory with well-defined problems, students will continue to focus their attention in this regard, choosing to forgo practical application until they commence their training contracts. At present, the auditing assessment format is primarily driven by the format of SAICA's ITC examination. The desire to qualify as a CA (SA) is a powerful driver for the vast majority of auditing students, and their focus is almost entirely driven by how topics will be examined in the ITC. As the ITC is theory-driven to a large extent, that is their focus too.

The drive towards a more practical approach to assessment will only be possible where concerned lecturers tackle the matter head-on. The change can only be effected through the work of auditing lectures and researchers who, as a result of empirical research, are able to provide convincing arguments at conferences and other opportunities. An argument must be made that the current ITC assessment policy is not beneficial for the profession in either the short or long term, as it results in a stunted form of learning at university level. It also results in a transfer of the burden to Practice and further afield when such "under-prepared" graduates enter the workplace.

8.3.10 Learning from mistakes made in a safe environment

The principle manner in which learning takes place during a simulation experience is through the making of mistakes and reflecting on them in order to improve. While students may not do so consciously, reflection takes place in order to identify what was done incorrectly, in order to change the manner in which a task is approached. The willingness to try (even though they may not understand what is actually required) is possible because the environment in which the simulation takes place provides a safe space in which to experiment.

Unfortunately, facilitators'' and students' understandings of the concept "safe environment" may differ vastly. From the student's perspective, making mistakes in a "public" space can be traumatic and lead to anxiety, insecurity, and even shame and withdrawal. In order for students to effectively utilise the "safe environment" principle, the lecturer's responsibility becomes even greater as a heightened awareness of the effects that this kind of learning may have on students is now needed. The facilitator must also develop skills that will allow him or her to create an environment in which the making of mistakes is a normal and acceptable prat of the learning process, and that will not be judged harshly.

8.3.11 Working collaboratively

Learning is enhanced while working collaboratively in a group setting. Students are able to pool their understandings in order to piece together the puzzle of practical tasks and procedures. It is important to recognise though that collaboration is more than just sitting together while working independently; it requires communication to develop each student's understanding and to prepare a well-prepared group effort.

8.3.12 The adoption of a more student-centred teaching and learning strategy

In auditing, the predominant teaching strategy is the provision of lectures. In many instances, lecturers teach in the manner that they were taught to, and as a result, the cycle of almost exclusively using lectures continues. This cycle will continue until someone makes a change. As the traditional lecture approach is often all that students have been exposed to, they accept the *status quo*, believing that lectures are an appropriate approach for auditing.

Instead of perpetuating a lecture-based teaching strategy, auditing lecturers need to argue in favour of an alternative approach to knowledge generation, one that encourages students to discover and construct their own knowledge while engaging in learning tasks. This course of action will necessitate emboldened lecturers who will try new approaches, while understanding that there may be criticism from students and other lecturers alike.

The adoption of a more student-centred teaching approach will almost certainly bring challenges for lecturers and students alike. For auditing lecturers who have themselves

been taught using a lecture-based teaching strategy, a more active teaching strategy is unfamiliar. In addition, most auditing lecturers do not have a formal teaching qualification, having been appointed to their teaching positions on the strength of a CA (SA) professional qualification. Accordingly, they may require training and guidance on how to develop alternative teaching strategies. Strategies such as simulation will also require significantly more preparation time that lectures do. For students who have also been accustomed to a predominantly lecture-based teaching strategy, a more student-centred approach may cause anxiety and a reluctance to engage. Such a change in strategy will also undoubtedly require a greater commitment from the students in terms of time and effort required.

8.3.13 The provision of authentic tasks that reflect real-world auditing

In essence, the provision of authentic tasks requires significantly more than just the selection of appropriate simulations. There needs to be a deliberate, conscious, and careful selection process to ensure that case studies selected for simulation-led learning experiences are relevant, speaking to current experiences in the real world of auditing. Furthermore, theoretical knowledge and pervasive skills identified in the SAICA competency framework should be mapped against the case study under consideration.

Presently, the number of simulation case studies available to auditing lecturers is extremely limited, placing further pressure on lecturers. A repository of simulations that are appropriate for undergraduate auditing modules does not exist, and there is a dire need for the development of appropriate simulation case studies. In light of this concern, further concerns related to the training of auditing lecturers to develop their own simulations may be raised. Related to the need for lecturer development are concerns about who would provide the training. This too is an area for potential future research.

8.3.14 The development of highly-desirable pervasive skills

In addition to developing students' abilities to implement theory in a practical setting, the simulation can also provide them with the opportunity to develop practical skills that are highly desirable in the business world today, including computer skills, communication skills, decision-making skills, and problem-solving skills. Pervasive skills are identified in the SAICA competency framework and are a necessary component of students' learning

activities at university. The majority of such skills cannot be effectively developed using a lecture-based teaching strategy.

The development of such skills can be successfully embedded in a simulation-led learning experience, with collaborative / group work experiences providing opportunities for the development of such skills. It requires early identification of desirable skills and the development of activities that will favour such skills. While the development of such skills is important, this should not overshadow the practical application of theory in the simulation. It will require the lecturer to have an in-depth understanding of how the simulation experience should unfold, what technical knowledge is relevant, and how pervasive skills may be developed too.

8.4 LIMITATIONS

When interpreting this study's findings, one needs to be cognisant of its limitations. Despite taking appropriate steps, as explained in chapter 4, to limit bias arising from my positionality as co-constructor of interview data and as insider-researcher, it is inevitable that my interpretations would have been filtered through my values, my background, and my personal involved in the Auditing Discipline. It is also possible that participants' censored their responses through fear of criticism and recrimination. While this risk was mitigated by repeated emphasis that the purpose of my research was to understand their experiences of learning in simulation, the possibility still exists that some participant responses may have been biases in this manner. However, through triangulation of findings from multiple data sets, this risk was reduced.

There was also a risk that my presence at simulation sessions could have led to biased behaviour on the part of student participants. However, as indicated above, this was mitigated through the use of triangulation.

This study's findings, as with all case studies, are bounded by their particular context, and are not generalizable to larger populations. However, by providing rich descriptions of learning experiences, the concepts of simulation pedagogy have been illuminated, making them accessible to others facing similar circumstances (for example, other Auditing educators at SAICA-accredited universities).

8.5 FUTURE RESEARCH

The rich insights, which have emerged from this case study, in expanding understanding of Auditing simulation pedagogy suggest the need for more case study research in a local context. The study's insights have highlighted the fact that external factors play an important role in the quality of learning that might be achieved. While little research appears to have been done in this regard, this could assist in understanding what interventions could be developed to assist students in developing their understanding of practical auditing concepts and principles.

In addition, the all-encompassing role of the facilitator suggests that further research into the facilitator's duties is needed. The need for a greater understanding of how to facilitate (for example) feedback and debriefing could enhance students' learning experiences too.

A further possible research focus in this regard could be expanding the use of simulation pedagogy to different accounting disciplines.

8.6 CONCLUSIONS

This study explored experiences of learning in audit simulation pedagogy in an undergraduate module at UKZN, and through the use of multiple data sets using methodology that included focus group interviews, written questionnaires, and reflective journals, achieved its aim of extending understanding of this phenomenon in accounting higher education.

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APPENDIX 1:

ETHICAL CLEARANCE CERTIFICATE

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

6 September 2013

Mrs Charmaine Lathleiff 882216018
School of Education
Edgewood Campus

Protocol reference number: HSS/0817/013D
Project title: "Imagining an authentic workplace using simulation": exploring simulation pedagogy in Auditing.

Dear Mrs Lathleiff

Full Approval – Expedited

This letter serves to notify you that your application in connection with the above has now been granted full approval.

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....
Dr Shenuka Singh (Acting Chair)

/px

cc Supervisor: Professor S Maistry
cc Co-Supervisor: Professor N Amin
cc Academic Leader Research: Dr MN Davids
cc School Administrator: Ms B Bhengu & Mr T Mthembu

APPENDIX 2:

INFORMED CONSENT

Informed Consent for students participating in the Auditing 300 project study

Name of principle investigator: Charmaine Lathleiff (CA) SA
Name of organization: University of KwaZulu-Natal
Name of project: Westville Campus Auditing 300 project

This Informed Consent form has two parts:

- **Information Sheet (to share information about the study with you)**
- **Certificate of Consent (for signatures if you choose to participate)**

You will be given a copy of the full Informed Consent form.

Part I: Information Sheet

Introduction

I am Charmaine Lathleiff. I am the Academic Leader for the Auditing Discipline at the University of KwaZulu-Natal (UKZN), as well the Module Coordinator for Advanced Auditing. I am doing research the learning that takes place during the Auditing 300 simulated audit project (on the Westville Campus). I am going to give you information and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research.

This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you can ask them of me or of another member of the Auditing academic staff.

Purpose of the research

Students have traditionally struggled to apply Auditing concepts and principles within a practical application. Examples of these difficulties include students' struggles with answering tutorial or examination questions, as well as the difficulties that they face when they start their training contracts at Auditing firms; students are not prepared for applying their theoretical knowledge in practical situations. We would like to find ways to improve students' ability to answer questions and to cope in the "real world". We believe that you can help us by telling us

how you approach tutorial/examination questions before having attempted the Auditing 300 project, as well as how the project has changed the way in which you think in relation to applying Auditing principles in a practical setting. We would like your opinion on whether the Auditing 300 project has deepened your understanding of Auditing theory and your ability to apply the theory in a practical setting. We want to learn how to modify our approach to teaching to improve students' understanding of Auditing, and to equip them to handle practical Auditing situations in a more effective manner, and would like to ascertain whether use of an Auditing simulation (such as the one in the project) could assist with this.

Type of Research Intervention

This research will involve your participation in the following ways:

- As part of your assessment for the Auditing 300 module, you are required to take part in a group project which will simulate a real audit. The simulated audit has been provided by the auditing firm of Pricewaterhouse Coopers and will require you to audit the financial statements of a fictitious company.
- For purposes of the research study, you will be required to work within a group of fellow volunteers to complete the audit.
- You will be asked to participate in an initial group discussion (i.e. prior to the start of the study) that will take about one and a half hours.
- While you are working on the audit, the research will involve your participation in four group discussions that will take about one and a half hours each.
- In addition, some of you will be asked to participate in four individual interviews that will take about one hour each.
- Finally, you will be asked to participate in a final group interview that will take about one and a half hours.

Participant Selection

You are being invited to take part in this research because we feel that your experiences with the Auditing 300 project can contribute much to our understanding of students' learning in a practical setting.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate, you will be allowed to return to a project group of your own choosing and to complete the Auditing 300 project on your own. The choice that you make will have no bearing on the final mark that you receive for the project.

Procedures

We are asking you to help us learn more about students' learning experiences. We are inviting you to take part in this research project. If you accept, you will be asked to

- Take part in a discussion group with 5 – 6 other persons with similar experiences. The discussion will be guided by me. The discussion group will start with me making sure that you are comfortable. I can also answer any questions about the research that you may have. In the first discussion group, I will ask you questions about your background and home life, as well as your past experiences with Auditing as a module at university. The types of questions that I will ask include what school you attended, whether you have had much (if any) exposure to the business environment, and whether you feel capable of answering Auditing tutorial questions properly. Thereafter, in the following discussion groups, I will ask you questions about your experiences with the simulated audit (i.e. the Auditing 300 project). The discussion will be limited to the aspect of the auditing project that is you will have been required to complete, and will include questions such as whether you have been able to identify the theory that should be applied to the audit, and how you applied the theory to the audit. **I will not ask you to share personal beliefs, practices or stories that you do not feel comfortable sharing.** The discussion will take place in the Auditing Board Room (located on the first floor of the J Block on the Westville campus of UKZN), and no one else but the people who will take part in the discussion or myself will be present during this discussion. The entire discussion will be tape-recorded, but no-one will be identified by name on the tape. The tape will be kept in my office which will remain locked when unoccupied. The information recorded is confidential, and no one else except me and my PhD supervisors (Professors Maistry and Amin) will have access to the tapes. The tapes will be destroyed after I have transcribed them.

- Participate in four individual interviews with me. (Please note that not all of you will be required to participate in individual interviews though). During the interview, we will meet in my office in the Auditing Section (J Block, Westville campus of UKZN). If you do not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there. The information recorded is confidential, and no one else except will access to the information documented during your interview. The entire interview will be tape-recorded, but no-one will be identified by name on the tape. The tape will be kept in my office which will remain locked while unoccupied. The information recorded is confidential, and no one else except me and my PhD supervisors (Professors Maistry and Amin) will have access to the tapes. The tapes will be destroyed after I have transcribed them.

Duration

The research takes place over two and a half months in total. During that time, we will meet as follows:

- Once for an initial interview;
- Five times to work on the project (where you will work in your group, and I will be available to assist and answer questions etc);
- Four times for group discussions (which will be interspersed between the work sessions);
- Four times for individual interviews (where you have agreed to participate in the individual interviews), and
- Once for a final group discussion.

Risks

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. However, we do not wish for this to happen. You do not have to answer any question or take part in the discussion/interview/ if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits

The perceived benefits are twofold: firstly, we believe that you will benefit by developing a deeper, more practical understanding of Auditing and that this will assist you greatly in your studies and in your future career as an auditor/Chartered Accountant. Secondly, we believe that your participation will assist the Auditing Section within the School of Accounting, Economics and Finance to develop enhanced teaching and learning strategies for students that come after you.

Reimbursements

You will not be provided with any incentive to take part in the research. However, we will provide you with lunch and refreshments on the days that we meet.

Confidentiality

We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and we will lock that information up with a lock and key. It will not be shared with, or given to anyone, except my PhD supervisors.

We will ask you and others in the group not to talk to people outside the group about what was said in the group. We will, in other words, ask each of you to keep what was said in the group confidential. You should know, however, that we cannot stop or prevent participants who were in the group from sharing things that should be confidential.

Sharing the Results

Nothing that you tell us today (or during the study) will be shared with anybody outside the research team, and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you before it is made widely available to the public. Each participant will receive a summary of the results.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your final result for the project in any way. You may stop participating in the discussion groups or individual interviews at any time that you wish, without your final result being affected. I will give you an opportunity at the end of the interview/discussion to review your remarks, and you can ask to modify or remove portions of those, if you do not agree with my notes or if I did not understand you correctly.

Who to Contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me (Charmaine Lathleiff) using any one of the following methods:

- Telephone: 031 260 7510
- Email: smithc@ukzn.ac.za
- In person: Room J114, J Block, Westville Campus of UKZN

This proposal has been reviewed and approved by academic staff of the School of Education (College of Humanities) at the University of KwaZulu-Natal, which is a which is a committee whose task it is (amongst others) to ensure that the interests of research participants are protected.

Part II: Certificate of Consent

I have been invited to participate in research about the use of a practical auditing component in the Auditing 300 module at UKZN.

I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study

Print Name of Participant_____

Signature of Participant _____

Date _____

Day/month/year

Statement by the researcher

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

1. **The Auditing 300 project will be attempted.**

2. **The participants will be asked to participate in group discussions, as well as individual interviews.**

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the participant.

Print Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Day/month/year

APPENDIX 3:

TURNITIN ORIGINALITY REPORT

Imagining an authentic workplace using simulation: exploring simulation pedagogy in auditing education

ORIGINALITY REPORT

9%	7%	5%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	lauda.ulapland.fi Internet Source	1%
2	Submitted to University of KwaZulu-Natal Student Paper	1%
3	core.ac.uk Internet Source	1%
4	www.ryerson.ca Internet Source	1%
5	www.cynthiabrame.com Internet Source	<1%
6	oakland.edu Internet Source	<1%
7	Jason J. Zigmont, Liana J. Kappus, Stephanie N. Sudikoff. "Theoretical Foundations of Learning Through Simulation", Seminars in Perinatology, 2011 Publication	<1%
	asee.org	

APPENDIX 4:

BIOGRAPHICAL QUESTIONNAIRE – STUDY PARTICIPANTS

General Biographical Information for the study group participants

1. Are you Male or Female?
2. Are you Black African, Indian, White, Coloured, or Other?
3. How old are you?
4. What is your home language?
5. If English is NOT your home language, how comfortable are you studying in English?

Secondary Education

6. Dud you attend a private school or a government school?
7. If you attended a government school, how would you describe your school? Well-funded or poorly-funded?
8. Where (i.e. what town) are you from?
9. Did you do Accounting as a subject to matric? If so, did you receive a C aggregate (or above) for Accounting?
10. Did you receive a C aggregate (or above) for English?

Family matters

11. Do either of your parents have tertiary education?
12. If you have siblings, have any of them attended university?
13. During term time, do you live "at home" and commute to university, or do you stay in university accommodation?

University-related matters

14. Was a B.Com (Accounting) your first choice?
15. If not, what would you rather have studied?
16. Is this your first attempt at doing Auditing 3B?
17. What do you find most challenging about Auditing as a subject?
18. How would you describe your learning style?

Your future career

19. Are you planning to enter a training contract with an auditing firm?
20. If so, do you see yourself remaining in the Auditing Profession after you have completed your training contract?

APPENDIX 5:
BIOGRAPHICAL QUESTIONNAIRE – STUDY PARTICIPANTS (FINDINGS)

	Westville	PMB
General Biographical Information		
1 Are you male or female?		
• Male	5	5
• Female	10	13
	15	18
2 Are you Black African, Indian, White, Coloured or Other?		
• Black African	7	11
• Indian	7	7
• White	1	0
• Coloured	0	0
• Other	0	0
	15	18
3 How old are you?		
• Average	21	23
4 What is your home language?		
• isiZulu	5	9
• English	8	7
• Khosa	0	1
• Other	2	1
	15	18
5 If English is not your home language, how comfortable are you studying in English?	Some	Some
Secondary Education		
6 Did you attend a private school or a government school?		

APPENDIX 5:
BIOGRAPHICAL QUESTIONNAIRE – STUDY PARTICIPANTS (FINDINGS)

		Westville	PMB
	• Government school	11	16
	• Private school	4	2
		15	18
7	**If you attended a government school, how would you describe your school? Well-funded or poorly-funded?**		
	• Well-funded	11	14
	• Poorly funded	0	2
	• Not applicable – private school	4	2
		15	18
8	**Where (i.e. what town) did you attend school?**		
	• Local – KZN	14	18
	• Rest of Africa	1	0
		15	18
9	**Did you do Accounting as a subject to Matric? If so, did you receive a C aggregate (or above) for Accounting?**		
	• Accounting to Matric	14	16
	• C aggregate (or above)	13	16
10	**Did you receive a C aggregate (or above) for English?**		
	• Yes	15	18
<u>Family Matters</u>			
11	**Do either / both of your parents have tertiary education?**		
	• One	2	3
	• Both	7	5

APPENDIX 5:
BIOGRAPHICAL QUESTIONNAIRE – STUDY PARTICIPANTS (FINDINGS)

		Westville	PMB
	• None	6	10
		15	18
12	**If you have siblings, have any of them attended university?**		
	• Yes	11	8
	• No	4	10
		15	18
13	**During term time, do you live "at home" and commute to university, or do you stay in university accommodation?**		
	• At home	10	13
	• University accommodation	5	5
		15	18
<u>University-related matters</u>			
14	**Was B.Com (Accounting) your first choice?**		
	• Yes	8	14
	• No	7	4
		15	18
15	**If not, what would you have preferred to study?**		
16	**Is this your first attempt at doing Auditing 3B?**		
	• Yes	8	14
	• No	7	4
		15	18
17	**What do you find most challenging about auditing as a subject?**		

APPENDIX 5:
BIOGRAPHICAL QUESTIONNAIRE – STUDY PARTICIPANTS (FINDINGS)

	Westville	PMB
18 How would you describe your learning style?		
Your future career		
19 Are you planning to enter a training contract with an Auditing firm?		
• Yes	14	17
• No	1	1
	15	18
20 If so, do you see yourself remaining in the Auditing Profession after you have completed your training contract?		
• Yes	11	9
• No	4	9
	15	18

APPENDIX 6:

SELF-REFLECTION PROCESS

Using an approach to reflection developed by Ash and Clayton (2004).

1. Describe the auditing experience(s) i.e. what task were you involved in
2. Analyse the experience(s) successively from the perspective of each category of auditing learning objectives:
    a. Academic
    b. Personal
    c. Corporate (i.e. group)
3. Identify the core of an important learning in each category
4. Articulate learning by turning this core idea into a well-developed statement of learning – using:
    a. Four guiding questions as an outline
        i. What did I learn?
        ii. How, specifically, did I learn it?
        iii. Why does this learning matter, or why is it significant?
        iv. In what ways will I use this learning; or what goals shall I set in accordance with what I have learned in order to improve myself, the quality of my learning, or the quality of my future experiences?
    b. The project-wide learning objectives to provide guidance in the development of the learning

YOU CAN STOP HERE

5. Apply standards of critical thinking to the draft AL through:
    a. Student's self-assessment, and/or
    b. Reflection leader feedback, and/or
    c. Instructor feedback.
6. Finalise the ALs, aiming to fulfil all learning objectives in each category, and meet standards of critical thinking.
7. Undertaking new experience(s)

    a. Including, where feasible, taking action on the goals set / testing the conclusions reached in the ALs

8. Continue the reflection process outlined here
    a. Including reflection on the experience of enacting the goals / testing the conclusions reached in the previous ALs, when this has been done, and articulating additional complexity of learning accordingly

APPENDIX 7:

GROUP PROJECT QUESTIONNAIRE

1. What did you enjoy about this group project?

_____

2. What did you not enjoy about this group project?

_____

3. What would you change about this group project?

_____

4. Do you think that the group project was a useful learning experience that should be continued in years to come? Why?

_____

5. Do you feel that the project has provided you with a better understanding of how to perform audit procedures? Why?

_____

6. Did you find the opening PwC presentation useful?
   What other information would you have liked them to include in their presentation?

_____

7. Do you think that your group leader was an effective leader? Why?

_____

8. What practical skills did you develop during the project?

_____

9. Did you enjoy working in a group? Why?

_____

10. How often did you meet to work together as a group? How did you stay in contact with your group members?

_____

11. Do you think that the approach that you adopted (i.e. how you worked as a group) was effective?

_____

12. Do you believe that your approach (to the project) provided you with good preparation for a "real world" working environment where you will be expected to work closely with colleagues (i.e. in a group setting)?

_____

13. How did you deal with disagreements and/or conflict within your group?

_____

14. Did you approach the Project Champion on your campus for assistance during the project? What kind of assistance did you need from the Project Champion?

_____

15. Would you have preferred to have someone available to assist you while you were working on the project (i.e. someone who was present while you were working)? Why?

_____

16. Did the project assist you to transform your theoretical knowledge of auditing into a practical understanding of auditing?

_____

17. Do you feel that this project will improve your performance in the final exam? Why?

_____

18. Do you think that you will benefit from the project when you go out into your training contract? Why?

_____

19. If you were not going to be awarded a mark for the project (i.e. the project was not going to count towards your year-mark) would you have approached the project differently? Why?

_____

20. Having completed the project, do you feel more confident about entering your training contract with an auditing firm? Why?

_____

Questionnaire number: _____

PMB or Westville: _____