



**FIRST YEAR STUDENT TEACHERS' PERCEPTIONS OF THEIR
CONSTRUCTIVIST CLASSROOM LEARNING ENVIRONMENTS IN
ACCOUNTING 1 AND IMPLICATIONS FOR TEACHER EDUCATORS.**

by

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I, Medson Mapuya, do hereby solemnly declare that this dissertation on the “First year student teachers’ perceptions of their constructivist classroom learning environment in Accounting 1 and implications for teacher educators” is my own original work and that it has never been presented or submitted to another university for any academic purposes and rewards. I further declare that all the sources used and quoted in the dissertation have been acknowledged by means of complete references.

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Medson Mapuya



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I would like to begin by acknowledging the one above, my heavenly father. Thank you for the life, for the energy, the determination and the opportunity to embark on this study and to complete it. I would not have done it without your blessings. Thank you Lord. May thy name be honored and praised through this study, which is a living testimony of your never-ending ability in our lives.

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DEDICATION

I dedicate this research study to my mother and my late father, who never had a chance to see me grow and become who I am today and to my family. They have been my source of inspiration throughout the entire study and they kept me going.

This mixed methods study was carried out at Central University of Technology, Free State, Welkom Campus. Its aim was to investigate the perceptions of first year student teachers about their constructivist classroom learning environments in Accounting 1 and implications of such perceptions for teacher educators. The ultimate goal was to develop strategies to improve and enhance a positive constructivist classroom learning environment. The study is grounded in constructivism and viewed the learning environment from the socio-ecological approach paradigm. The population was all the first year Bachelor of Education (B.Ed.) Accounting students. Convenience sampling was used to select a study sample of 112 students. Data was collected using a questionnaire called the *Constructivist Learning Environment Survey* (CLES). The CLES was adopted and adapted for use in this study as it had already been tested for reliability and validity by its developers. Students' responses of their perceptions were measured on a 5 point Likert-type scale in seven categories. Semi-structured interviews were used to supplement questionnaire data.

The quantitative data revealed positive perceptions of students in aspects regarding learning to speak out, learning to communicate, an interest in accounting and teacher support in Accounting. The study further revealed that students were not satisfied with some aspects in the learning to learn category. Although they were partially satisfied with the learning about the world and learning about accounting aspects, the qualitative findings showed that more needed to be done to improve their satisfaction and create positive perceptions. It was revealed that the students remained alienated and marginalized from the designing and planning of their academic activities and the overall classroom instruction.

The findings pointed to the need for teaching staff to move away from standardized lectures to customized instruction which acknowledges that every student in the classroom has different needs and abilities. The study recommends that lecturers should strive towards promoting constructivist learning environments in their classrooms where constructivist ideas and principles are encouraged. To this effect, they need to be equipped with the necessary skills and competencies to create social constructivist classrooms and learning environments.



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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter presents an overview of this study on the perceptions of first year student teachers' perceptions of their constructivist classroom learning environment in Accounting and the implications for teacher educators.

As argued by Hodgson, Lam and Chow (2010), from secondary school, first year students need to adjust from highly structured and supportive learning environments which promote learning dependence to a complex learning environment at university which emphasizes autonomous learning. To this effect, Millet (2015) warns that the perceptions of students about their learning environment has a huge impact on their transition into university life and their overall development and academic progression.

The educational implications of this transition phase in the academic lives of first year students is emphasized by Hodgson *et al.* (2010) who assert that a successful transition during first year at university can have a significant influence on the students' academic success in their studies. These sentiments are also endorsed by Millet (2015), who argued that the dynamics of adjusting into the social, academic and learning environment constitute the difference between a negative and positive experience at university for most first year students and how they ultimately perceive the learning environment.

The term learning environment is used to refer to a few contextual aspects or elements of the teaching and learning process. Firstly, it refers to the social atmosphere or climate in which teaching and learning takes place (Arisoy, 2007; Millet, 2015 and Rankin, 2005). Secondly, it is the physical setting of the classroom and its social norms (Litmanen, Loyens and Lonka, 2014). Lastly, it refers to the physical activities in the classroom, the teaching strategies used in the teaching and learning process, the type of learning in which students are engaged and the assessment methods used to evaluate teaching and learning (Doppelt, Christian and Schunn, 2008; Cleveland and

Fisher, 2014). Thus, the term learning environment looks at and evaluates the psychology, sociology and pedagogy of the various contexts in which teaching and learning takes place and how these contexts affect the students' achievement in both the cognitive and effective domains.

Researchers on students' perceptions about learning environments are in agreement that these perceptions influence the students' academic performance, course satisfaction and completion. They are also unanimous that if students perceive the learning environment and their lecturers to be supportive of their learning needs and educational well-being, they are more likely to thrive in challenging situations (Dahlin, Fjell and Runeson, 2010; Fraser and Killen, 2003; Gibbs and Simpson, 2004 and Gijbels and Dochy, 2006). On the other hand, research findings on teaching strategies indicate that a constructivist approach can be used to provide support to students at any level and promote their learning. The available literature suggests that constructivist learning environments represent most of the students' perceived ideal learning contexts (Dopplet, *et al.* 2008 and Radovan and Makovec, 2015).

Dopplet *et al.* (2008) and Radovan and Makovec (2015) argue that a constructivist learning environment is characterized by students' awareness in learning about the world around them and a comprehensive understanding of the relationship between what they learn in the classrooms and the reality in their lives. It also creates and offers students opportunities to speak out, express themselves openly, and learn from each other. In a constructivist learning environment, students are empowered and encouraged to be actively involved in their learning processes. Killen (2016) summarizes it all by noting that the basic precept of constructivist learning environments is that knowledge is obtained and understanding is realized through active construction and reconstruction of mental frameworks. Constructivism promotes critical thinking skills of students which lead to creativity. Thus students who have been exposed to constructivist learning environments are in a superior position to design, create and invent new ideas, solutions and products.

Evidence in support of the above approach to teaching and learning as advocated by Dopplet *et al.* (2008); Killen (2016) and Radovan and Makovec (2015) is also found in

the studies of Johnson and Johnson, (2009a); Slavin, (2009) and Snowman and McCown, (2012) who discovered that cooperative group work among students was ideal for promoting student learning towards the realization of social, academic and personal outcomes. This approach to teaching and learning adequately accommodates the various learning needs and interests of different students in the classroom. It is also praised for providing a less threatening but rather more encouraging and accommodating learning environment, which is a significant success factor in the academic lives of students.

These research findings necessitate the need for a paradigm shift on viewing the learning environment from lecturer-centered to student-centered perspectives as advocated by Nel, Nel and Hugo (2012). Such a call emphasizes and testifies the need and importance of creating sustainable constructivist learning environments in educational institutions, starting at classroom level. As such, understanding the perceptions of students about their classroom environments, the kind of support they get from their lecturers as well as their perceived relevance of course content to their lives and career plays an important role in designing intervention strategies to support their learning. Educational institutions and lecturers therefore need to be conscious of such perceptions to enable them to create a quality classroom learning environment which is supportive, encouraging and focused on learning.

As noted by Killen (2016), the differences in the academic success of students can be greatly determined by a mismatch between teaching styles used by the lecturers in the classrooms and the individual students' learning styles. This mismatch usually results from a lack of the lecturers' understanding of the students' envisaged classroom and learning environment. Students will be highly disadvantaged if the teaching styles of their lecturers do not match the way they would like to learn and how they prefer to be taught. Thus, to assist and accommodate all students and to enable them to reach their fullest academic potential, it is imperative for the lectures to obtain and understand their perceptions regarding an ideal classroom environment that best suits them. Since these students are unique and may have different perceptions, it is important for the lecturers

to be well conversant with the various teaching styles and vary their approach accordingly.

In light of the above, Kreber and Cranton (2000) argue that educators and lecturers need to constantly reflect on their teaching in terms of what they teach, how they teach it and why they teach in those specific ways. On the other hand, students also need to reflect deeply on their learning. In this regard, Hattie (2009) advises lecturers to view and reflect on their teaching through the eyes of their students. To this effect, Killen (2016) suggests that obtaining evaluative comments from students can be an effective way of getting feedback from them as well as their perceptions on what happens in classrooms. This investigation was thus, partly informed and inspired by Killen's (2016) sentiments above, as it also obtained feedback from the students to reflect on the reality in the classrooms and the students' perceptions.

Establishing and enhancing positive classrooms and learning environments motivate students and enhance conditions in which students can reach their full academic potential. Killen (2016) warns that the learning environment in which teaching and learning take place is more than the physical place in which it occurs. He argues that it encompasses the interactions and relationships between the educator and the students as well the shared expectations and standards for learning and behavior in the classrooms. Creating constructivist learning environments can be achieved through the use of cooperative learning.

Cooperative learning is a technique used by lecturers to help student's process information more quickly by making them work in groups to accomplish a common learning goal. It is an instrumental teaching strategy to create and enhance a constructivist classroom environment. Individual group members are responsible for learning the information given, and also for helping their fellow group members master the same content (Ginsburg-Block, Rohrbeck, Lavigne and Fantuzzo, 2008; Johnson and Johnson, 2009 and Loyens and Gijbels, 2008). Cooperative learning has been applied successfully in various learning areas. Research findings prove that it has been very effective in creating positive classroom environments and in achieving positive

results in different subjects and grades. (Alijanian, 2012; Loyens and Gijbels, 2008 and Van Wyk, 2010).

It is also important to note that the South African education system is based on the precepts of social constructivism, as pronounced in the National Curriculum Statements (Grades R – 12) and the Curriculum Assessment Policy Statement (2015) of Accounting. Student educators therefore need to be exposed to constructivist learning environments for them to be effective in their classrooms upon completion of their studies. They need first-hand experience to have a comprehensive understanding of constructivism in practice as well as its educational implications.

Education literature has identified the need for educators to understand teaching strategies in order to improve the quality of learning through the provision of supportive classrooms and learning environments. According to Tebabal and Kahssay (2011), the purpose of teaching at any level of education is to bring a fundamental change in the student or learner. To achieve this, the lecturers or educators need to use and implement effective teaching and learning strategies in their classrooms and make sure that the teaching and learning conditions are favorable. Munyaradzi (2013) notes that to facilitate the process of knowledge translation, educators should apply appropriate teaching methods that best suit the specific objectives and level exit outcomes. Traditionally, teacher-directed teaching strategy with its different methods have been used for teaching and learning over learner-centered strategies.

Lecturers and educators need to have a sound understanding and knowledge of teaching and communication tools and strategies that enable them to develop individual learning methods such as discovery learning and social interactive activities to stimulate and enhance peer collaboration in the classrooms. Danladi (2006) explained education as a process of teaching and learning in which students acquire practical knowledge, values and skills for effective participation in society. He argued that the process of acquiring the relevant knowledge, attitudes, values and skills must be made as concrete as possible for easy learning. This implies that considering the perceptions of students on their learning environments as well as the teaching strategies used by the lecturers play a significant role in achieving meaningful and effective learning.

Based on literature review and the research findings obtained, the researcher made some recommendations in the conclusion to the stakeholders involved in the teaching and learning of accounting at Central University of Technology, Free State and how they can improve classroom environments to positively influence the academic performance of students. This investigation paved the way for further research on strategies that can be implemented to create sustainable constructivist classrooms and learning environments. The recommendations and suggestions advanced can be used as a basis for further research aimed at addressing the identified factors.

1.2 BACKGROUND TO THE STUDY

The national and global statistics about the drop out and course completion rates among first year students at universities referred to in this investigation do not specifically implicate accounting education among first year students in Higher Education institutions. However, it is important to note that the teaching and learning of accounting either as a main or complementary subject at university does not take place in a vacuum. It is located in a wider context of the learning environment and will therefore be affected by all the other variables such as students' perceptions of their learning environments, just like the other modules.

From a global research perspective, Hamilton and Hamilton (2006) lament the fact that while an increasing number of students enroll for studies in universities across the globe, a significant percentage of them do not stay for the second year. An investigation by Hamilton *et al.* (2006) revealed that 20% to 25% of first year students do not come back for the second year of their studies at university. In the same breath, Grayson and Grayson (2003) established that 20% to 30% of first year students drop out of university in the following year. Boute, Pancer, Pratt, Adams, Birnie-Lefcovitch, Polivy and Wintre (2007) later suggested that this high dropout rate can be attributed to hostile learning environments at the university and the adjustment problems experienced by students in the transition process.

From a general South African perspective, Makola (2016) notes that students enroll for a qualification at a university with the intention of successfully completing it within the

given record time. However, the completion rates among students are racially unbalanced and biased, with Statistian-General Lehohla in particular warning that black students will continue to drop out of the education system until there is adequate support structures to assist them (Raborife, 2017).

To this effect, he argues that the reality is that the South African university education system has a very high drop-out rate. Lehohla as reported by Raborife (2017) observed a downward trend on the course completion rates of black and coloured students and an upward one on the Indian, white and Asian students. This observation illuminates the earlier findings by the Council on Higher Education (2013) which revealed that the completion rates of white students has an average of 50%, higher than that of African students. Makola (2016) notes that this has necessitated the development and implementation of intervention programs by universities, whose effectiveness has not been well documented to date (Council on Higher Education, 2012)

Nationally, the re-registration of students at institutions of higher learning after the first year and their level of persistence in their studies tend to be very low. Seepe (2005) reveals that only one in five South African students who registered for a three-year qualification at a university in the year 2000 graduated in 2005. An alarming 50% of those students are drop outs who fell out of the Higher Education system, while only 16% of the students who registered in 2000 for the first time completed their degrees in 2005 and graduated in record time.

The classroom learning environment of students has a significant bearing on their persistence and course completion rates. As such, Makola (2016) notes that investigations which are aimed at developing and testing the perceptions of students and to provide some insights into the above statistics are of high significance to the higher education community. This view is endorsed by Pollard (2014) who argues that getting continuous feedback from students about their learning experiences in the classrooms add value to the education process. It encourages and promotes research among academic staff and improves both the learning experience and learning environment of students.

The above statistics need to be understood and evaluated in the context of some of the challenges faced by first year students. According to Naong, Zwane, Mogashoa and Fleischmann (2009) and Pieterse (2015), being at a university immediately after high school poses a number of challenges to students. Most of these students exit high school at the age of eighteen or nineteen years to enroll at institutions of Higher Education. Their enrolment at university usually implies that they have to go away from home, the security, comfort, care and familiarity of family life for most students. It also means leaving behind the support of familiar educators, friends and surroundings. This happens to be a very challenging time in their lives, which coincides with the change from late adolescents to young adulthood and taking more responsibility of one's destiny, future and career.

Consequently, students often experience a host of challenges in their first year of Higher Education. If these challenges and adjustment problems are not effectively and adequately dealt with, through a supportive teaching and learning environment, most first year students face the prospects of failing and dropping out of the system. At university level, lecturers can assist these students by establishing and finding out their learning styles and how they would prefer to be taught. This will reveal the kind of support they need from both the lecturers and the university to promote their learning. This call is also endorsed by Makola (2016) who asserts that research on learning styles and academic performances demonstrate the learning environments that complement the learning styles of students in promoting their academic success.

1.2.1 TRANSITION AND ADJUSTMENT PROBLEMS

Noting the significant differences and sharp contrasts between high school and university learning environments, it becomes important for all the stakeholders involved in university education to have a sound understanding of the adjustment problems and factors experienced by first year students. Among others, this understanding will contribute towards creating and enhancing a successful transition process for all first year students by giving them the necessary support to deal with these challenges.

Friedlander, Reid, Shupak and Cribbie (2007) contend that it has been widely acknowledged that adjustment during the first year of studies at university is a significant indicator of academic success. Yet this change and transition from the high school learning environment to the one in the universities is often a serious challenge for most first year students (Kariuki, 2006 and Lourens and Smit, 2003). Similarly, Millet (2015) argues that the transition from high school to university is a complex phenomenon on its own which requires students to adjust to new academic and social systems.

In this regard, Hodgson *et al.* (2010) observed that first year students in most universities across the world experience a number of adjustment problems in their new learning environments. From a South African perspective, this observation is supported by Naong *et al.* (2009) and Pieterse (2015) who concur that many first year students who enroll and register at universities in South Africa face numerous challenges in their studies such as not being fully prepared and equipped with life and study skills, they found tertiary education very challenging and stressful.

At high school, they receive constant support, supervision and motivation from their subject and class teachers and even parents (Millet 2015 and Naong *et al.* 2009). This creates a sense of stability, security and dependence among learners. Coming from such a supportive and nurturing academic and learning background, Naong *et al.* (2009) argue that human beings have a general tendency to experience emotional insecurity in new and unfamiliar environments. This also applies to first year students who would have just joined the university environment to become part of a bigger family. Wangeri, Kimani and Motweleli (2012), discovered that most of them find themselves in unfamiliar surroundings and new learning environments at university where they are forced to adjust to new teaching styles of different lecturers. The feeling of emotional insecurity cited by Naong *et al.* (2009) usually culminated in confusion, tension, anxiety and a sense of helplessness.

Wangeri *et al.* (2012) make reference to the fact that the academic, physical and social environment of the university is intimidating to most first year students. Research findings on challenges experienced by these first year students are unanimous that

such challenges include absent mindedness, homesickness, loneliness, a decline in academic performance, depression and increased interpersonal conflict (Millet 2015). In addition, Hodgson *et al.* (2010) maintained that first year students coming from rural backgrounds experienced challenges such as unfamiliar institutional culture, new learning environments and lecturers who speak in a second language using different accents and paces.

Diversity among first year students has also been established as an important variable which influences students' learning experiences and perceptions of the overall learning environment. According to Mudhovodzi, (2012), there has been a steady increase in the number of students attending university world-wide. This increase in the student population brings a high degree of diversity among students. To this effect, Rothman, Kelly-Woessner and Woessner (2011) allude that this diversity among students is manifested in different cultural backgrounds, skills and levels of cognitive development and identities. This diversity further complicates the transition process of students and their adjustment into new social and learning environments.

It is important to note that these challenges, including but not limited to teaching strategies that do not support and complement the learning styles of students and acknowledge their learning dependence background from high school fail to promote and support their learning (Naong *et al.* 2009). Understanding how first year students perceive their learning environments is therefore important towards creating and designing supportive learning environments which promote and encourage them to reach their full academic potential and to complete their studies in record time.

Additionally, investigations conducted by Bitzer (2003) and Bojuwoye (2002) into challenges and adjustment problems faced by first year students at South African universities cite poor quality of the learning environments in some university classrooms as one of the most prominent factors for first year students' failure and drop out. To assist first year students to overcome such a challenge, Makola (2016) calls upon universities to create and offer students a supportive learning environment and community which promotes their learning and academic success. Respectively, an investigation conducted by Swoope (1995) concluded that the increased retention of

students in American universities was a result of the students' satisfaction with the academic, learning and social environment within the university. Hence, it is imperative that lecturers consult the students to inform them of their choice of teaching strategies and obtain their perceptions about the learning environment.

The perceived learning environment has some important implications on the academic success of students in their studies (Fisher, 2008 and Genn, 2001). It affects both their motivation and academic success. The educational gains of intrinsic motivation on goal attainment and academic achievement has been well documented by Church, Elliot, and Gable (2001); Gibbs and Simpson (2004) and Gijbels and Dochy (2006). As such, Dahlin *et al.* (2010) postulate that the academic success of students is positively related to how they perceive their learning environment and experiences together with the support they get from both their lecturers and their classmates. Dopplet, *et al.* (2008) also earlier subscribed to this assumption by alluding that the attainment of academic outcomes is a product of the numerous elements of the learning environments in which teaching and learning take place and how these elements are perceived by students.

Most recently are the investigations of Radovan and Makovec (2015) which corroborate the claims that students' perceptions of their learning environment directly affect their motivation to learn, which in turn, predicts their ultimate academic success. Research findings demonstrate that the development of a student goal orientation approach to studies depends on how the students perceive certain characteristics of their learning environment (Church, *et al.* 2001). According to Nie and Lau (2010) and Urdan (2004), several elements of the teaching and learning process and the lecturer's overall approach to classroom activities which are related to a constructivist understanding of learning, affect the students' achievement of goal orientation behavior and self-regulation.

An investigation by Greene, Miller, Crowson, Duke and Akey (2004) which examined how the students' perceptions of their learning environment affected their motivation and goal setting revealed that the classroom climate and manner in which the teaching and learning process takes place play an important role in determining the students' motivation and their academic success. In another study, Lizzo, Willson and Simons

(2002) discovered that the student's perceptions of their learning environment can be a significant indication of study enjoyment, attainment of learning outcomes and course completion. A similar investigation by Radovan and Makovec (2015) produced compelling evidence which endorses the idea that the students' perceptions of their learning environment can positively influence motivation to learn and the students' overall satisfaction of the course.

In this investigation by Radovan and Makovec (2015), it was established that when students perceive in having a greater sense of control over their learning environment and the entire teaching and learning process, they are bound to set themselves intrinsic goals and demonstrate a sense of self-efficacy. It was also revealed that students become more intrinsically motivated when they perceive their learning environment to be promotive of their autonomy and self-direction (which is the personal development dimension) and when they find their education to be useful and relevant to their lives. The latter explains the inclusion of section A in the Constructivist Learning Environment Questionnaire which was used in this study. This section contains statements on the students' perceptions of learning about the world in their classrooms.

1.2.2 STRATEGIES TOWARDS CREATING AN ACADEMICALLY ENABLING LEARNING ENVIRONMENT

Based on their study findings, Radovan and Makovec (2015), recommend the use of teaching strategies that promote and increase student engagement while acknowledging and considering their individual learning needs and interests. To achieve this envisaged constructivist learning environment, emphasis should be put on teaching strategies that are founded on the basic principles of open dialogue, peer collaboration, authentic classroom activities and tasks and active construction of knowledge which is relevant and meaningful to the students. A cooperative learning approach has thus been found to be ideal towards the realization of such a learning environment. It provides for some level of lecturer-controlled didactic to achieve educational goals while empowering students to be in control of their learning at the same time.

However, it is important to note that the perceptions of students about their learning environments and their perceived quality of learning are multi-faceted concepts which are often a result of a number of complex factors. It is complicated by the fact that more than one variables operate concurrently to influence their learning experience and the outcome of teaching and learning. Thus the explanations to students' academic performance in any learning area has to be approached from different perspectives.

One of such factors is establishing how students perceive the teaching strategies used by their lecturers and how such strategies promote constructivist learning environments. The term teaching strategy refers to a combination of teaching methods and techniques used by educators to attain the desired outcomes of a learning program (Jacobs, Vakalisa and Gawe, 2012 and Visser and Vreken, 2013). Various teaching strategies have been adopted and used to create supportive learning environments, to achieve specific lesson objectives and broad educational goals and promote social and cognitive constructivism. Co-operative learning is one of such techniques that have gained recognition in the teaching and learning domain. The educational gains and implications of cooperative learning will be discussed briefly below.

Co-operative learning is an approach to teaching and learning which uses small heterogeneous groups for the purpose of mutual help in the mastery of a specific learning task. The underlying assumption of co-operative learning is that by working together in small groups of four to five students and by supporting and helping each other master the various aspects of specific tasks, students will be more motivated to learn, will learn more than if they were to work individually and forge stronger interpersonal relationships than they would by working individually (Du Plessis, Conley and Du Plessis, 2011; Jacobs *et al.* 2012 and Snowman and McCown, 2012).

Co-operative learning arrangements have been found to be far more superior in fostering constructivist learning environments and increasing motivation as opposed to competitive learning arrangements where students compete with each other to obtain the rewards made available for successful completion of classroom tasks (Johnson and Johnson, 2009a and Slavin 2009). Snowman and McCown (2012) note that in the vast majority of studies they have considered, forms of co-operative learning have proved to

be more effective than non-cooperative rewards structures at raising the levels of variables that contribute to motivation, raising achievement and producing positive social outcomes.

According to Ginsburg-Block, *et al.* (2008), an analysis of fifteen studies that measured the effect of co-operative learning as a teaching strategy on the motivational levels of elementary grade students found moderate to strong effects in eleven of the studies. The various features of co-operative learning, especially positive interdependence, are highly motivating because they stimulate and promote achievement oriented behavior such as regular class attendance, hard work, getting assistance from group friends, and acknowledging other group friends' efforts. Ginsburg-Block *et al.* (2008), point out that learning is seen as an obligation and a valued activity because the group's success is based on it and one's group friends will reward it.

While most of the reported effects of co-operative learning as a teaching strategy have been positive towards stimulating academic performance, Shachar and Fischer (2004) note that negative results have also occasionally appeared. In a case study of eleventh grade students whose chemistry classes used co-operative learning, a decline in learner motivation was reported. The researchers attributed this finding to students being dissatisfied with the learning pace because of an upcoming high-stakes test. Should this explanation be correct, it will be justifiable to say that the usefulness of a teaching strategy or technique will depend on the context in which it is used.

Gillies (2004) discovered that students in cooperative learning groups who worked on problem solving activities that required them to use all six cognitive processes represented in Bloom's taxonomy, scored significantly higher on a subsequent achievement test but received no training in the group interaction. In another separate study, Slavin (2009), it was found that the maths scores of middle and high school students were considerably higher when teachers used cooperative learning programs than when they used a textbook or computer based instruction.

A team of researchers, Veemans and Cesareni (2005) examined whether pairs of students trained to interact in a specified way would use the acquired skills more

frequently to solve maths problems than would student pairs not taught such skills. Although students who received training made significantly more high level, elaborative responses when asking for and giving assistance on the maths task than did students who were not trained, they did so less frequently than they had before the training. Researchers also found that students who had prior experience with co-operative learning scored higher on the maths task than students who had no prior co-operative learning.

It is in view of the identified unavoidable challenges that Naong *et al.* (2009) suggests that first year students require support during the transition phase. This view is also supported by Green (2004) who points out that the primary goal of universities should be to promote and improve the successful transition of students to higher education and promote their academic success. To this end, Naong *et al.* (2009) proposed training students in adopting new learning styles, interpersonal skills such as communication and group work. Ensuring that they perceive their new learning environment at university as conscious of their needs as first year students and academically enabling should therefore be the driver of all initiatives to address these challenges.

1.3 STATEMENT OF THE PROBLEM

The performance of first year students in accounting is not satisfactory as shown by the results. Based on the second semester results of 2016, the average class performance in Economics and Management Sciences Education Option: Accounting FET I (Accounting 1) assessment was 51% while it was 69% in Economics and Management Sciences Education Option: Business Management FET I (Business Management 1) and 67% in Economics and Management Sciences Education Option: Economics FET I (Economics 1). This is a very low class average as compared to the other two major subjects which form part of the programme. Furthermore, in the final end of year examination of 2016, there were 21 students who sat for the re-evaluation examination in Accounting 1, only three students in Economics 1 and none in Business Management 1. Nationally, this problem is highlighted in the statistics given by Raborife (2017); Seepe (2005); the National Council on Higher Education (2013) and the sentiments of

Makola (2016) about the course completion rates and drop-out rates of South African students in universities.

It is also important to point out that Economics and Management Sciences Education Option: Accounting FET I is compulsory at first year level and is one of the three major course requirements for all the Bachelor of Education degrees (FET): Specialization; Economic and Management Sciences at Central University of Technology, Free State. Thus this particular module is important to all the B.Ed. (EMS) students. This is a cause for concern and necessitated the researcher to undertake this study to investigate the perceptions of first year student teachers' perceptions of their constructivist classroom learning environment in Accounting and the implications for teacher educators.

1.4 AIMS OF THE STUDY

This study sought to achieve two broad overarching aims. Firstly, it was to assess the perceptions of Accounting 1 students about their teaching and learning environment experiences. Secondly, this study aimed at proposing or developing strategies to improve and enhance a positive constructivist learning environment.

1.5 RESEARCH QUESTIONS

The study sought to answer the following research questions:

1.5.1 Main Research Questions

The main research questions posed in this study are:

1. How do first year Accounting students perceive their classroom learning environments?
2. What are the implications of students' perceptions for teacher educators?

1.5.2 Sub Research Questions

From the main research questions posed above, the following sub research questions have been developed in this study:

1. What are the constructivist design features and principles that are being used by the lecturers to improve the teaching and learning environment of first year students?
2. To what extent are these constructivist ideas and principles implemented in the Accounting classroom?
3. Do these strategies assist the students in understanding Accounting 1?
4. How are students' perceptions of their learning environment connected to their academic performance and motivation to succeed?

1.6 RESEARCH OBJECTIVES

The following are the objectives of this study, which are aligned to the research questions presented above:

1. To establish and describe the perceptions of B.Ed. students about their classroom learning experience in Accounting.
2. To determine the implications of student perceptions for lecturers and teacher educators and how these perceptions are connected to the students' academic performance and their motivation to succeed.
3. To identify constructivist design features and principles that are used by the lecturers to improve the teaching and learning environment of first year students and find out if these constructivist ideas and principles are implemented in the accounting classroom.
4. To determine the extent to which constructivist ideas and principles are implemented in accounting classrooms.
5. To develop strategies which lecturers can use to promote active learning and improve the academic performance of first year accounting students at Central University of Technology, Free State.

1.7 RATIONALE FOR THE STUDY

The rationale for undertaking this study was to investigate and provide detailed descriptions of how first year accounting students at Central University of Technology,

Free State perceive their learning environment. Additionally, this study also sought to determine the implications of student perceptions for lecturers and teacher educators and how these perceptions are connected to the students' academic performance and their motivation to succeed.

In terms of the reality in the accounting classroom learning environment, as perceived by the students, the researcher wanted to identify constructivist design features and principles that lecturers can use to improve the teaching and learning environment of first year students. He also sought to determine if these constructivist ideas and principles are implemented in the accounting classroom. Lastly, the purpose of this study was also to identify the best strategies which lecturers can use to promote active learning and improve the academic performance of first year accounting students at Central University of Technology, Free State.

1.8 SIGNIFICANCE OF THE STUDY

Establishing the perceptions of first year students about their learning environment can provide lecturers and institutions of higher learning with some important insights into the institutional and pedagogical factors behind the low course completion and high failure rates among students as reported by the Council on Higher Education, (2010 and 2013); Makola (2016); Raborife (2017) and Seepe (2005). It will enable them to manipulate and modify institutional and pedagogical variables that affect how students perceive their learning environment and ultimate academic performance. It will empower lecturers with relevant supportive strategies which they can implement in their classrooms.

The primary beneficiaries of this study are the students and the lecturers. This study may enhance and improve the lecturers' understanding of the perceptions of first year B.Ed. students about their experiences and on learning accounting in a constructivist environment. Additionally, it may also enable the lecturers to establish and ascertain the views of these students on what happens in the accounting classrooms, their involvement in learning and what they think needs to be done to improve their learning. This benefit may contribute towards enabling them to employ the relevant teaching

strategies in the subject. Lecturers may be able to design their teaching and learning activities around a method and an approach that has the potential to get the best out of students while empowering them to be independent and self-regulated scholars. This may result in much more improved and positive results in accounting which have been quite elusive in most cases.

Such a contribution is also acknowledged by Principe (2005) who allude that the perceptions of students about their learning environment significantly affects their motivation in the course. In turn, motivation determines student effort and the ultimate academic performance. The existing theory and research on motivation suggests that intrinsic and extrinsic motivation of students function together with their sense of efficacy to influence engagement and change perceptions about the learning experience (Bandura, 1998 and Gillet, Vallerand and Lafreniere, 2012). It is not sufficient for students to be simply present in class for them to do well academically. They need to be more motivated towards teaching and learning. It is this desire to be in the classroom which is linked with high levels of academic attainment.

1.9 SCOPE OF THE STUDY

The scope of this study is the first year accounting B.Ed. students at Central University of Technology, Free State. It falls under the broad field of Educational Psychology and specifically under Curriculum Studies. This is because it involves an evaluation of the learning environment and experience as perceived by the students. It further deliberates on the kind of approach to teaching and learning that can be used to enhance and promote the academic success of students. It deals with subject didactics and pedagogy.

The target market of this research study are the stakeholders in accounting education at Central University of technology, Free State. While the names of people who participated in this study will be withheld and regarded as confidential due to the ethical considerations and protocols observed, the findings of this research shall be made known to all the students and the lecturers. It is anticipated that the research findings will be used to improve, revolutionize and modify future classes, to create supportive

and motivating learning environments and encourage students to be self-regulated. The findings will also be used to advise lecturers and universities on how to get the best results out of their students and improve pass and course completion rates.

The research findings may not be used for any other purpose other what it is intended for. For instance, the comments expressed by the students in the focus group interviews and the open-ended section of the questionnaire will not be used to criticize the lecturers or universities, but to revolutionize the learning environment to benefit everyone involved. Furthermore, the students will not be penalized in any way for any negative feedback about their learning experiences.

1.10 METHODOLOGICAL LIMITATIONS OF THE STUDY

As noted by Gay, Mills and Airasian (2011), a limitation in a research study refers to some aspect of the study which the researcher cannot control but believe may negatively affect the research findings. While sample size is not a substantial methodological limitation in qualitative research, it is important to note that Gay *et al.* (2011) believe that a less than ideal sample size as one of the most common limitations in most studies.

This study only reflects the views and perceptions of the 112 first year B.Ed. students about their learning experiences in the Accounting 1 classroom at Central University of Technology, Free State, Welkom Campus. Therefore, the study findings cannot be generalized to other faculties and departments within Central University of Technology, Free State and other universities in South Africa. Furthermore, the convenience sampling technique used by the researcher automatically left out some students outside the study population and sample which could have enriched the study findings. This concern is also raised by Creswell (2012); Johnson and Christensen (2014) and McMillan and Schumacher (2010). Nevertheless, the purpose of this study was not to generalize the study findings to other areas, but to accurately describe the perceptions of the Accounting 1 students about their teaching and learning experiences.

Thus, despite these methodological limitations, the contribution of the research findings in this study towards providing some significant insights into some of the pedagogical

and institutional issues that affect students in universities still remain largely undiminished. The findings provide some important information about the perceptions of students on their learning experiences and the educational implications of a paradigm shift within the domain of teaching strategies. The study findings still provide an indication of what students regard and view as key issues in promoting and supporting their learning. Thus the educational gains and contributions of this study are therefore still regarded as highly phenomenal, especially in the context of first year students who would have just enrolled at the university and require adequate academic support structures to succeed.

It is therefore recommended that future studies must be conducted on larger samples in universities across the country to confirm the relevance, applicability and replicability of the research findings reported in this study. These investigations also need to use multiple data collection instruments to corroborate and supplement each other.

1.11 SPECIAL ETHICAL CONSIDERATIONS

Of central concern to social research is issues of ethical considerations that the researcher needs to observe and uphold. Such ethical issues include privacy and confidentiality, informed consent, voluntary participation, minimization of risk to participants and the protection of vulnerable individuals (Babbie, 2013; Cohen, Manion, and Morrison, 2011; Crow, Wiles, Heath and Charles, 2006; Denzin and Lincoln, 2008; Fraenkel and Wallen, 2009; Lewis and Lindsay, 2000 and de Vos, Strydom, Fouché and Delpont, 2011).

Participation in the study was entirely voluntary and no financial benefits were accrued to any individuals as a result of their participation. The study participants were informed of their right to withdraw from the study without any penalties anytime they felt they could no longer carry on. Lastly, it was also deemed important to protect and promote the well-being of the students who participated in this study in every sense and possible way, including but not limited to privacy and confidentiality.

The upcoming section presents the operational definitions of the key concepts used in the study, which according to Thomas, Nelson and Silverman (2015), offer observable

phenomenon as opposed to a synonym definition. It is an observable phenomenon that allows the researcher to test empirically whether the predicted outcomes can be supported.

1.12 DEFINITION OF CONCEPTS

According to Thomas, *et al.* (2015), operationally defining certain terms is one of the important steps towards the successful implementation of a research project. This allows the researcher and the reader of the research report to evaluate the research findings adequately. Imenda and Muyangwa (2006), also support this by alluding that the researcher should ensure that any terms that are to be defined in the precise sense in which they are used are stated. Therefore, definitions made in this section are operational and convey observable behavior in different settings and contexts. These definitions have been derived from the literature that deals with the study phenomenon.

The contextual definitions and explanations provided in this section are for the following concepts; perceptions, learning environment and teaching strategies as they are used in the study.

1.12.1 Perception

The applicable meaning of perception in this study is the one offered by Pieterse (2015) and Zikmund (1997). Pieterse (2015) define it as the way individuals receive and interpret their experiences. On the other hand, Zikmund (1997) offers a more comprehensive explanation by defining it as enduring dispositions to consistently respond to various aspects of the world, person, event or objects in a given manner. It is used in this study to denote the views of ACT12ES students and what they think about their learning environment based on their personal experiences.

1.12.2 Learning Environment

The contextual meaning of learning environment as it is used in this study was derived from Arisoy (2007); Cleveland and Fisher (2014); Doppelt, *et al.* (2008) and Litmanen *et al.* (2014). It is used in this study to refer to the lecture halls and classrooms in which

the teaching and learning of Accounting takes place and the learning atmosphere in these venues.

Litmanen, *et al.* (2014), define learning environment as the physical setting of the classroom and its social norms, atmosphere and characteristics. Arisoy (2007) perceive it briefly as the social atmosphere in which learning takes place. Both Cleveland and Fisher (2014) and Doppelt, *et al.* (2008) are unanimous in that it refers to the physical activities in the classroom, the teaching strategies used in the teaching and learning process, the type of learning in which students are engaged and the assessment methods used to evaluate teaching and learning. They further argue that the term learning environment looks at the psychology, sociology and pedagogy of the various contexts in which teaching and learning take place and how these contexts affect the students' achievement in both the cognitive and effective domains.

It was also interchangeably used with the term **classroom learning environment**, which was defined by Rakici (2004) as the space or place where students and lectures interact with each other using a wide range of tools and information resources to pursue learning activities. Rakici (2004) assume that the quality of the classroom learning environment and the psycho-social interactions determines the students' perceptions and learning experience as well as their attainment of academic goals.

1.12.3. Constructivist Learning Environment

This is a student-centered learning environment which empowers students through the use of the underlying principles and assumptions of social constructivism in teaching and learning activities (Arisoy, 2007 and Rakici, 2004). This is the envisaged learning environment for the Accounting 1 students to be able to achieve academic success in their studies.

1.12.4 Teaching strategies

This refers to a combination of teaching methods and techniques that the educator uses in teaching (Jacobs *et al.* 2012 and Visser and Vreken, 2013). In the current study, it refers to the various methods which the lecturer uses to execute the Accounting lesson.

CHAPTER OUTLINE

Chapter Outline will summarize what all the other chapters will do. As such, this study comprises of the following chapters:

CHAPTER 1. OVERVIEW OF THE STUDY

This is an introductory chapter of the study which presents the background to the study, the statement of the research problem as identified from the background of the study. It then continues to address the aims, research questions, research objectives, purpose of the study and its significance. It also covers the scope of the study, its methodological limitations and the special ethical considerations that were considered.

CHAPTER 2. LITERATURE REVIEW

This chapter presents an analysis and synthesis of literature on learning environments and students' perceptions of learning environments. The theoretical and conceptual frameworks underlining the study are also discussed in this chapter. It also offers an explanation of the various elements in the learning environment and how they influence the students' perceptions of the learning environment.

CHAPTER 3. RESEARCH DESIGN AND METHODOLOGY

This chapter provides an explanation of the overall approach that was used to carry out the study and all the steps and processes followed from planning of the study, data collection and data analysis.

CHAPTER 4. PRESENTATION, ANALYSIS AND DISCUSSION OF DATA

In this chapter, the data collected is presented and the research findings are discussed in light of the literature review conducted.

CHAPTER 5. DISCUSSION OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

This is the last chapter of the study in which the researcher provides a summary of the research findings and makes conclusions. Based on the study findings discussed in

chapter 4 and the conclusions made thereafter, the researcher also makes some recommendations in this chapter on the various strategies that can be used to create and enhance supportive learning environments.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter deals with literature review on learning environments and students' perceptions of the learning environment and how these perceptions are influenced by the variables in the learning environments. The various components within each dimension of the learning environment are discussed and how they shape and influence the perceptions of students. It also looks at the nature and type of an approach to teaching and learning which can be used to create and enhance an ideal learning environment which can be positively perceived by students and promote their academic success. The theoretical frameworks that underlie this study are also discussed as well as their relevance and applicability to the study phenomenon.

Creswell (2006) and (2012) defines literature review as a written summary of journal articles, books and other documents that describe the past and current state of information on a particular topic while Lichtman (2013) summarises it as representation of what already exists about a specific topic. It is an account of what has been published on a specific topic by accredited scholars and researchers.

The upcoming section deliberates on the theoretical and conceptual frameworks of the study, in relation to the study phenomenon and the research questions and objectives.

2.2 CONCEPTUAL AND THEORETICAL FRAMEWORK

Before considering the theoretical and conceptual frameworks that have inspired this study, it is important to highlight the importance of theory and the various learning theories in relation to teaching and learning as argued by Van Wyk and Dos Reis (2016). A theory can be defined as a collection of related statements that describe, explain and illuminate a specific phenomenon, or some particular observations. Educators and lecturers need to prepare students in the classrooms by using a range of theories on the best effective and efficient ways to promote academic performance, noting that each theory provides a different perspective and approach to learning.

There appears to be an acceleration in the use of theories in education, for instance, to understand how students' perceptions of their learning environment affect their motivation and ultimate academic performance in the subject. Considering the importance of theory in educational practice, Reeves, Albert, Kuper and Hodges (2005) argue that the main reason why theories are popularly used is that they are quite phenomenal in creating and designing classroom environments that promote learning and academic performance. In this way, theories are perceived to improve the transferring of information from one setting to another because they provide lenses through which participants in the learning environment can view the challenges they encounter and provide empirical evidence to generate realistic and practical solutions. Thus theories help in solving complex phenomena through providing plausible explanations so as to predict their recurrence in future.

Van Wyk and Dos Reis (2016) further caution that the consideration of the various teaching and learning theories, ought to be guided and informed by the curriculum orientation to classroom instruction that is supported by the school curriculum policies in South Africa and globally. It is therefore imperative to refer to the relevant regulatory framework that is applicable to education when discussing these theories. For instance, reference can be made to the National Curriculum Statements (Grades R- 12) and the National Policy on the Minimum Requirements for Teacher Education Qualification (2011) in South Africa.

2.2.1 THE RATIONALE FOR DEVELOPING A CONCEPTUAL FRAMEWORK

According to Gray (2014), a conceptual framework describes all the key factors, constructs and variables in a research study and the assumed relationship between them in a narrative and sometimes graphical format. Similarly, Miles, Huberman and Saldana (2013), regard it as a series of intellectual "bins" that contain major and strategic events and behaviors about a study. Neil *et al.* (2014), note that the conceptual framework of a study refers to a group of ideas, concepts and theoretical views that provide an overarching structure and coherence to the research study.

Gray, (2014) claims that designing a conceptual framework compels the researcher to specify the study phenomenon, what will be omitted in the study as well as the hypothesized relationship between the study variables. Accordingly, Smith (2015), emphasize that the development of a conceptual representation of the research study is an important step towards the successful completion of the investigation. Developing a conceptual framework assists in clarifying the significant relationships, the need for supporting theory, the explanatory and intervening variables and lastly, the demonstration of causation (Smith 2015).

McMillian (2012) concurs that designing and creating a conceptual framework helps to establish a logical connection between theory, the research questions and methodology. By the same token, Miles *et al.* (2013) believe that a conceptual framework helps to establish a boundary of the research study and clarifies what is included and excluded in the study and the criteria for determining this inclusion/exclusion. These conceptual frameworks also guided the researcher, not only in formulating the research questions, but also in the literature of the analysis in review, selection of the research design and methodology and in the final analysis of collected data.

The development of a conceptual framework of this study was informed by the researcher's understanding of the assumptions and principles embedded in the socio-ecological model for the learning environment and a constructivist approach to teaching and learning.

The upcoming paragraphs focus on these theoretical frameworks within which this study is grounded.

2.2.2 THEORETICAL FRAMEWORK

Rakotsoana and Rakotsoana (2007) define theoretical framework as the conceptual underpinning of a research study which is either based on theory or a particular conceptual model. As such, theoretical framework deals with the significant underlying tenets, philosophies and assumptions within which a specific study has been developed, designed and grounded. The theoretical framework serves the purpose of

guiding the researcher in analyzing, explaining and interpreting data. This research study was based on two theoretical frameworks, which are, the socio-ecological view of the learning environment and the theory of social constructivism.

To enhance and promote a comprehensive understanding of the study phenomenon the theoretical assumptions of two approaches were blended and used to form the theoretical frameworks that informed and inspired this investigation. The socio-ecological approach (model) by Rudolf Moos (1968 and 1974) was adapted to illustrate the influence the environment has on academic achievement from the perspectives of the individuals who occupy it and how it affects their overall quality of life. The theory of social constructivism as pioneered by Lev Vygotsky was used to demonstrate how an ideal positive learning environment can be achieved and its educational gains. These major approaches were found to be very compatible with each other and applicable to this investigation. As such, combining them was deemed necessary to paint a clear picture of how the learning environment affects the perceptions of students and how they can be modified to support and promote academic success of students.

Rakotsoana and Rakotsoana (2007) further mention that theoretical framework shapes out the course of a research study, ranging from research questions posed in chapter one to research methodology. The theoretical perspectives and positions enshrined in the two theoretical frameworks used in this study make a phenomenal contribution to our understanding of the students' perceptions of the learning environment, how the learning environment influences those perceptions and of cooperative learning in Accounting. Correspondingly, the mixed research design adopted in this study was also informed by and compatible with the main assumptions and principles enshrined in these theoretical frameworks.

2.2.3 APPROACH USED TO DISCUSS THE THEORETICAL FRAMEWORK

In discussing the theoretical frameworks that underlie this study, the researcher used the revised deductive process approach as proposed by Smith (2015). The deductive approach was used because, as noted by Smith (2015), this is where theory provides the basis for testing of the empirical observations and is also the most prominent form of

positivist accounting research. The current investigation was conducted in a highly structured environment and also included the empirical testing of the socio-ecological model and a constructivist approach to teaching and learning. This is compatible with the deductive approach, whose reliability depends on the integrity of qualitative methods.

The upcoming section deliberates on the socio-ecological approach as a model which can contribute towards a comprehensive understanding of the learning environment and its relevance to the current study in terms of literature review and the phenomenon under investigation.

2.3 THE SOCIO- ECOLOGICAL APPROACH (MODEL) BY MOOS (1974)

Investigations covered in the literature reviewed by the researcher provide compelling evidence to suggest that the students' perceptions and understanding of their learning environment affect a number of cognitive variables and their ultimate academic results. In particular, Fraser and Killen (2003) discovered that the learning environment is consistently and significantly related to affective and cognitive outcomes of students. As earlier alluded to, the comprehensive understanding and interpretation of the classroom learning environment in this study is inspired and informed by the socio-ecological approach propounded by Moos (1974).

According to Arisoy (2007); Den Brok (2005); Lakhan and Ekundayo (2013); Radovan and Makovec (2015) and Rakici (2004) research into learning environments emerged from the work of Rudolf. H. Moos (1968 and 1974). Moos (1974) conceptualized the three main dimensions which define and differentiate the components of the learning environment. Although this model has been used in various fields such as the health and engineering sectors, it has been found to be very compatible with the current study which is rooted in education. This is because it offers some plausible and compelling explanations of the various components within the classroom learning environment which can influence the students' perceptions of the learning environment and experience. It also enables individuals outside the classrooms to understand the learning environment from the perspectives and perceptions of the students.

Arisoy (2007) and Rakici (2004) argue that Moos (1974) developed the socio-ecological approach to illustrate and demonstrate the influence the environment has from the perspectives of the individuals who occupy it and how it can be modified to improve the quality of life. Moos (1974) argued that the psychosocial environment has three central dimensions that focus on the majority of settings people find themselves in their daily lives. As such, Moos (1974) propounded that any environment has the relationship dimension, the personal development dimension and the systems maintenance and systems change dimension.

These three dimensions within any environment will now be discussed in detail and contextualized to the current study to help illuminate the classroom climate and learning experiences of students.

2.3.1 THE RELATIONSHIP DIMENSION

Lakhan and Ekundayo (2013) and Radovan and Makovec (2015) assert that the relationship dimension assesses and evaluates the degree to which the students are involved in the learning environment. It looks at the extent to which students assist and support each other to promote their education. Rakici (2004) simply note that the relationship dimension is concerned with the nature and type of interactions and relationships between the people who occupy a given environment. Radovan and Makovec (2015) further note that this dimension emphasizes the nature, quality and power of personal relations in any given context.

These relations can either be negative or positive, depending on the effect they have on both the students and the lecturer. In this study, the context is the teaching and learning of first year accounting in the classroom at Central University of Technology, Free State, Welkom Campus. Den Brok (2005) agrees with Lakhan and Ekundayo (2013) that the elements which Moos (1974) included in this category basically evaluate and examine the types and levels of personal relationships among the students in the classroom.

These elements include the levels of personal engagement, interaction, involvement, peer cohesion, mutual assistance, cooperation, lecture support, affiliation and expressiveness (Radovan and Makovec, 2015). Such variables are significant in

determining how the students will perceive the learning environment. They also influence the successful implementation of a constructivist approach to teaching and learning (cf.2.5.2 and cf.2.5.3) The relationship dimension was also evaluated in the current study by the questionnaire used under section “E”, which poses statements about learning to communicate and student negotiation. This dimension emphasizes the role of positive interactions and negotiations among all the participants and inhabitants of the learning environment. It is important to note that how students relate to each other and to the lecturer, and the nature of these relations between them form an important part of the social relations in the classroom.

It is assumed that the absence of adequate student involvement, peer cohesion, lecturer support, affiliation and expressiveness in the accounting lectures will naturally make the students perceive the learning environment negatively. A learning environment which lacks the elements included under the relationship dimension does not promote open dialogue between students which promotes active learning and sharing of ideas. It also deprives the students of the opportunity to develop interpersonal and communication skills which are important for their success academically and later in life. Such an environment also hinders an effective implementation of a constructivist approach to teaching and learning whose success and effectiveness depends on the presence of the above relationship dimension related variables in sufficient levels or amounts.

2.3.2 THE PERSONAL DEVELOPMENT DIMENSION

The personal development dimension evaluates and analyses the degree to which the learning environment creates and offers students opportunities to develop their self-esteem and self- enhancement. It covers all the aspects through which the learning environment encourages the growth, development and promotion of students Lakhan and Ekundayo (2013) suggest that at university, this dimension includes competition, academic success and task orientation. Rakici (2004) complement this by adding that under this dimension, self- discovery, anger, aggression and personal status are also important qualifiers.

Radovan and Makovec (2015) argue that the personal development dimension is expressed and reflected in the students' perceptions of autonomy, goal setting and demands in the classroom. Consequently, it is believed that the learning environment should promote the students' orientation towards teaching and learning tasks, enhance a competing atmosphere, encourage a spirit of academic research among students and self-regulated learning behavior. These student attributes are also enhanced and promoted by a constructivist approach to teaching and learning, which justifies its inclusion in the current study.

Although Moos (1974) argued that personal development varies according to the nature and type of environment under investigation, the autonomy, practical orientation and personal problem orientation variables remain of great significance to this study and enhance one's understanding of the learning environment from a personal growth perspective.

Lakhan and Ekundayo (2013) subscribe to an earlier view of autonomy by Allegrante, Hanson, Sleet and Marks (2010). They agree that autonomy assesses the degree to which students are encouraged to be independent and self-sufficient scholars. This view of autonomy is consistent with a constructivist approach to teaching and learning. It is also in harmony with the graduate attributes envisaged by the Central University of Technology, Free State and some of the educational imperatives of the National Curriculum Statement (Grades R- 12) and the Curriculum Assessment Policy Statement (2015). Moos (1974) identified the variable of autonomy under the personal development dimension to be particularly prevalent and important in universities.

Moos (1974) argued that if the learning environment stresses autonomy and independence, students are more likely to be rewarded for taking observable initiatives in their studies. On the contrary, learning environments which do not support and encourage student autonomy usually give no rewards and use negative reinforcement when students demonstrate behavior which is independent and autonomous. The educational implications and gains of operant conditioning on student behavior have been well documented by Skinner (1984) as noted by Snowman and McCown (2012).

The practical orientation of the personal development dimension looks at the degree to which the learning program prepares and orientates students towards training for employment, focusing on the future and working towards the achievement of concrete goals. (Den Brok, 2004). This is also consistent with the CUT graduates attributes and the educational goals and objectives pronounced in the National Curriculum Statement (Grades R- 12) and the Curriculum Assessment Policy Statement (2015). All schools and universities continuously strive to realize and achieve the practical orientation of the learning environment.

Arisoy (2007) and Lakhan and Ekundayo (2013) point out that the personal problem orientation element of the personal development dimension evaluates the extent to which students are encouraged to be conscious of their feelings and problems and make attempts to understand them. This is a very important element of the learning environment, especially in light of the complex and diverse nature of the various problems encountered by first year students in universities as identified by Bitzer (2003); Bojuwoye (2002); Makola (2016) and Pieterse (2015).

2.3.3 THE SYSTEMS MAINTENANCE AND SYSTEM CHANGE DIMENSION

The third dimension of the environment as propounded by Moos (1974) is the systems maintenance and system change dimension. This dimension encompasses components such as organization, order, clarity in expectations of both the students and the lecturer and control of the environment and physical comfort. Rakici (2004) further notes that it also includes innovation of the learning environment at the university and that student influence is a variable which is related to system change at universities.

Radovan and Makovec (2015) add that the system maintenance and system change dimension refers to the rules, the surveillance mechanisms and the ability and manner in which the system responds to changes. These changes can be in terms of learning needs and the overall approach to teaching and learning. It is reflected and shown in the differentiation of lessons, how clear the classroom rules and instructions are and how differences in terms of thinking are accepted in the classroom. This further affirms

the need to create classroom learning environments which embrace student diversity and always keep pace with their individual needs.

These dimensions are important in assessing the morale and treatment outcome on students in the classrooms and conditions under which they learn. This approach also offers a holistic explanation of the different and dynamic elements within the learning environment that shape and determine the learning experiences of students and their ultimate perceptions of that particular environment. Below is an illustration of the environmental dimensions enshrined in Moos's socio-ecological model of the learning environment.

2.3.4 CONCEPTUALISATION OF THE SOCIO-ECOLOGICAL MODEL IN LEARNING ENVIRONMENTS AS ENVISAGED BY THE RESEARCHER

Figure 2.1 on the next page shows the three dimensions within the learning environment and the various elements in each one of them. These specific variables play an important role on the overall academic development, progression, performance of the students and their perceptions of the learning environment. Therefore, they are of central concern to any academic institution and the staff who are directly involved in teaching and learning activities.

It is also important to note that teaching and learning does not take place in a vacuum but within the confines of specific learning environment. This environment has its own variables which directly influence the students' learning experiences and ultimately, their perceptions of that learning environment.

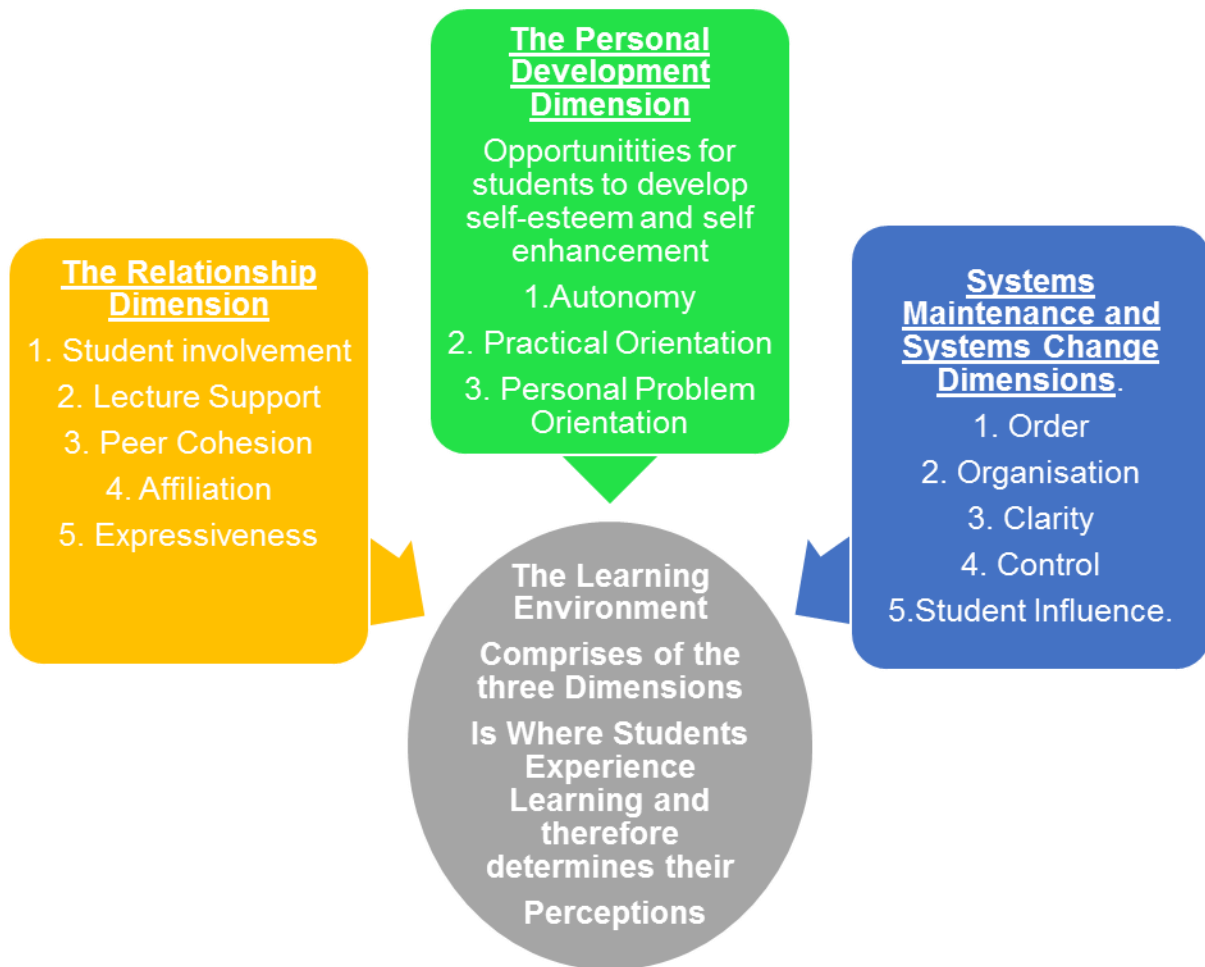


Figure 2.1 Conceptualization of the Socio-Ecological Model in Learning Environments as Envisaged by the Researcher

2.4 REVIEW OF LITERATURE ON THE EFFECTS OF STUDENTS' PERCEPTIONS OF THE LEARNING ENVIRONMENT ON ACADEMIC SUCCESS

A host of studies have been conducted on the learning environment and how it is related to the academic performance of the students who experience teaching and

learning within it. Among others, investigations by Bakhshialiabad, Bakhshi and Hassanshahi (2015); Dahlin *et al.* (2010); Nie *et al.* (2010); Radovan and Makovec (2015) and Urdan (2004) have produced substantial research and inquiry based evidence to suggest that there is a significant relationship between students' perceptions of the learning environment and the development of their cognitive and effective domains and their overall academic performance.

However, while the majority of these investigations contend that academic performance is correlated with the students' perceptions of the learning environment and context in which teaching and learning takes place, they did not report on the degree of this association. Hence, this leaves room for exaggerations and overstatements of the effects of students' perceptions of the learning environment on their academic success. Thus there is a need for more scientific studies to respond to such exaggerations and overstatements and fill the information gap within the study phenomenon.

2.4.1 PURPOSE SERVED BY KNOWLEDGE OF THE LEARNING ENVIRONMENT

The learning environment includes several elements such as social relationships, classroom interactions, general approach to learning activities and the physical attributes of the classroom that contribute to learning. It covers what is perceived or experienced by both the students and the lecturer and stands out to be a learning variable which can exacerbate or mitigate academic success of students (Abraham, Ramnarayan, Vinod and Torke, 2008 and Bakhshialiabad *et al.* 2015). It has been broadly defined as everything that transpires in the classroom, including the various physical locations, contexts and cultures in which students learn.

A comprehensive description of the learning environment should incorporate the culture within a class and its existing ethos, characteristics, student interactions, how the lecturer organizes the educational setting to facilitate teaching and learning, the type of learning in which students are engaged and the assessment methods used to evaluate teaching and learning (Doppelt, *et al.* 2008; Cleveland and Fisher, 2014 and Litmanen, *et al.* 2014). This term also looks at the psychology, sociology and pedagogy of the

various contexts in which teaching and learning take place and how these contexts affect the students' achievement in both the cognitive and effective domains.

Bakhashialiabad *et al.* (2015) corroborate Arisoy (2007) who contends that the nature of the learning environment and the psycho-social interactions in the classroom have a huge effect on the students' ability to learn and achieve their goals. Bakhashialiabad *et al.* (2015) provide a two sided view of the learning environment which includes the physical and psychological aspects to illuminate the implications on teaching and learning. They identify the physical domain of the learning environment which refers to variables such as facilities, spaces, ventilation, furniture, lighting, ventilation and all the other features which affect the safety and comfort of students and ultimately their learning experience and personal development. On the other hand, the psychological environment focuses on the quality of the classroom in terms of the social relationship among the stakeholders in the classroom. This is also referred to as the classroom social interactions and relationships.

Most researchers and educational psychologists who have explored the learning environment through the socio-ecological paradigm developed by Moos (1974) subscribe to the conclusion that the learning environment can be a powerful indicator of academic achievement of students and their attitudes (Arisoy, 2007; Brown, Williams and Lynch, 2011; Eccles and Wigfield, 2002; Myint and Goh 2001; Penlington, Joyce, Tudor and Thompson, 2012 and Pintrich and Schunk, 2002). The dominant view that emerged from investigations in chemistry, physics, biology and maths education corroborate that the students' perceptions of their learning environment is a major predictor of differences in learning outcomes more than factors related to the characteristics of students (Abraham, *et al.* 2008; Bakhashialiabad *et al.* 2015 and McLoughlin and Luca, 2004).

They have also unanimously agreed that the various components within the relationship, personal development and systems maintenance and change dimensions of the learning environment directly affect how students perceive that specific environment, their learning experience and ultimately their academic success. Bakhashialiabad, *et al.* (2015), Brown, *et al.* (2011) and Penlington, *et al.* (2012). In

this regard, specific reference must be made to Bakhshialiabad, *et al*, (2015) who hypothesized that the quality of the learning environment is indicative of the effectiveness of the education program.

2.4.2 EFFECTS OF STUDENTS' PERCEPTIONS OF THE LEARNING ENVIRONMENT ON ACADEMIC SUCCESS

2.4.2.1 POSITIVE PERCEPTIONS

Den Broks (2005) in particular, postulated that students tend to perform better and portray positive attitudes towards learning when they have positive perceptions of the learning environment. Bakhshialiabad, *et al*. (2015) confirmed the earlier sentiments of Myint and Goh (2001), that meaningful and successful learning is believed to be positively correlated to the students' perceptions of the learning environment, which determines what, how and why they learn. In light of the above research findings, Abraham, *et al*. (2008) and Rakici, (2004) caution that any attempts to improve the effectiveness of universities in meeting educational goals and objectives should not ignore the power of students' perceptions of the learning environment on academic success. In the same vein, Bakhshialiabad, *et al*. (2015), emphasize that measures to modify the learning environment should be based on students' perceptions of that environment.

2.4.2.2 ATTITUDE AND ACHIEVEMENT

According to Eccles and Wigfield (2002) and Rakici (2004), the classroom is the basic structural unit of any education system. This is because the classroom is the environment where learning takes place, where lecturers and students interact with each other and the curriculum. These interactions, as illustrated by the socio-ecological view of the learning environment, create a learning environment that effects both the attitudes and achievement of students. This was later endorsed by the findings of Arisoy (2007) and Bakhshialiabad, *et al*. (2015) which established several school and classroom factors to be significant determinants of student outcomes, including in situations where several other factors were controlled and manipulated. The quality of the learning environment has been reliably proved to be correlated to the academic

performance of students, their motivation and satisfaction and eventually, their learning experiences.

As noted by Penlington, Joyce, Tudor and Thompson (2012) studies into the phenomenon under investigation have connected the perceptions of students about their learning environment to their quality of learning. Students tend to learn much better and more efficiently when they have some positive perceptions of their learning environment. This claim is substantiated by Myint and Goh (2001) who discovered the existence of a positive relationship between the perceptions of the learning environment and attitudinal outcomes. Similarly, Kaplan, Middleton, Urdan, and Midgley, (2002) and Stipek, (2002) allude that research in educational psychology and the learning environment has highlighted the significant relationship between the learning environment of students and their motivation.

An investigation by Rakici, (2004) established that the students' attitudes towards teaching and learning activities were directly associated with their perceptions of the learning environment in the classrooms. Their positive attitude was also found to be linked with their perceptions of high teacher support in their learning tasks. It was revealed that where they perceived support from both the educator and the entire learning environment, they frequently used investigative methods in which they were equally and actively involved in the teaching and learning process.

For instance, Arisoy (2007) established that all the components of constructivist learning environment and motivational beliefs are positively linked to each other. Thus, a positive relationship between all the elements of a constructivist learning environment and those of students' attitudes was also found. This relationship can be used to justify the claims made by Pintrich and Schunk (2002) who advocated that learning environments which give students choice and control over their learning promote and facilitate intrinsic motivation. This kind of motivation has been consistently proved to be strongly connected to students' high levels of self-efficacy, intrinsic goal orientation and other dynamic aspects of motivation.

2.4.2.3 LECTURERS

The findings by Arisoy (2007) and Rakici, (2004) further affirm the need for the teaching and learning environments to offer students their classroom learning prerogatives such as autonomy, participation, involvement and individuality. The findings also point to the important role played by the lecturers towards enhancing a collaborative and academically stimulating learning environment. They further make it necessary for lecturers and educators to seriously consider the educational benefits of a constructivist approach to teaching and learning. Thus it is necessarily not enough to view the learning environment from a socio-ecological perspective, but there is a need to also look at it from a constructivist point of view in order to create a holistic overview of how it affects the perceptions of students and ultimately, their academic success. There are several features of a constructivist learning environment that can enhance student motivational beliefs and positive perceptions.

2.4.2.4 MOTIVATIONAL EFFECTS

A constructivist learning environment enhances the development of student motivation by giving students opportunities to develop autonomy, responsibility and optimal level challenge. Such attributes are centrally related to the personal relationship and personal development dimensions as argued by Moos (1974) which are important determinants of how students are likely to perceive their learning environment. The motivational effects of a constructivist learning environment which is student-centered give students control over their learning and empower them towards self-directed teaching and learning activities.

Students need to be motivated to learn intentionally in a self-regulated manner which promotes academic success and personal growth, and ultimately, the fulfillment of the practical orientation element which is identified under the personal development dimension. Thus their experiences in the learning environment, and their completion of the academic program in particular should lead them to career opportunities and accomplishment of other concrete goals.

Research evidence suggest that academic institutions and lecturers need to genuinely acknowledge the motivational aspects of the learning environments and how they approach teaching and learning activities. According to McLoughlin and Luca (2004), there is a very close link between students' ability to engage in deep and generative learning and efficacy beliefs about oneself and levels of motivation and confidence. The effects of motivation on academic achievement have also been widely researched and confirmed as an important requirement for effective teaching and learning.

Motivation can be broadly regarded as the selection, persistence, direction and intensity of human behavior. (Snowman, McCown and Biehler, 2009 and Snowman and McCown, 2012). It is the willingness of an individual to put and invest a certain amount of energy and effort to achieve a specific goal under a particular set of conditions and circumstances (Daniels, Kalkman and McCombs 2001). On the other hand, Tella (2007) define motivation as self-determination to succeed in any kind of activity an individual engages in. Such activities range from academic work, professional work to sporting activities.

The importance of motivation in all teaching and learning initiatives is best expressed by Al Othman and Shuqair (2013). In support of the above sentiments, they maintain that when students are motivated, they are enthusiastic and determined to work hard, focus on learning activities, are self-regulated, require little or no encouragement, confront challenges willingly and transfer that motivation to other students as well. This enhances collaborative learning, which is a significant element towards the realization of all the educational goals of teaching and learning.

Educational researchers such as Dörnyei and Ushioda (2009) argue that students can learn anything they wish to learn and master it perfectly with the necessary levels of motivation. They believe that motivation leads to favorable attitudes towards learning, which will enhance and promote academic success. A positive attitude towards teaching and learning results in dynamic or involved learning. Dynamic learning involves writing, brainstorming, reading and participation in problem-solving activities. These attributes can positively influence academic performance in all learning areas.

Motivation is the key to understanding human behavior because it explains why an individual avoids work while the other embraces work with all its challenges to successfully complete a task (Al Othman and Shuqair, 2013; Atta and Jamil, 2012; Christiana, 2009; Dörnyei and Ushioda, 2009 and Rehman and Haider 2013). Williams and Williams (2013) view motivation as the act and process of motivating, the condition of being motivating, a motivating force, a driver or stimulus that causes a person to act, behave and direct effort towards the accomplishment of a specific task. To highlight the role of motivation, Eccles and Wigfield (2002) argue that students have to regulate their behavior, predict its outcomes and respond to them when they engage in teaching and learning activities.

Students have been found to have either a positive or negative general pattern of motivation related beliefs which in the end, affect their academic performance. Students with a positive motivational perspective tend to demonstrate high self-efficacy, internal locus of control and develop mastery goals as opposed to performance goals (Christiana, 2009 and Rehman and Haider, 2013). This kind of motivation has been found to be significantly correlated with self-management strategies. This relationship is more important for low achieving students than for high achieving ones. Thus positive motivation orientation is essential for enhancing self-regulated and autonomous students, both of which are influential elements within the personal development dimension.

The satisfaction and accomplishments of students, both of which depend on the learning environment are regarded as important qualifiers of the quality of learning experiences and are also directly related to other various outcome variables. It is therefore imperative to emphasize and acknowledge the educational importance of learning environments that provide students with opportunities for active and participative learning. This recognition is also critical to the provision and delivery of high quality curriculum which is student-centered.

While the effect of gender on the students' perceptions was not considered in this study, it was confirmed by Arisoy (2007) and Den Brok (2005) to be a factor that consistently influenced the students' perceptions of the learning environment, irrespective of the

interest in the learning environment. Investigations by both Den Brok (2005) and Rakici (2004) revealed that girls rated their learning environment and the teacher's interpersonal behavior more favorably than their male counterparts. The girls who participated in an investigation by Arisoy (2007) showed positive perceptions that were superior to that of boys, but they were also more motivated to learn than the boys. These claims were later reinforced by Brown, Williams and Lynch (2011) whose findings demonstrated that female students indicated a more positive perception of the learning environment than their male counterparts.

It was also discovered that the students perceived the learning environment of male educators to be more cooperative than that of female educators. Male educators were rated as being stricter in the classrooms than female educators.

The following section looks at a practical approach to teaching and learning which can be used in learning environments to enhance and facilitate the presence of the different components in the classroom which are important determinants of students' perceptions and their academic performance. This is in line with three basic dimensions propagated by Moos (1974).

2.5 LEARNING THEORIES

Since this study also seeks to establish the extent to which the accounting classroom and learning environment is constructivist oriented, it is necessary to discuss learning theories which advocate constructivism. As such, below is a discussion of these theories and their underlying assumptions.

2.5.1 THE SOCIAL COGNITIVE THEORY

One of the most outstanding theories to learning is the Social Cognitive Theory (Social learning Theory) whose main proponent was Albert Bandura (1998, 2001 and 2002). Snowman and McCown (2012) assert that the main goal of Albert Bandura was to explain how learning results from the interactions among personal characteristics, behavioral patterns and the social environment such as interactions with other individuals.

According to Albert Bandura (1998 and 2001) people learn from each other through observation, imitation and modeling. The explanation of learning under the Social Cognitive Theory is based on the assumption that neither spontaneous behavior nor reinforcement is necessary for learning to take place. Observing or imitating a model can be used to learn new behaviors. This approach and explanation to learning includes elements of both operant conditioning and information processing and emphasizes how behavioral and personal factors interact with the social setting in which behavior occurs (Snowman and McCown, 2012). It emphasizes the key variables within the personal development dimension of the learning environment as described by Moos (1974 and 1976).

The Social Cognitive Theory is thus mentioned in the current study by virtue of its precepts which are compatible with the socio-ecological model and social constructivism theory. These theories emphasize learning in groups and the role played by students towards each other's learning and cognitive development. They further acknowledge the fact that students cannot learn successfully in isolation from each other, but rather need one another to effectively and meaningfully engage in teaching and learning activities. They highlight the significance of mutual collaboration among participants in a learning environment for learning to take place.

However, for the purpose of this study, the underlying theoretical framework is Lev Vygotsky's Sociocultural Theory of Cognitive Development which connects social interaction in classrooms to the cognitive capacities of students. Vygotsky was a contemporary of Piaget and had very different views about the main forces that shape learning and thinking, particularly considering the roles of culture, social interaction and formal instruction (Rowe and Wertsch, 2002).

The main theory that underlies co-operative learning is the social constructivism theory which was advanced by Lev Semyonovich Vygotsky (1896 – 1934). He argued that the roles of culture and society, language and interaction are important in understanding how humans learn. Thus, this study is grounded in the principles of Social constructivism. The first year accounting students will be expected to learn from each other and construct new knowledge and conclusions from their group interactions. It is

hoped that the students will be able to positively contribute towards the academic success and development of their counterparts through their interactions and engagements in the learning material during the Accounting lessons.

From a curriculum design perspective, Jacobs *et al.* (2012) point out that the South African school curriculum has been based on a constructivist theory since 1997. For instance, the adoption and advocacy of inclusive education implies that learner diversity in the classrooms should be embraced by all educators as an inherent variable and important characteristic in South African education. The constructivist theory was fundamentally based on Dewy's ideas which were later developed further by Piaget and Freire. Many recent curriculum specialists such as Bernstein (2000) and White (2005 and 1996) advocate constructivism.

Constructivists argue that once students have acquired effective learning skills such as group work, research and excursions, they can use these skills to learn everything they wish to learn. To achieve the desired outcomes, constructivists believe that students should be assessed continuously. The researcher is of the opinion that the development of the effective learning skills that the students need depend on the teaching strategies employed by the lectures in teaching the subject.

In the upcoming section, the researcher deliberates on the precepts of social constructivism and its educational implications to teaching and learning of accounting. It also looks at the compatibility of social constructivism with the socio-ecological approach, paying particular attention to the unique elements within each dimension in the learning environment and how they are likely to influence students' perceptions.

2.5.2 THE SOCIAL CONSTRUCTIVISM THEORY (SOCIOCULTURAL THEORY)

This theory has also been called the Sociocultural Theory because it emphasizes and maintains that how humans think is a function of both social and cultural forces. According to Creswell (2012) social constructivism has often been viewed as interpretivism. It is a world view in which individuals constantly seek to understand the world in which they live and work in. To get this understanding, they develop subjective meanings of their experiences which are negotiated socially and historically. This

assertion also provides enough grounds to recommend a phenomenological approach in such investigations, as with the current study.

Humans are a product of a culture that values and prizes the ability of its members to think at the most abstract level (Daniel and Bimbola, 2010). It stresses and highlights the role of social interaction, language and culture on the development of a child's mind (Creswell, 2012). Mayer (2004) argues that development is therefore considered to be a direct result of social interaction. It is thus assumed in the current study that through their daily interactions with each other in educational settings such as cooperative learning sessions, the students will be able to perceive their learning environment positively, better understand and master the complex subject content and ultimately achieve better marks in their assessments.

The researcher believes that the significant qualifiers of the learning environment included in the relationship and personal growth dimensions are best promoted and encouraged by a constructivist approach to teaching and learning. This view is also consistent with the claims by Church, *et al.* (2001); Greene *et al.* (2004); Lizzo, *et al.* (2002); Nie *et al.* (2010) and Urdan (2004). Radovan and Makovec (2015) in particular, recommended that constructivist teaching strategies can play a significant role towards creating the ideal and supportive learning environment perceived by the students. In a nutshell, it is perceived that through their daily interactions with each other in a constructivist educational setting the students will be able to establish positive relations, improve their interpersonal skills, understand better and master the complex subject content and ultimately achieve academic success.

It is also important to mention that the theory of social constructivism supports the provisions and approach to teaching and learning as stipulated in the National Curriculum Statement (Grades R- 12). To this effect, the Curriculum Assessment Policy Statement (2015) is pivotal to the advancement of the precepts of this theory and the realization of inclusive education and social cohesion in the constitutional dispensation. The implications and relevance of the NCS and CAPS document to the current study has been discussed comprehensively in the upcoming sections of this chapter.

Snowman, *et al.* (2009) maintain that while Piaget considered developing children to be industrious and self-motivated individuals who can explore, construct and test ideas with their experience on their own, Vygotsky believed that culture and language play a significant role in children's cognitive development. He also believed in the importance of psychological tools in cognitive development. McInerney (2005) notes that these are the cognitive devices and procedures through which humans communicate and explore the world around them.

Psychological tools include the concepts and symbols together with real tools that allow people to think, solve problems and function in a culture. These cognitive devices aid and transform mental functioning. Gredler and Shields (2004) mention that the most common examples of psychological tools are speech, writing, gestures, diagrams, chemical formulas, musical notation, rules and memory techniques. During their interactions with each other in the classrooms, students will make use of such psychological tools in handling their various tasks as allocated to them by the researcher. Such psychological tools are also perceived to play a significant role towards their better understanding of accounting and academic performance. For instance, the students' understanding of accounting principles such as the rule of double entry, realization and materiality concepts influence their ability to accurately handle, interpret and record transactions.

Shapiro (2002) adds that Vygotsky believed in internalization when dealing with learning in a cultural context. Internalization is the process through which students incorporate external, society based ideas into internal cognitive structures. Students show advancement and progress in cognitive development when they incorporate understanding into a new context. The students are expected to build on their Grade 12 subject knowledge and infuse the real-life based knowledge with the theoretical textbook concepts to enhance a superior understanding of the subject.

Of importance to the sociocultural theory of cognitive development is the concept of activity (Eggen and Kauchak, 2014). Vygotsky was convinced that children learn through active (involvement) interaction with more knowledgeable people whose cognitive development is well advanced. Children are introduced to a culture's major

psychological tools through social interactions with their parents and through formal interactions with their teachers in the classrooms. Vygotsky believed that children gain tremendously from the knowledge and conceptual tools passed down to them by those who are more intellectually advanced.

Thus children's' thinking is developed and stimulated when they interact with a more knowledgeable other, who can either be teachers, parents, or classmates. Through these interactions, such as the envisaged cooperative learning sessions in the current study, the students will be able to develop an understanding that they would not have been able to acquire on their own. Putting students of mixed academic ability means that there will be one or two students who are much more knowledgeable in Accounting and can therefore promote the academic development of their weaker counterparts in the groups.

It is important however, not to assume the educational benefits of putting students of mixed ability in one group in all cases. Lemmer, Meier and van Wyk, (2009) cautions that one of the most serious challenges of cooperative learning is the concern of variations in student's academic status such as entry level skills and knowledge, language proficiency, social status and friendship network. Lecturers therefore need to acknowledge and make provisions for such differences so as to reap maximum educational gains from cooperative learning.

However, as Tappan (2006) records, Vygotsky was convinced that for social interaction to be more effective in promoting development, the process of mediation must be present to them. Pea (2004) postulates that mediation occurs when a more knowledgeable person interprets a child's behavior and helps transform it into an internal and symbolic representation that bears and conveys a similar meaning to the child and other children. Well composed, organized and monitored cooperative learning groups with the educators at the background as a learning mediator can ensure that students benefit academically from their interactions and with each other. Makola (2016) recognizes the educational gains of such supplementary instruction towards the attainment of academic outcomes and student success.

Language is a prerequisite for social interaction to take place. According to the sociocultural theory, language plays three important roles in cognitive development. It gives learners access to knowledge others already have, it is a cognitive tool that people use to make sense of their experiences and lastly, language is a means for regulating and reflecting on one's own thinking, (Hung, 2002 and Shapiro, 2002). Thus the ability of the students to express themselves, ask and answer questions and meaningfully engage in the learning activities partly depends on their language skills and proficiency. Their understanding of transactions, instructions, related subject vocabulary and the general subject content also relies on their language skills.

Another important element of the sociocultural theory is private speech and self-regulation as observed by Gredler and Shields (2004). Private speech is a self-talk that guides thinking and action. According to Feitosa, Santos, Filho, Bezerra and Pederneiras (2013), Vygotsky believed that private speech provides children with a tool that they can use to assess and evaluate their thinking, assist with problem solving and control emotions and actions. These aspects are important for the attainment and realization of self-regulation. Ultimately, this concept will play an influential role towards the success and academic development of the students both individually and collectively in cooperative learning arrangements. The students' ability to engage in private speech means that they will be able to examine and reflect on their ideas before sharing them with others. This will improve the quality of ideas and debates generated as they will be based on careful thought and consideration. In the end, students will reap some substantial benefits that will be manifested in their academic performance in Accounting and positive perceptions of the learning environment.

Emerson and Miyake (2003) note that children who use private speech achieve more than their peers, enjoy learning more and learn complex tasks more effectively than those who do not. Friend and Pace (2011) point out that the absence of speech, which helps to monitor learning and complex thinking can cause learners to encounter and experience problems in their learning. It is maintained that through private speech, the students will be able to internally question and converse their answers before they can

share them with the rest of their group members. This will benefit all the group members in peer learning and tutoring.

Although children benefit a lot developmentally and cognitively from their interactions with a more knowledgeable other, not all forms of interaction are effective and productive. In this regard, Vygotsky compared well and purposefully structured instruction to a magnet. It is partially above what children know and can do at the present time, but it will elevate them and help them master things they cannot learn on their own. Thus the educator is still viewed as an essential component required for the success of learning activities in a social constructivist classroom. It is therefore clear that while social constructivism puts the students at the forefront of all their teaching and learning activities, lecturers are still required to guide, direct and manage the learning processes and activities. The use of a cooperative learning ensures that the lecturer or student instructor, the individual and collective students are all important role players in the teaching and learning environment of Accounting.

To illustrate the importance of the educator, the concept of Zone of Proximal development (ZPD) needs to be examined and brought to context. Tappan (2006) and Pea (2004) concur that this is the term that Vygotsky used to refer to the difference between what a student can learn on his own and what he can accomplish when given assistance by a knowledgeable person. The accounting lecturer or student instructor maintains an influential and stimulating role in making sure that students think and go beyond that which they already know or think they know. Since cooperative learning is also about student empowerment, the knowledgeable person needs to be creative to find ways to stimulate and challenge them to actively engage in the teaching and learning activities for their own benefit.

Vygotsky noted that students benefit most from interaction when working in their Zone of Proximal Development. ZPD includes the attitudes, abilities and patterns of thinking that are in the process of maturing and can only be refined with assistance (Newman and Holzman, 2013 and Tappan, 2006). Vygotsky argues that students with wider zones are more likely to experience greater cognitive (learning) development when instruction is designed to be just above the lower limit of their Zone of Proximal

Development than students with narrower zones (Eggen and Kauchak, 2014) Scaffolding is thus an important concept of constructivist learning environments and will be now discussed briefly below.

2.5.2.1 SCAFFOLDING

Scaffolding is a term used by Vygotsky (1978) to describe the teaching-learning process (Jacobs *et al.*2012). The socio-constructivist (sociocultural) concept of scaffolding by Vygotsky is of fundamental importance in South African education. According to this view, teachers should use scaffolding when they teach new skills to learners.

According to Hmelo-Silver, Duncan and Chinn (2007) and Sawyer (2006) instructional scaffolding is a learning process designed to promote deeper level learning. Sawyer, (2006) define scaffolding as the assistance and guidance given to learners that help them complete tasks they would not have been able to complete on their own. It also helps learners to answer difficult questions or solve complicated problems. The role of the educator is therefore to facilitate the learning process by giving learners hints or by asking them some leading questions. Teachers must support learning during its early stages. Teaching scaffolds are support structures teachers put in place to assist learners in accomplishing new tasks and concepts they cannot typically achieve independently Hmelo-Silver *et al.* (2007).

Lutz, Guthrie and Davis (2006), note that a learners' development is enhanced by their teachers' support. Development is impaired and compromised without this support. However, educators need to recognize and note that scaffolding provides only enough support to allow learners to progress on their own. As learners exhibit and demonstrate mastery over the content in question, the support and learning aids are reduced and eventually removed.

Scaffolding techniques that can assist students to reach the upper limit of their ZPD include modeling, and questioning, suggestions and cognitive structuring. The behavior of learners becomes more even, more internalized and more automatized as they approach the upper limit of their ZPD. It is at this point that the educator should withdraw any forms of assistance given to learners as it will be deemed disruptive.

Vygotsky propose that teacher directed strategies or techniques should be used in the early stages of teaching a new skill or concept to learners. Learners must get direct information and help from the teacher in the beginning. Gradually, as learners begin to understand the new concept or how to perform the new skill, the teacher should give less and less assistance until the learners eventually take over or learn to do the skill on their own. As soon as the learners start demonstrating some understanding of the task, skill or concept, the teacher should slowly switch to learner-centered teaching strategies (Jacobs *et al.*2012).

According to Azevedo and Hadwin (2005) the main benefit of using the scaffolding is that it provides a supportive learning environment. Learners are free to ask questions, provide feedback and support their peers in learning new material in a scaffolded learning environment. Educators who incorporate scaffold in the classroom become more of a mentor and facilitator of learning and knowledge construction rather than the dominant content expert.

Azevedo and Hadwin (2005) note that scaffolding provides incentives for students to take a more active role in their own learning. Learners share the collective responsibility of teaching and learning through scaffolds that demand them to go beyond their current skills and knowledge levels. Learners are then able to take control and ownership of the learning event.

Alibali (2006) provides a number of benefits that are associated with scaffolding. Among others, scaffolding challenges learners through deep and discovery learning, creates the opportunity for peer-teaching and learning, provides individualized instruction, especially in smaller classrooms, increases learners' chances and possibilities of meeting instructional objectives, motivates learners to become better learners by teaching them how to learn, provides learners with the opportunity to engage in meaningful and dynamic discussions in small and large classes and lastly, scaffolds can be recycled for other learning structures.

Since this theory of social constructivism informed this study, it is necessary to analyze its major principles and assumptions in relation to the current investigation and their

educational implications to the stakeholders involved. These will now be discussed below.

2.5.3. ASSUMPTIONS OF SOCIAL CONSTRUCTIVISM AND ITS RELEVANCE IN THE CURRENT STUDY

According to Taole (2015), social constructivism refers to the internalization of knowledge and skills developed during interaction with others. Co-operative learning provides a platform for such an exercise to happen. Taole (2015), further notes that the underlying assumption of constructivism is that knowledge is not imposed through external factors but rather, it is generated internally and constructed differently by individuals. It assumes that the process of learning and knowledge acquisition depends on a person's interaction with the outside world. The basis for constructivism is the incorporation of student activities in the teaching and learning process. Constructivists believe that students are able to create meaning and construct knowledge from a given situation through performing different activities which make them covertly involved in the analysis, interpretation and evaluation of experiences.

As such, van Wyk and Dos Reis (2016) assert that constructivism views the process of teaching and learning as a shared experience and responsibility. At the center of constructivism is the democratic context where the elements of the teaching and learning process are negotiated continually and continuously. Furthermore, the students are actively involved in a learning environment as a result of the student-centered methods used which facilitate problem solving abilities of students, improve their perception of the learning environment and promote academic success.

Constructivism, is an umbrella term which covers several views of learning that share common claims, (Loyens, Magda and Rikers, 2008 and Tobias and Duffy, 2009). There are four identifiable key assumptions regarding the constructivist frame, which are prior knowledge, multiple perspectives, self- regulation and authentic learning (Loyens *et al*, 2008). To mention a few, the multiple perspectives, self-regulation and authentic elements of the constructivist approach to teaching and learning provide for the

realization of the determinants of the relationship and personal development or growth dimensions of the environment that were pioneered by Moos (1974).

A constructivist approach to teaching and learning helps students to internalize and reshape or transform new information. The underlying assumption of the constructivist theory is that students should be helped to construct knowledge that is meaningful and useful in their own lives. This assumption is also one of the broad educational goals and purposes which the National Curriculum Statement Grades R – 12 (2015), purport to achieve. It is also echoed in Vygotsky's sociocultural theory of cognitive development, which emphasized the roles of culture, social interaction and formal instruction in learning and cognitive development (Rowe and Wertsch, 2002).

Accordingly, how students learn is more important than what they learn. Killen, (2016) argue that this is because their learning experiences will directly influence their motivation and their future learning strategies. The skills that the students learn are more important than the content they learn. Thus student empowerment is a central concept when dealing with social constructivism in the classrooms. Consequently, all teaching and learning activities must be consciously designed with a view to empower the students.

Constructivism holds that meaningful learning occurs when people actively try to make sense of the world and when they construct and interpret reality by filtering new ideas and experiences through existing knowledge structures (Visser and Vreken, 2013). Meaningful learning is the creation of knowledge structures such as concepts, rules, hypotheses and associations from personal experiences (Snowman and McCown, 2012). This assumption is further validated and reinforced by Taole (2015), adding that with constructivism, knowledge is not imposed by external factors but is rather generated internally and constructed by individuals. It assumes that the process of learning and knowledge acquisition depend on a person's interaction with the outside world and that students' activities provide the basis for constructivism. Thus the teaching and learning activities to be given to the students in the classroom and during the supplementary instruction sessions are pivotal to constructivism.

Constructivists view students as active agents in the construction of knowledge (Rikers, van Gog and Paas (2008). Meaningful learning is therefore the creation of knowledge structures from personal experience. Each student builds a personal view of the world by using existing knowledge, interests, attitudes and goals to select and interpret the information he or she encounters (Koohang, Kohun and DeLorenzo, 2009). This assumption highlights the importance of what educational psychologists call prior knowledge, which is the previously learned knowledge and skills that students bring to the classroom (Ozuru, Dempsey and McNamara, 2009).

Taole (2015), explain that constructivism is also based on the precept that social interaction and the negotiation of understanding with others can assist students to construct knowledge. Lemmer, *et al.* (2009) concur with Ozuru *et al.* (2009) that one person's knowledge can never be identical to another person's, because knowledge is the result of personal interpretation of experience which is influenced by factors such as the student's age, gender, race, ethnic background and knowledge base.

Thus the students will be given the opportunity to gain a perspective different from their own when they interact with each other in the classroom and in their respective cooperative learning groups. The additions to, deletions from and modification of the individual's knowledge structures results from the sharing of multiple perspectives (Azevedo, Witherspoon, Chauncey, Burkett and Fike (2009). This implies that lecturers need to create opportunities for students to learn from each other in groups by promoting group work, group discussions, class debates and other forms of cooperative learning.

As noted by Daniel and Bimbola (2010), constructivists regard students not as passive recipients of new information, but as active agents who use their prior knowledge and experiences to engage their environments and to build new knowledge structures. This is also consistent with Piaget's concepts of assimilation and accommodation. Self-regulation allows students to be in control of their learning, to function as agents of their own learning rather than objects of instruction (Visser and Vreken 2013).

The lesson that has been learnt from these assumptions by lecturers is the educational importance and relevance of student empowerment. They should always try to instill and promote a spirit of self-regulation among the students by making them control their learning. They should teach and encourage students to be independent and self-motivated towards achieving educational goals and objectives. The students need to acquire skills and competencies from each other that can make them better individual students who will be able to positively view the learning environment as supportive and achieve academic success.

Lastly, the constructivist approach to teaching and learning draws from the assumption that authentic problems provide realistic authentic contexts that contribute to the construction and transfer of knowledge (Eggen and Kauchak 2014). When students encounter realistic problems, they are able to use what they already know about the problem situation (Driscoll, 2005). By allowing students to engage their prior knowledge, authentic tasks often provide opportunities for students to work collaboratively, thereby providing opportunities for social interaction and negotiation of meaning through multiple perspectives.

In light of the above, the lecturers need to use real-life and practical problems to challenge the cognitive abilities of their students while giving them the opportunity to use their prior and existing knowledge to solve the problem. Tasks and evaluations must be difficult and challenging, but within the confines of what students already know. For instance, where applicable, reference should always be made to current and topical issues such as fraud, crime, poverty, inflation and politics. Lecturers need to give students practical examples when teaching topics such as depreciation, ethics and internal control. This allows the students to see the connection between what they learn in the classrooms and the reality in their lives outside the classrooms.

The cooperative learning as a teaching strategy that falls within the constructivist approach to teaching and learning that has been used in various proportions in the classrooms are discussions, scaffolding, role play and experiments. Now that a social constructivist approach to teaching and learning has been dealt with in terms of how it promotes a learning environment which support the academic success of students, it is

important to contextualize it and bring it to the current study to examine its suitability and applicability in the teaching and learning of Accounting 1 students at Central University of Technology, Free State, Welkom Campus.

2.5.4 CONCEPTUALISATION OF CONSTRUCTIVIST LEARNING ENVIRONMENTS AS ENVISAGED BY THE RESEARCHER

Based on the literature review conducted in this study, cooperative learning has been identified as a constructivist approach to teaching and learning that can enhance and promote all the various elements of the three dimensions of the socio-ecological model within the learning environment (Radovan and Makovec 2015).

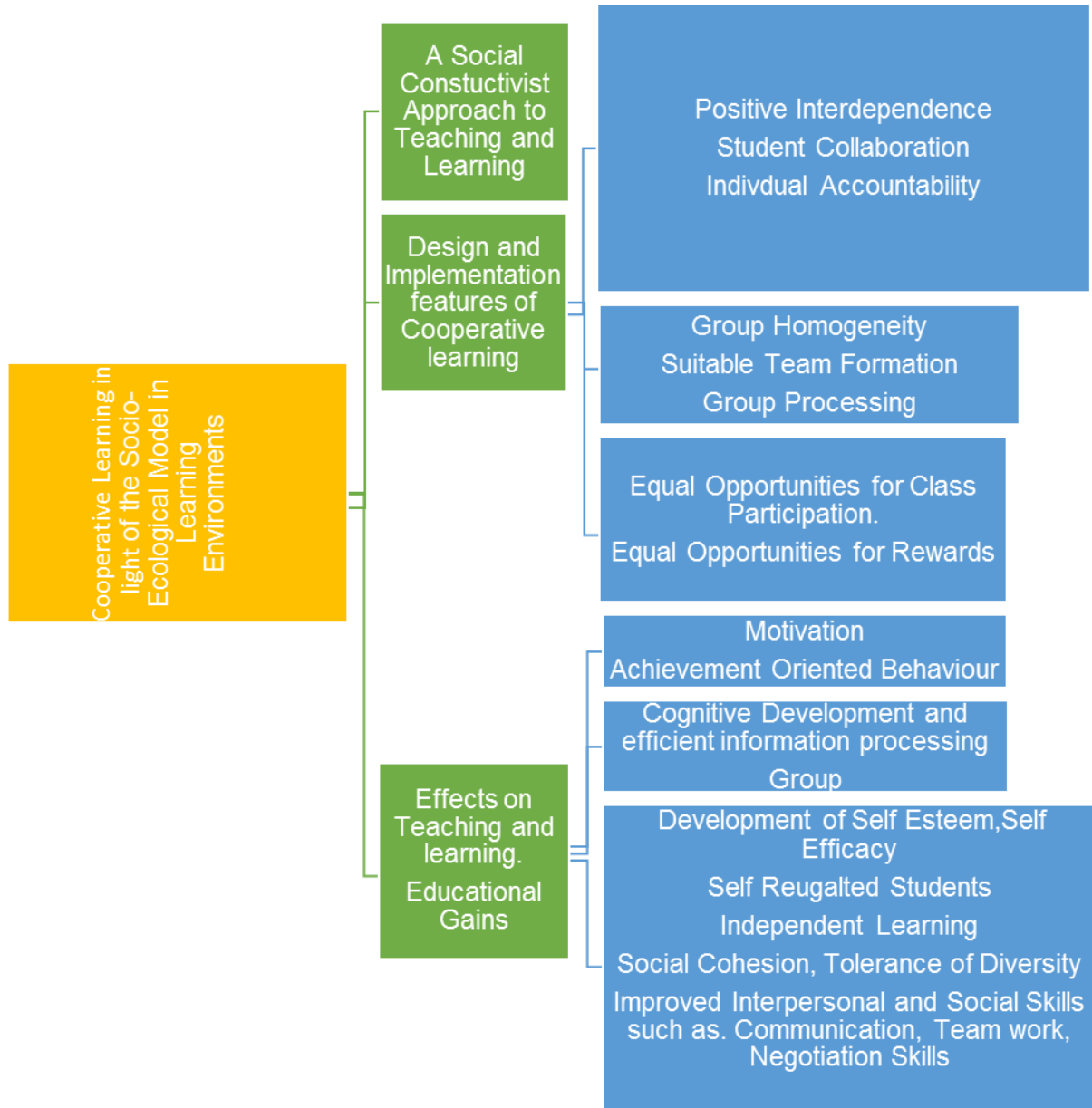


Figure 2.2 Conceptualization of Constructivist Learning Environments as Envisaged by the Researcher

2.5.5 CONCEPTUAL FRAMEWORK OF THE STUDY

Figures 2.1 and 2.2 presented above demonstrate the diagrammatical presentation of the main concepts and assumptions of the current investigation in terms of the theoretical approaches used. This presentation also shows the relevance of the two approaches to the learning environments as perceived by students and the envisaged educational gains and implications of a constructivist approach such as cooperative learning to teaching and learning.

The socio-ecological view of the learning environment is in harmony with the theory of social constructivism with regards to the nature and approach of this study. The socio-ecological model has been used to illustrate and illuminate how the three significant dimensions within the learning environment influence the students' perceptions of the learning environment and their experience. Of central concern therefore, to this model is explaining how the environmental variables and processes within the relationship, the personal development and systems maintenance and changes dimensions interact to create a specific learning environment for the students and ultimately affect their learning experiences and perceptions.

Given the educational gains of a constructivist approach (cf.2.5.2; cf.2.5.3 and cf.2.7) to classroom instruction, it is quite recommendable and predictable that the envisaged ideal learning environment which students perceive as supportive and conducive for effective teaching and learning can be best achieved through the implementation of teaching strategies such as cooperative learning. A constructivist approach to teaching and learning also helps to enhance the positive variables or elements of the socio-ecological model. This sentiment is also sustained by the work of Radovan and Makovec (2015) who recommended the use of social constructivist strategies in the classrooms to create favorable learning environments. These strategies are important in enhancing the specific elements within the three main dimensions as propounded by Moos (1974).

By combining the fundamental assumptions of both the socio-ecological view of the learning environment and those for a constructivist approach to classroom instruction, it

is assumed that the students will perceive their learning environment as best for promoting their academic success. These two have also been combined because they complement each other and make a significant contribution towards one's understanding of students' perceptions of learning environments and the kind of support they require both at institutional and classroom level.

The assumptions embodied in these theories also promote the realization of the Central University of Technology Graduates Attributes, which students need to demonstrate upon completion of their various courses and modules. They also play a pivotal role towards the attainment of the educational goals enshrined in the National Curriculum Statements (Grades R- 12) and the Accounting CAPS document. These secondary school documents lay the foundation for the students into tertiary institutions. As such, the realization of their provisions, goals and objectives can easily be an indicator of success for the first year students and their ability to cope in the hostile learning environments at the universities.

The Perceived Ways through which Cooperative Learning Improves Learning

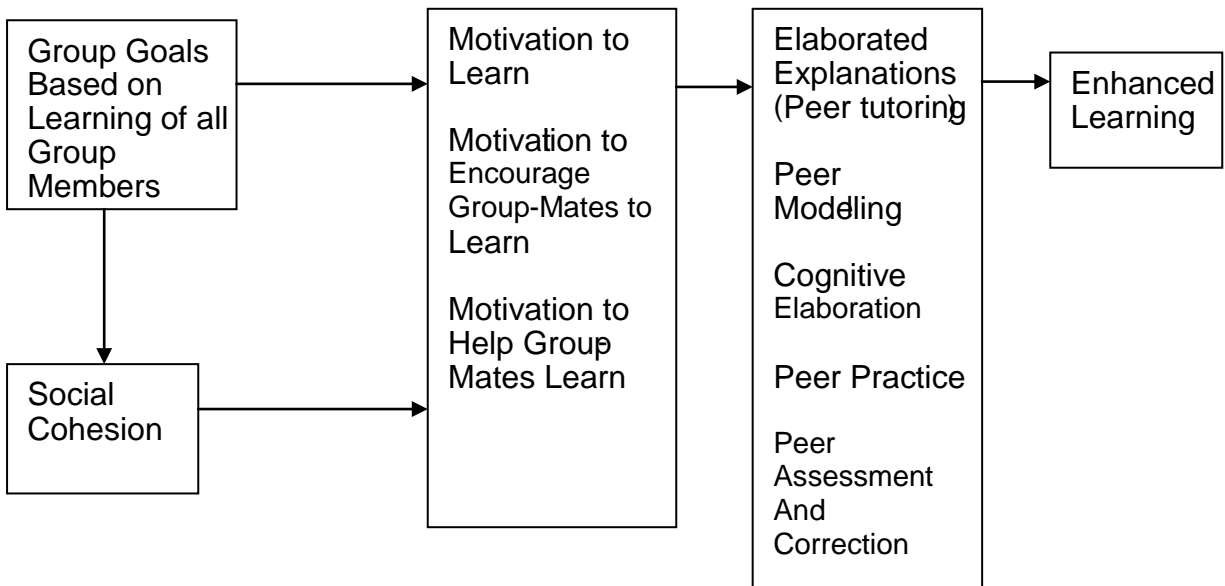


Figure 2.3 The Perceived Way through which Cooperative Learning Improves Learning. Source: Slavin, (2009)

Figure 2.3 above shows a flow diagram on the perceived educational implications of cooperative learning by Slavin (2009) and how it can potentially benefit students. This flow diagram should be understood and interpreted in conjunction with **Figure 2.2** which shows the researcher's conceptualization of constructivist learning environments. It is also important to highlight that cooperative learning, as one of the strategies that can be used by lecturers and educators to promote and enhance constructivist learning environments is regarded by the researcher as being in harmony with the key assumptions of the socio-ecological view of the learning environment as propagated by Moos, (1974 and 1976).

For instance, some of the qualifiers in the three domains of the learning environment, such as, the relationship domain, represented above by social cohesion and the personal development domain, manifested in the peer modelling and improved motivation to learn, provide grounds on which arguments in favor of cooperative learning can be based.

2.5.6 JUSTIFICATION FOR THE THEORY OF SOCIAL CONSTRUCTIVISM

Out of the different approaches and theories to learning and teaching, the researcher chose to use Vygotsky's Sociocultural Theory of Cognitive Development. The main reason is that this theory offers a compelling explanation of learning. It provides a holistic and comprehensive explanation of learning. More still, the main ideas and principles of this theory overlap with those found in the socio-ecological perspective of the learning environment.

Some of the most prominent concepts and principles that are identifiable in the sociocultural theory of cognitive development are, operant conditioning by Skinner, Constructivism by Piaget, Self-Regulation and Self- Efficacy by Bandura, Discovery learning by Bruner, Cooperative learning- social approach and Mediated Learning. The educational implications of Vygotsky's socio-cultural theory cannot be ignored given the problems and challenges faced by first year students in universities.

The terms social constructivism and cooperative learning are at the center of this study. Therefore, the literature review that was done emphasizes much regarding them in

terms of their educational implications and effects on the academic performance of learners across a host of learning areas and how they perceive their learning environment.

In the proceeding paragraphs, the researcher provides a close examination of the applicable legislation and framework that guide and inform initial teacher training and development programs or qualifications in South Africa and at Central University of Technology, Free State. Effort has also been made to illustrate and illuminate the consistency and harmony between them and social constructivism, especially in light of its assumptions explained earlier and cooperative learning.

2.6. THE FRAMEWORK FOR TEACHER TRAINING AND DEVELOPMENT IN SOUTH AFRICA

The Bachelor of Education (B.Ed.) degree is a qualification which offers students entry into the teaching profession upon its successful completion. It has been designed to equip graduates with relevant subject knowledge, educational theory and methodological expertise. A balanced mixture of constructivism and other approaches to teaching and learning can be used to ensure that the students meet and demonstrate the minimum requirements set out in the National Policy on the Minimum Requirements for Teacher Education Qualification (MRTEQ) (Department of Education and Training, 2011). At CUT, such an approach can aid towards the realization of CUT graduate attributes.

For instance, the policy requires all Senior Phase and FET educators to be skilled in identifying and addressing learning barriers in their subjects. They must also be knowledgeable on curriculum differentiation for different learning levels within a grade (Department of Education and Training, 2011). Some of these skills and attributes are not learned and obtained directly from the formal prescribed curriculum of the B.Ed. qualification but from their personal teaching and learning experiences during exposure to the course curriculum in the classroom. These are included in what Zakaria, Solfitri, Daud, and Abidin, (2013) referred to as substantial benefits reaped by students from a paradigm shift from teacher-centered to learner-centered classroom environments.

As outlined in the MRTEQ (Government Gazette, 15 July 2011. No 34467), the Department of Higher Education and Training (2011) requires all educational programs for initial teacher training and development to address all the critical challenges currently experienced in South Africa. To this effect, special attention needs to be placed on poor content and conceptual knowledge among educators as well as the legacies of apartheid. The Department of Higher Education and Training (2011) suggest that this can be achieved through incorporating situational and contextual variables that help educators to develop competencies that make it possible for them to deal with transformation and diversity. Co-operative learning is regarded as a viable means to this effect.

Exposing student teachers to constructivist learning environments and giving them personal experiences of cooperative learning during their educational training and development can play a pivotal role towards achieving this objective. The use and implementation of cooperative learning strategies when presenting lessons to students can benefit them through exposure to inclusive education and diversity. The MRTEQ also emphasizes the various type of knowledge that should underlie teaching practice and the importance of integrated and applied learning. Above all, it stresses what student teachers should learn and how it is to be learnt. This notion is consistent with the assumptions of constructivism noted by Rowe and Wertsch (2002) which values and emphasizes how learning takes place.

The need for incorporating constructivism in initial teacher training and development programs has also been necessitated and strengthened by the sentiments of Nel *et al.* (2012) who foresaw it as an idealist initiative in all South African Schools. There appears to be an acceleration in the need for cooperative learning arrangements and the expectation among educators to use teaching strategies that empower learners and achieve various educational outcomes such as social cohesion and citizenship. Thus educators need to be exposed to such teaching and learning environments during their initial teacher training so that they become competent in them and get appropriate experience before they become qualified and join teaching practice. Once they are in

practice, it is expected that they will make a difference in the lives of the learners they will be teaching and the communities they will be serving.

Moreover, the MRTEQ (Department of Education and Training, 2011) highlights the need for teacher training and development programs to expose student teachers to active and meaningful learning which embraces contextual factors and personal experiences. Such is an overarching philosophy of constructivism as maintained by Snowman and McCown, 2012; Taole, (2015) and Visser and Vreken, (2013) . Therefore, teaching the students in constructivist learning environments can be viewed as viable alternative to give them such exposure and opportunities.

In addition, the Department of Higher Education and Training (2011) also identifies five main types of learning which student teachers must experience to support the acquisition, integration and application of knowledge for teaching purposes. These are, disciplinary learning, pedagogical learning, practical learning, fundamental learning and situational learning.

All these types of learning are important towards making student teachers competent and successful in their career and professional lives. While they are mostly subject, technical and discipline related types of learning, pedagogical and situational learning are particularly embodied in constructivism. Pedagogical learning includes the educators' knowledge of instructional and assessment methods and knowledge on how to create appropriate learning opportunities for diverse learners in their classrooms. This kind of learning also includes inclusive education, which according to the MRTEQ (Department of Education and Training, 2011) is an essential element of both pedagogical knowledge and specialized pedagogical content knowledge. Such learning can be best achieved through constructivist teaching methods such as cooperative learning, as argued by Li and Lam (2005).

A constructivist approach to teaching and learning will not only empower student teachers, but it will also give them practical experience on how to design their instruction to cater for learner diversity and create the kind of learners envisaged by the

Department of Education as outlined in the national Curriculum Statements (Grades R – 12).

Situational learning is defined by the MRTEQ (Department of Education and Training, 2011) as knowledge of different learning situations, contexts and environment in education. Included in this type of learning is the understanding of the nature of South African society and learning to work in various contexts with different challenges. Looking at the nature and type of this aspect of learning, the use and inclusion of a constructivist approach to teaching and learning is highly recommendable. It is worth mentioning that the specific contextual, problem solving and design features of cooperative learning and constructivism in varied and contrasting contexts will benefit students substantially towards ensuring that they learn and retain such prescribed knowledge and competencies.

2.7 THE APPLICABILITY OF THE SOCIAL CONSTRUCTIVISM APPROACH TO TEACHING AND LEARNING OF ACCOUNTING AT FIRST YEAR LEVEL

As discovered and observed by Bitzer (2003); Bojuwoye (2002); Makola (2016) and Pieterse (2015); and the transition of students from grade 12 to first year at university is usually characterized by a number of challenges, that range from deficiencies in pedagogical support to social and financial constraints. Therefore, the best form of support they can have at first year level is an academically supportive, friendly and participative learning environment which promotes their academic success and progression to second year level. This points to a constructivist approach to classroom instruction.

According to Ramsook and Thomas (2016), the central principle in the constructivist approach is that students can only make sense of new situations in terms of their existing understanding, and that learning involves an active process in which students construct meaning by linking new ideas with their existing knowledge (Naylor and Keogh, 1999, cited by Ramsook and Thomas, 2016). Murphy (1997), cited by Kovacs (2014) has, inter alia, this to say about constructivism: “Collaboration and experience are encouraged to construct knowledge; problem-solving, deep and high-order thinking

are emphasized; errors represent a learning opportunity”. This justifies constructivism as a paradigm in the study. What is important in constructivist learning is how the individual derives meaning from knowledge rather than merely adopting it (Beyhan and Koksai, 2013). To this end, the constructivist theory posits the view that students assimilate and accommodate new knowledge in their existing schema, and thus information is always reviewed and reconstructed in new ways (Tobias and Duffy, 2009, cited by Ramsook and Thomas, 2016). Piaget’s constructivist approach is relevant to the study to the extent that it recognizes the key role played by prior learning in the construction of knowledge.

The Social constructivist approach also encourages “learning by doing” (Ramsook and Thomas, 2016:129) or hands-on learning (Hannah, 2013), and this is compatible with first year accounting. It emphasises the collaborative nature of learning as well as the role of the cultural and social environment (Ramsook and Thomas, 2016). Students first construct knowledge in a social context, and then individually internalize it (Eggen and Kauchak, 2014, cited by Jensen and Frederick, 2016). The focus is on how people work together to create knowledge (Ormrod, 2013). Vygotsky’s Zone of Proximal Development (ZPD), which uses social interaction with more knowledgeable others to move development forward as well as scaffolding, are also applicable in the teaching and learning of first year accounting. The significance of the aforementioned in the study is that the lecturer and / or knowledgeable individuals will only provide direct support (social interaction and scaffolding) after the students have tried to solve the problems themselves.

2.8 SUMMARY OF LITERATURE REVIEW

The teaching and learning environment plays an important role on various elements that directly affect the academic performance of students. Similarly, the students’ perceptions of their learning environment is also significant in understanding their academic performance and general attitude towards teaching and learning. It is therefore important for lecturers to be always aware and conscious of how the students perceive their environment. Research findings on learning environments suggest that they ought to support and promote all the different variables within the three dimensions

of the environment as pioneered by Moos (1974 and 1976) in the socio-ecological model.

At the same time, use of constructivist teaching strategies and tools has been recommended as most influential towards the creation of effective classrooms where students in optimum teaching and learning with a positive view of the learning environment. There is a substantial amount of compelling research evidence to suggest that cooperative learning arrangement, if properly implemented in the classrooms can assist in improving the students' academic performance across a wide range of subjects and enabling them to have some positive perceptions of the climate in the classroom.

Any teaching method employed in the classrooms needs to be consistent with the provisions of the applicable regulatory framework. Cooperative learning is one of the methods which is in harmony with these official documents and which is supported by compelling research evidence to be effective in teaching and learning. Being a very challenging subject, with complex topics and content, accounting can be best taught using cooperative learning mixed with some traditional instruction methods. From the preliminary literature review above, one can say that most research findings are unanimous that learner-centered methods are more effective and can lead to high quality learning when they are used properly with some elements of a teacher-centered approach. Much emphasis has been on the use of cooperative learning and its benefits, which in itself is a product of the socio-constructivist approach to learning by Vygotsky.

As noted by the learning paradigm, the purpose of learning is to produce learning and not provide instruction, to elicit the students' discovery and construction of knowledge, rather than just to transfer knowledge to students, to create powerful learning environments as opposed to offering courses and programs. To improve the quality of learning rather than instruction is the goal of learning. Teaching strategies must therefore serve to achieve this primary goal. Thus to determine the success of a teaching strategy on teaching and learning, it is important to consider learning and students' outputs, the quality of exiting students, those who are not entering, the aggregation of learning growth and efficiency and the quality of students.

The next chapter presents the research design and research methodology that were used in this study. It offers an outline of all the logistical arrangements about the study, starting from obtaining permission from the university and informed consent from the students to conducting the study, followed by the data collection and data analysis procedures. It will also explain the data collection instruments in the study and the techniques that were used to analyze the data sets collected from the students.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter looks at the research design and methodology that were used in the research study and all the other technicalities and logistics that are inherent with research design and methodology. These include, the study population and sample, the sampling technique, data collection instruments, data collection procedure, data analysis techniques employed and the ethical considerations observed.

3.1.1 DEFINITIONS OF RESEARCH DESIGN AND METHODOLOGY

A host of definitions have been put forward to define research design and methodology. These definitions suggest that while research design and research methodology are closely related and intertwined, they are distinguishable and cannot be used as synonyms for each other or interchangeably. It is therefore important to consider how each term has been defined. Morrison (2012) define methodology as the theory of how researchers acquire or gain knowledge in research contexts and reason thereto. Briggs and Coleman (2007) argue that methodology provides the rationale for the ways through which the researcher conducts the research activities. They further contend that it is much more than methods, techniques or tools such as conducting interviews and keeping a research diary.

Most authorities are in accordance and conformity that research design is the approach used by the researcher in carrying out the study. In short, it deals with the actual execution and implementation of the study. Among others, Cresswell, (2012) defines research design as the specific steps involved in a research study which can be collection, recording interpretation and analysis of data. Gray, (2014) define it as the overarching plan for data collection, measurement and analysis in a study which describes the study purpose, the research questions, data collection, sampling and data analysis techniques.

Similarly, Babbie (2013); Cohen, *et al.* (2013) and Imenda and Muyangwa (2006) define research design as the researcher's overall research approach and justification of the use of such an approach in relation to the phenomenon under investigation. It is a plan of action that links the philosophical assumptions to specific methods. Monette, Sullivan and De Jong (2013) explain research design as a plan which explains data collection and the actual execution of the research study on the ground. Research design has very important implications on data collection instruments, which in turn influence the reliability and validity of the data collected and ultimately, the research findings themselves.

When looking at the importance of research design in research, Denscombe (2013) identifies three inherent essential elements that a good research design must contain for it to be effective. It describes the different variables in the research study and identifies the approach that will be used in the study. Additionally, it should justify the choice and use of a research approach and lastly, the research design must describe the relationship between the study variables. On the other hand, methodology refers to the philosophical framework and the fundamental assumptions of research (Babbie 2013 and Cresswell, 2006).

The proceeding section looks at the research design for the current study, the methodological assumptions and the research instruments the researcher used in the investigation. It also looks at the data collection procedures and data analysis techniques.

3.2 RESEARCH DESIGN

Denscombe (2013) maintain that a mixed methods approach is associated with humanistic research which uses qualitative methodologies or approaches which emphasize the views and personal experiences of the study participants. On the other hand, Terre Blanche, Durrheim and Painter (2011) argue that the central achievement of qualitative design is the development of methodologies for understanding human phenomena. The Quan-Qual Model which is also known as sequential exploratory mixed methods design was used in this study.

The choice of the overall research design and the usage of research tools for the current study was informed by the topic itself, the research variables, the research questions and the purpose of the study. Since the current study involves exploring and describing the perceptions of students about their actual learning environment, a mixed methods approach was used. However, it was more quantitative than qualitative as much of the focus was on the students' perceptions, feelings and perspectives of their learning environment (Quan-qual). The criteria for choosing the research methods in this study is also consistent with the recommendations made by Lewis and Lindsay (2000) who propounded that research methods should be determined by the research questions and strongly influenced by ethical considerations and the theoretical framework of the study.

For the qualitative research strand, the researcher included section C in the questionnaire. Although this section only required the students to state what else they wanted to see taking place in the classroom, which could have been omitted in the 42 specific statements posed for in each main category, it also provided them with an opportunity to express their perceptions and opinions about their classroom learning environment.

The students' perceptions and perspectives of their learning environment is a variable which can be best described by the students' voices and the subsequent themes that emerge. This is where the qualitative aspect of research design was brought into perspective. On the other hand, the ratings provided by the students to each of the 42 statements on the questionnaire (through giving a specific numerical value between 1 and 5 to each statement) were analyzed and explained numerically using measures of central tendency. Thus the data collection instruments were designed around the specific types of data that needed to be collected to answer the research questions. The qualitative data was used to corroborate and substantiate the quantitative findings.

This explains why the researcher believed that this study was compatible with a mixed methods approach to research and benefited from this design in a number of ways. Mixing qualitative and quantitative methods in this kind of study is also supported by the work of Hennink, Hutter and Bailey (2011), who maintained that sometimes the nature

of the research topic, the purpose of the study, the research questions, aims and objectives justify the use of both methods. A paradigm shift in a single study, for example, moving from qualitative to quantitative research design gives the qualitative research the function of exploring relevant issues, identifying themes and concepts and fine-tuning the operationalization of variables (Hennink *et al.*2011). On the other hand, quantitative research in a qualitative study serves to quantify, generalize or diversify the qualitative research findings. (Hennink *et al.*2011).

Mixed methods are also in harmony with conducting a research study in a social constructivist set up, where a number of variables are present in a single study and mixed data sets are collected at the source. This study was conducted at Central University of Technology, Free State, Welkom Campus, in the classroom.

Moreover, the dependent and independent research variables in this study make the mixed methods approach a logical option. It is assumed that the students' perceptions and perspectives of their learning experience depends on the lecture's approach to teaching and learning in the classroom. A comprehensive understanding of their perceptions and views requires both qualitative and quantitative data sets.

3.3 THE RATIONALE FOR MIXED METHODS

According to Briggs and Coleman (2007), methodological rationale provides the researcher with the underlying reasons for selecting a specific data collection instrument or tool and the justification for the manner in which it was used. The upcoming paragraphs focus on the rationale for using mixed methods and provide justification for the research instruments that were used.

Most of the advocates for the use of mixed methods argue that it allows the researcher to have the benefits of the strengths of both the qualitative and quantitative techniques while allowing the two techniques to eliminate the weaknesses of each other. The underlying assumption which guides the researcher when mixed methods are used assumes a worldview or several worldviews and that the use of qualitative and quantitative approaches as a combination provides a better understanding of the

research problems than either approach can achieve alone (Cohen *et al.* 2011 and Creswell 2006 and 2012).

According to Cohen *et al.* (2011), in mixed methods, research is driven by the research questions, which are usually more than one and which require both qualitative and quantitative data to be answered. This is also consistent with Greene's (2008) comments, who noted that the use of mixed methodology follows from the research questions and purpose. Cohen *et al.* (2011) further note that mixed methods research answers both the "what" (numerical and qualitative data) and the "how or why" (qualitative) types of research questions. They argue that this is important if the aim of the researcher is to fully understand the different explanations of outcomes.

In light of the above, the nature of the research questions (both the main and specific) and purpose of this study as developed and presented in Chapter 1 justify the use of mixed methods. To answer the following set of research questions comprehensively and holistically, there is a need to have both qualitative and quantitative data sets. These questions require an analysis of quantitative data which will be qualitatively explained.

Leech and Onwuegbuzie (2009) further point out that the use of mixed methods in research involves collecting, analyzing and interpreting quantitative and qualitative data in a single study that investigates a similar underlying phenomenon. On the other hand, Greene (2008) proposes that a mixed method way of thinking acknowledges the availability of a multiple legitimate approaches to social research and that a single approach achieves an incomplete understanding of the study phenomenon.

Greene's (2008) position is also supported by Teddlie and Tashakori (2009) when they state that the use of mixed methods draws on and combines both numeric and narrative approaches and data. Both methods in a single study are necessary and relevant in meeting the needs of the research rather than the loyalty of the researcher towards a single approach and to answer research questions comprehensively.

Consistent with the current study is the argument raised by Onwuegbuzie and Leech (2005a), who noted that the use of mixed methods acknowledges similarities between

different philosophies and epistemologies rather than differences that separate them. They argue that there are more similarities than differences between qualitative and quantitative approach because they use observational data, describe data and build on explanations and possible reasons for research findings. The explanations and descriptions that will be advanced to fully address the research questions and achieve the research objectives will be based on descriptive analysis of the data collected and research findings. The qualitative themes made also contributed towards explaining the quantitative data obtained.

Johnson and Onwuegbuzie (2004), note that mixed research methods are a research paradigm whose time has arrived. In the same vein, Ercikan and Roth (2006) criticize the polarization of research into either quantitative or qualitative approaches and their inherent objectivity and subjectivity respectively. They argue that there is a huge degree of compatibility between the two research designs. This sentiment embodies the view that how students view and perceive their teaching and learning experiences is a qualitative variable which this study sought to understand and explain in relation to the lecturer's teaching strategy, a qualitative phenomenon.

Reams and Twale (2008) advocate for the use of mixed methods by indicating that they are necessary to uncover information and perspective, increase data corroboration and enable the researcher to make unbiased and more accurate findings. In light of this claim, it is worth mentioning that the qualitative and quantitative data sets will put the researcher in a better position to reliably and accurately answer questions regarding the real learning experiences of the first year accounting students. In the same vein, Denscombe (2008) alludes that the use and implementation of mixed methods in research increase data accuracy, provide a more comprehensive picture of the study phenomenon than can be achieved by a single approach, thus enabling the researcher to overcome the shortcomings and inherent biases of single approaches.

Johnson, Onwuegbuzie, and Turner (2007) agree with Denscombe (2008) and Reams and Twale (2008) by acknowledging that methodological pluralism enables errors in single approaches to be identified and corrected. They further note that the use of mixed methods enables meanings in data to be probed, corroboration and triangulation

to be done, collection of complete data and emergence of new perspectives and paradoxes that exist between the two sets of data.

Evidently, the main strength of the mixed methods methodology is that it enables the researcher to mix the datasets and obtain a better understanding of the problem than using only one dataset (Babbie 2013; Cohen *et al.* 2011 and Creswell 2006). It is not enough to just collect data and analyse qualitative and quantitative data, there is a need to mix them in some way, so that together, they form a more holistic picture of the problem than they do individually (Creswell 2011, Lemmer and van Wyk, 2011).

Creswell (2006 and 2012) and Lemmer and van Wyk, (2011) highlight that through the use of mixed methods, a number of problems are overcome, for instance, biases inherent in one approach are neutralized and even cancelled by the use of the other approach and the results from the one inform and help develop the other. Lemmer and van Wyk, (2011) further advance their perspective by pointing out that qualitative and quantitative approaches are therefore used as complementary approaches with the quantitative findings informing and supporting the richness of the qualitative findings or results.

Now that the applicability of mixed methods in this study have been discussed, attention will now be paid to the population of the study, sampling and the sampling technique and the data collection tools used in the study.

3.4 POPULATION AND SAMPLING OF THE STUDY

Any research study involves a target population, which is usually a specific and contextualized group of people which is only applicable to that study. The study population is determined by the researcher, based on the research topic, research questions and objectives.

3.4.1 Population

Population is defined by Babbie (2013) and Cohen *et al.*, (2011) as the group or collection which the researcher is interested in generalizing about. Creswell (2012) contend that population refers to a group of individuals sharing similar characteristics

which the researcher wants to study and examine while McMillan and Schumacher (2010) regard it as a well-defined larger group of individuals to which the research results will be generalized on. It is also referred to as a target population or universe. Okeke and van Wyk (2016) view it as a group of persons, objects or items from which the study sample will be taken for measurement.

Thus it includes all the people or items in a study with characteristics the researcher wishes to understand. The research population for this study was all the 112 first year B.Ed. accounting students at Central University of Technology, Free State, Welkom Campus. The researcher wanted to gather and collect the perceptions of these students on their classroom learning environment of accounting.

3.4.2 Sampling

Babbie (2013) and Cohen *et al.* (2013) are unanimous that sampling refers to a process of selecting and determining individuals from the study population who will participate in a research study and be studied to represent the study population. Creswell and Plano (2011) mention that sampling is implemented to provide a description of a sample by studying a smaller sample of that population.

The goal of sampling is representativeness. This is supported by Cohen *et al.* (2013) and Lichtman (2013) who remark that when sampling, the researcher needs to ensure that the selected sample fairly represents the study population for it to be a valid sample. Thus, as suggested by Kollig and Keller (2002), larger samples yield more precise results than smaller samples. Gray (2014) also subscribes to this idea by alluding that while a sample size cannot be determined with certainty, increasing the sample size usually increases its precision because larger samples are more likely to be representative of the study population they represent.

Furthermore, the size of the study sample also plays an important role in the generalizability, reliability and validity of the research findings. This claim is further reinforced by McMillan and Schumacher (2010) who observed that the size of the sample influences the credibility of the research findings.

Lemmer and van Wyk, (2011), noted that in quantitative research, the logic of sampling is different in that a whole population is targeted and a random sample is drawn to select participants to respond to questions provided to them in the data collection instruments, such as questionnaires. A sample can be chosen as a simple random sample, a stratified random sample, a cluster sample or a systematic sample.

3.4.3 The study sample

Okeke and van Wyk (2016), define a sample as a set of respondents or participants who have been selected from a larger population for the purpose of the study. According to Creswell (2012), a sample is a portion of the target population which the researcher chooses to study to obtain some generalizations about the total population of the study. McMillan and Schumacher (2010) summarize it as a group of research participants from whom data is collected.

The sample of this study are all the 112 first year B.Ed. students who participated in answering the research questionnaire and in the focus group interviews. The study sample was studied in terms of its characteristics, perceptions, views and other attributes and were then applied and generalized to the study population. The population of this study is also the study sample.

3.4.4 The sampling technique (Convenience sampling)

According to Gray (2014), qualitative research is oriented towards more purposeful sampling to obtain comprehensive information which can increase one's understanding of the study population. In perspective of this, the researcher used convenience sampling to select the study sample, which according to McMillan and Schumacher (2010) is when a group of research participants are selected on the basis of being accessible or expedient, such as a university class. Babbie, (2013), Gray (2014) and Okeke and van Wyk (2016) further note that this is a type of sampling in which the sample is selected on the basis of knowledge of the population, its elements and the purpose of the study (Cohen *et al.*2011). Denscombe (2013) argues that convenience sampling is based on the assumption that the best information in a study can be obtained through concentrating and focusing on a relatively small number of individuals

or cases. The individuals are intentionally selected on the basis of their known knowledge or characteristics.

The researcher conveniently selected all B.Ed. Accounting 1 students to participate in the study because, as Lodico, Spaulding and Voegtle (2010) stated, they had key knowledge related to the study. Briggs and Coleman (2007) add that purposive or judgmental sampling is an improvement of convenience sampling whereby the researcher makes use of previous experience to select cases or individuals, which according to the researcher are typical and representative.

Given, (2008) points out that convenience sampling is usually associated with qualitative research methods because of its emphasis on an in-depth analysis of the perceptions and underlying factors. For the purpose of this study, the maximum variation sampling technique, which is a sub-element of purposive sampling was very instrumental in the selection of the study participants. As a result, all the Accounting 1 students at Central University of Technology, Free State, Welkom Campus were selected to participate in the study.

Convenience sampling was used in this study by selecting B.Ed. Accounting 1 students in the second semester of the 2016 academic year. The respondents had both the experience and expertise to provide quality information by rating the 42 statements on the specific learning aspects identified. They also gave the researcher some significant and indispensable insights into the research topic. Denscombe (2013) remarks that the major advantage of convenience sampling is that it permits the researcher to work with people who are critical of the investigation and focus on cases which can best illuminate the research problem and research questions.

The next subheading will look at the data collection instruments which the researcher used to collect data from the Accounting 1 students as well as their applicability and how exactly they were used.

3.5 DATA COLLECTION TOOLS

Data collection tools are the devices used by the researcher in a study to collect and gather data from participants in a study. Bailey (2007) defines research instruments as measuring devices used to evaluate more precisely the behavior being studied. It is a device for operationally defining a variable (Cohen and Wollack 2010). According to Cohen and Wollack (2010), a measuring instrument reduces behavior to numbers or other forms convenient for data analysis. It takes the response out of the realm of casual observation and makes it reliable.

The measuring instrument has the greatest influence on the reliability of data collected. Data must be accurate because it is through this collected data that the researcher seeks to discover the absolute truth and answers to the research questions raised in the study. Measuring instruments can be questionnaires, interviews, documentation or observation. As far as Babbie (2013) and Cohen *et al.* (2011) are concerned, most researchers are unanimous that the validity and reliability of data collected in a research study depends on the nature and types of research instruments used by the researcher as well as their applicability and justification in the study.

Contextualizing this study, Gray (2014) argue that the mixed methods paradigm is a theoretical perspective that relies heavily on the use of unstructured methods of data collection such as unstructured interviews. As such, it predominantly makes use of in-depth interviews. This view is also endorsed by McMillan and Schumacher (2010) who noted that in-depth unstructured interviews are the main tool for data collection in a qualitative investigation. This investigation adopted a constructivist learning environment questionnaire to collect both quantitative and qualitative data (c.f. Appendix 1). It also used focus group interviews for gathering of qualitative data only (c.f. Appendix 4).

3.5.1 QUESTIONNAIRES IN SOCIAL RESEARCH AND IN RELATION TO THE CURRENT STUDY

McMillan and Schumacher (2010), define a questionnaire as a written document which contains a set of questions and statements that seek to collect the perceptions,

attitudes, beliefs, perspectives, values and other characteristics of the research participants. A questionnaire is an instrument in which respondents provide written responses to questions or mark items indicating their responses. Babbie (2013) views a questionnaire as a document containing questions that are purposefully designed to solicit information that will assist the researcher to answer the research questions and achieve the purpose of the study. Creswell (2012) simply regard it as a form used by the researcher that is completed by the participants and returned to the researcher for further analysis. These definitions of a questionnaire collectively point to the remarks of Denscombe (2013) about what constitutes a valid and credible questionnaire that is to be used for research purposes.

As such, Denscombe (2013) remind researchers about the three essential requirements that a questionnaire must meet in order to qualify as a research instrument. Firstly, it must be designed to collect information which can be subsequently used as data for analysis and for answering the research questions posed in a study. In short, it must be used to discover information. Secondly, it must consist of written statements so that each person who answers the questionnaire should read an identical set of questions and answer or respond according to their views, perceptions and understanding. Lastly, it must gather and collect information through asking people directly about issues related to the study phenomenon.

A questionnaire provides an opportunity to examine correlations among the subjects' responses and also to look for possible patterns of cause and effect (Cohen *et al.*2011). According to Babbie and Mouton, (2008), questionnaires are commonly used when the researcher seeks to determine the degree to which the research participants share or hold a particular perspective or attitude. In the current investigation, they were used to determine the extent to which the students agreed on the 42 specific statements about some aspects of their learning environment.

Babbie (2013) assert that questionnaires are widely used and serve as a very useful tool for gathering survey information, structured numerical data and can be administered in the researcher's absence. A questionnaire can be compiled using open ended, close ended questions or both types of questions. According to Babbie, (2013)

open-ended questions are questions for which the respondents are asked to supply their own answers. Open-ended questions are the cornerstone of in-depth qualitative interviewing in research.

According to Creswell, (2012), open-ended questions are asked in qualitative research to enable the study participants to best voice their experiences freely and unconstrained by any perspectives of the researcher or past research findings. Furthermore, an open ended response to questions in a study allows the respondents to formulate and create their own options for responding. In this study, a section on additional information on the questionnaire was deliberately included to enhance and promote this in-depth qualitative discourse.

On the contrary, close-ended questions involve asking the respondent to select a response from possible answers provided by the researcher. In the current investigation, the students were presented with 42 statements which had 5 possible responses based on the Likert scale (c.f. Appendix 1). They had to rate each statement based on how well it represented their perceptions about what was actually happening in their classroom, ranging from never, which was represented by 1 and always which was denoted by 5. Close-ended questions provide uniformity of participants' answers and the data is easy to process and analyze. Closed-ended questions were developed because they are easy to fill, save time and keep the respondents focused on the subject. The midpoint in the rating of all the statements was 3 (1, 2, 3, 4, and 5). Any scores below 3 were regarded as low (Seldom; 2 and never; 1) and those above 3 were high (Often; 4 and Always; 5).

Burton, Brundrett and Jones (2014) justify the popularity of questionnaires in most research studies by citing that they are relatively economical, can reach distant respondents, provide standardized questions, guarantee the anonymity of the research participants and that questions can be specially designed and written for specific purposes to facilitate analysis. Burton *et al.* (2014) maintain that questionnaires can offer a quick, effective, efficient and confidential way of collecting a large number of responses. In addition, the data collected from the close-ended questions in the questionnaires can lend itself to quantitative analysis through the use of descriptive

statics or inferential statistics. On the other hand, the open ended textual responses can give the study participants freedom of expression and may be useful in capturing additional and valuable data outside the closed questions compiled by the researcher.

Some advocates of questionnaires in research also point to the gains of using both questions and statements in a study to collect data from the research participants (Babbie and Mouton, 2008 and Okeke and van Wyk, 2016). They argue that combining the two in a single questionnaire gives the researcher more flexibility in designing the items and can make the questionnaire more interesting. Creswell (2009) also allude that questionnaires are used in the majority of research studies as a main tool for data collection since they evoke diverse answers and responses from the research participants. Thus questions were used in the current study because they are the main method of collecting data.

Through the use of specific statements and questions the researcher was able to provide the Accounting 1 students with the opportunity to freely rate and describe their teaching and learning experiences. The researcher was also able to determine the students' interpretations of such experiences and the meaning they attach to them. This kind of knowledge was very influential towards creating and implementing supportive classroom teaching and learning environment for future classes.

In order to compile accurate, pertinent data, it is important that the questionnaire is correctly structured, with relevant clearly understandable questions. The researcher's task is to design a questionnaire in such a way as to facilitate rather than impede the learner participants' ability to provide exactly the information required. Creswell (2012) and Denscombe (2013) caution that a poorly designed questionnaire can invalidate any research results. The researcher therefore took the necessary measures to ensure that the questionnaire was not confusing.

The researcher personally distributed and administered all the questionnaires to all the Accounting 1 students in class. They were taken through the whole questionnaires to identify any sections or parts thereto that could pose challenges to them when completing. The students were given enough time to respond to the questionnaires in

the classroom and they submitted them to the researcher immediately after completing. This ensured a 100% response rate, even though there were some students who did not write any comments on the open ended section about any additional information they wanted to bring to the attention of the researcher.

The use and applicability of the constructivist learning environment questionnaire both in social research and in the current study in particular will now be discussed.

3.5.2 CONSTRUCTIVIST LEARNING ENVIRONMENT QUESTIONNAIRE

3.5.2.1 RATIONALE FOR A CONSTRUCTIVIST LEARNING ENVIRONMENT QUESTIONNAIRE

The constructivist learning environment questionnaire was used to measure the students' perceptions of the classroom learning environment through the use of the Likert Scale (c.f. Appendix 1). Quantitative data was obtained from the ratings given by the students to each of the 42 statements posed to them while qualitative data was gathered from the focus group interviews and the open ended section of the constructivist learning environment questionnaire.

A constructivist learning environment questionnaire was adapted for use in this study because it has been tested for reliability and validity in other parts of the world. The researcher wanted to test its applicability to university students in South Africa. Although this instrument was initially developed and intended for secondary school students, it was found useful and relevant with first year students because there is very little gap in terms of transition between them and the secondary school students (Taylor, Fraser Fisher 1997). It was found to be very applicable to this study because it was used to measure a study phenomenon which it is designed for.

The use of a questionnaire with constructivist elements of the teaching and learning environment assisted the researcher to measure the classroom environment. It was also used by Aldridge, Fraser, Bell and Dorman (2012) and Walker and Fraser (2005). It was believed to be a significant research tool in this study to accurately reflect the perceptions of students on whether or not their learning environment was indeed

constructivist and conformed to the socio-ecological model as suggested by Loyens and Gijbels (2008).

According to Fraser (1998), the constructivist learning environment questionnaire was developed for secondary school students to assess the students' perceptions of the three dimensions of the learning environment identified by Moos (1974). Under the relationship dimension, this instrument looks at the personal relevance and uncertainty while it considers the critical voice of students and their shared control under the personal development dimension. Lastly, it evaluates student negotiation under the system maintenance and change dimension.

Rakici (2004) contends that the evaluations and assessments of the learning environment done in the past were dominantly done through the use of observations. This data collection instrument was blamed and criticized for giving insights into the learning environment through the eyes of the researcher or observer and ignored the views and perceptions of the students. In light of this claim, this investigation made attempts to provide more student-centered insights and perspectives of the learning environment through the use of the constructivist learning environment questionnaire.

It is also important to note that this questionnaire was found to be in harmony with the mixed approach stance that was used in the study, which emphasizes objective reporting of the views, perceptions and perspectives of the study participants. The questionnaire therefore gave students the opportunity to rate identical 42 statements about aspects of their learning environment based on their individual experiences in the classroom and encounters with the lecturer and other students.

Rakici (2004) further observe that to compensate for the failures of the observation method, investigations conducted in the Western countries used a variety of validated questionnaires to evaluate the students' perceptions of their learning environment. Such questionnaires include the constructivist learning environment survey, the science laboratory learning inventory and the questionnaire on teacher interaction.

Both Fraser (1998) and Rakici (2004) admit that the constructivist learning environment questionnaires are more economical as compared to observations which require expert

observation. In addition, they are also based on the students' experiences in the learning environment over extended periods of time, unlike data from observations which is only restricted to limited time and lessons.

Moreover, reliable and valid perceptual measures are based on the combined judgments of all the students involved in the study while observations only involve a single observer at the research site. Furthermore, the perceptions of students are more important than the observed behavior because their perceptions are a significant indicator of the behavior more than the actual situation.

It is also argued that the evaluation of students' perceptions of the learning environment tend to account for some considerable differences in student learning outcomes as opposed to directly observed outcomes. Consequently, the students are in a superior position to judge their learning environment because they have encountered various learning experiences and environments and they also have adequate time to create accurate impressions. More still, the students are able to project a consistent picture of the long standing elements of their learning environments, even though the lecturer's behavior and approach to teaching and learning cannot be consistent.

3.5.3 FOCUS GROUP INTERVIEWS

The focus group interviews used in this study are a form of qualitative interviews and were therefore designed and carried out with some qualitative connotations (c.f. Appendix 4). As noted by Creswell (2012), in general a qualitative interview happens when the researcher poses open-ended questions to one or more participants and record their responses. On the other hand, Babbie and Mouton (2001) maintains that a qualitative interview is an interaction between the interviewer and interviewee in which the interviewer has a general plan of inquiry but lacks a specifically formulated set of questions that need to be asked in specific words and in a given order.

Research literature considers the moderately sized "focus group" as the most informative mode of data collection, and many texts and articles are testament to this view (Stewart, Shamdasani and Rook 2009, cited by Yin, 2011). A group is regarded as "focused" because it comprises a gathering of individuals who share similar experiences

and common views (Yin, 2011). The focus group interviews consulted 7 groups of 6 members.

In particular, a focus group interview is the process of gathering and collecting data in a study by conducting interviews with a group of people (Creswell, 2012). Denscombe (2013) define a focus group interview as unstructured interviews in which a moderator leads a discussion between small groups of study participants on a specific topic. Correspondingly, Savin- Baden and Major (2013), suggest that a group interview is when the researcher asks the research participants a question simultaneously and expect responses from as many research participants as possible from the group. Johnson and Christensen (2014) suggest that focus group interviews are particularly useful when used to complement other methods of data collection in a study. They were used as a complementary instrument to the constructivist learning environment questionnaire, which was the main tool of data collection in this study. The responses from these discussions were therefore used to corroborate the data collected in the questionnaires.

A group interview is a convenient way to collect data from multiple research participants all together and it is also very economical. Babbie (2014) further note that the researcher establishes a general direction for the discussion and pursues specific themes raised by the respondents. The data obtained from the responses will then be transcribed and typed into the computer for analysis. Denscombe (2013) argues that the rationale of focus group interviews is to triangulate data collected from other sources. While there was not a pre-determined set of questions for this study, the discussion was mainly focused on the responses provided in the questionnaire and such topics guided the interview.

As noted by Johnson and Christensen (2014), focus group interviews can be used for several purposes. These include, to discover the perceptions, ideas and opinions of the study participants on a given phenomenon, to obtain general background information on a specific topic of interest, to come up with a research hypothesis which can be subjected to further research and testing through the use of more qualitative approaches, to promote and stimulate new ideas and creativity, to interpret previous

qualitative findings, and to identify potential problems within new paradigm. In the current research study, the focus group interviews were used to determine and establish the Accounting 1 students, perceptions, feelings and opinions of their teaching and learning experiences and on the learning environment.

According to Babbie and Mouton (2008), researchers can use focus group interviews in a qualitative research design in two different ways. These are, firstly, to get individual responses from individual participants. The reason behind this use of a focus group interview is that it saves time and money. The second usage is in finding information which the researcher would not otherwise have been able to access. Gray (2014) and Johnson and Christensen (2014) agree with Babbie (2013) that this way of using focus group interviews is very useful because it creates and provides an environment in which people may get together and create meaning collectively among themselves rather than individually.

This in-depth interview seeks to capture the various perspectives of all the people involved in the phenomena being investigated. McMillan and Schumacher (2010) note that these interviews are usually one hour long, even though they can be sometimes two hours. Depending on the themes that emerge, it may be necessary for the researcher to have more than one session with the participants. In the same vein, Savin-Baden and Major (2013) comment that these interviews are usually long and often resemble rambling conversations between the researcher and the study participants in which the researcher listens closely for clues or themes on the participants' perceived important issues. As themes and patterns emerge, the researcher then re-interviews the study participants to classify the understanding of the experiences of the participants. This was achieved in the current study through the inclusion of an open ended section in the questionnaire and follow up focus group interviews for further probing. Babbie (2014) confirm that probes are an efficient and useful way of getting in depth responses without biasing later answers.

The focus group interviews were conducted and designed in such a way that there was an atmosphere and social environment in which students were stimulated by each other's perceptions and ideas of an ideal learning environment, constructivism and

student empowerment. McMillan and Schumacher (2010) comment that such a stance is believed to increase the quality and richness of data collected more than one on one interviews can do. In this study, the students tended to be more open and expressed their inner feelings and emotions when they responded from a group as opposed to a one on one interview session where they are likely to be reserved. However, the researcher was aware of the possible effects of peer pressure due to responses given within the group.

When considering interviews, Babbie and Mouton (2001 and 2008) advise the researcher to learn the skills of being a good listener and become more interested than interesting, learn to look and listen expectantly and allow the respondent to fill in the silence. As such, the researcher listened attentively to the students' responses, taking into consideration their body language and recorded them on an interview record sheet. While all the participants in the study were known to the researcher, all the responses were recorded without any names attached to them to ensure that they would not be traced back to the source. This was to promote anonymity as one of the ethical considerations that were observed in the study.

Proponents and supporters of focus group interviews argue that when compared with other methods such as participant observation, they give the researcher the opportunity to observe a higher degree of interaction on a topic within a limited period of time, depending on the researcher's ability to assemble and direct the focus group (Babbie, 2014). Johnson and Christensen (2014) point out that focus group interviews are highly instrumental in providing and producing in-depth information in a short period of time and that the results are usually very easy to understand. In addition, Cohen *et al.* (2005) and Denscombe (2013) claim that focus group interviews provide evidence about the existence of similarities and differences in the opinions and perceptions of the study participants.

On the contrary, Creswell (2012) remark that focus group interviews can be very challenging, especially if the interviewer cannot control the group and direct the discussion. This criticism is also raised by Babbie and Mouton (2008) who pointed out

that lack of strict control of the focus group interviews can turn out to be a setback to a researcher who lacks the skills to do so.

The upcoming section addresses the issues of reliability and validity in the current study and how they were upheld and promoted. Both validity and reliability will be discussed in the context of the phenomenological paradigm and the research instruments that were used in the study.

3.6 RELIABILITY AND VALIDITY OF THE CONSTRUCTIVIST LEARNING ENVIRONMENT QUESTIONNAIRE

As earlier alluded to (cf. 3.5.2), the Constructivist Learning Environment Questionnaire used in this study has already been tested for reliability and validity. Consistency and repeatability of data collected by any research instrument is of fundamental importance as far as the acceptance of such data is concerned. The concept of reliability has been used in research to provide the criteria of acceptance of such data collected and the ultimate research findings. Gray (2014) claim that while reliability and validity are the main factors that enhance the credibility of research findings, there are some alternative and additional sources of quality and credibility in any study which other researchers and readers alike look for.

These include consistency, which demonstrates how the study had been carried out and the plausibility of the researcher's actions and data analysis. There must also be evidence of accuracy in the study. This is evidence that the data is a fair representation of the views and perceptions of the participants, which includes verifying with the participants that they have not been misinterpreted. Lastly, the research study should also make attempts to show and prove neutrality. This refers to evidence which demonstrates that the researcher is aware of the likely confounding effects of their own actions, preconceptions, perceptions and that where possible, these have been adequately taken into consideration. However, since this study was conducted using a phenomenological paradigm, whose underlying assumption is that the researcher needs to put aside any preconceptions and perceptions to have an objective understanding of

the perceptions and experiences of the study participants, this was therefore not a material issue.

The validity and reliability of the research study must accommodate the vast difference of views present in the social sciences. This view is sustained by Bashir, Afzal and Azeem, (2008); Golafshani, (2003) and Morse, Barrett, Mayan, Olson, and Spiers (2002). Accordingly, Harrison, MacGibbon, and Morton (2001) agree that reliability and validity of qualitative research are inadequately delineated and deciphered. In order to execute this task, the researcher will draw from the suggestions of Mahlomaholo and Nkoane (2002) regarding how to conceive qualitative validity and reliability.

Bashir *et al.* (2008) and Healy and Perry (2000) suggest that validity could be represented by the content of items which deal with how truly the questions asked in the interview reflect the behaviors of the respondents. Durrheim (1999) proposes that qualitative research conceptualizes research validity as the degree to which the research would produce observations that are believable to the researcher, the participants being studied, and the reader of the research. Similarly, reliability and validity should also be consistent with the research methodology.

3.6.1 Reliability

While reliability has been largely defined in a quantitative research context by most authorities, Okeke and van Wyk. (2016), point out that it refers to dependability and consistency in qualitative research. Reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions (Babbie 2013, and Okeke and van Wyk, 2016). Denscombe (2013) argues that it refers to the neutrality and consistency of a research instrument in terms of its effects when used over multiple cases or instances. Reliability looks at whether a specific technique can yield similar results when applied repeatedly to the same objects. Creswell (2012) and Johnson and Christensen (2014) are unanimous that reliability implies that the scores from an instrument are stable and consistent. This definition is also supported by Babbie (2013) who noted that reliability in research implies that similar results must be achieved if a research was to be carried out on a similar group of respondents in a similar context.

The assumption of reliability is that a research instrument should collect similar data each time it is repeated in a study. Gray, (2014) argues that a reliable research instrument must consistently measure what it is meant to measure. This is a claim supported by Savin-Baden and Major (2013) who postulate that reliability is ensuring that data collection instruments can be used again and experiments can be repeated to measure the same thing again accurately.

Reliability is summed up by Fraenkel and Wallen (2009) as a concept which refers to the consistency of the scores of each individual from one administration of an instrument to another and from one set of items to another. Additionally, Lather (2009), define reliability as the fit between what occurs and what was recorded, and is established by detailed field work notes, a team approach, participants' confirmation of accuracy of observations and use of participants' quotations.

Creswell (2012) note that reliability is a synonym for dependability, consistency and reliability of research instruments and participants over time. Reliability is concerned with precision and accuracy. It is information that is true and consistent no matter the circumstances. To increase reliability, researchers should ask themselves whether other researchers using the same tool or procedure will get similar results and whether someone will obtain a similar picture using the procedures on different occasions. However, it is important to note that reliability does not ensure accuracy of the research findings.

Gray (2014) and Savin-Baden and Major (2013) agree that the reliability of research findings and data collected in a phenomenological study can be achieved through confirmation with the study participants. Consequently, the researcher used focus group interviews as follow ups and confirmation of the data that was collected and the themes that emerged from the open ended section of the questionnaire which gave students the opportunity to provide any additional information regarding anything else which they wanted to see happening in the classroom. Some students also came up with other issues related to their learning environment which were not covered by the 42 specific statements that were presented to them.

For the qualitative research design, reliability is dependent on the trustworthiness and credibility that could be assessed in terms of a number of specific strategies. In order to ensure the reliability of the research study, Mahlomaholo and Nkoane's (2002) requirements of reliability was considered in the current study. The reliability requirements of Bashir *et al.* (2008), and Harrison *et al.*, (2001) are, credibility, which refers to the confidence the reader wields in the findings of the research which is demonstrated by prolonged engagement of the researcher in overseeing the cultural and social engagements of people involved in the research.

They also cite transferability which is achieved through descriptions which provide a detailed account of field work experiences in which the researcher makes explicit patterns of cultural and social relationships, and dependability. The latter refers to the view that the researcher has regarding knowledge and meaning-making being co-created. Lastly, they refer to conformability, which looks at the degree of neutrality the researcher has to allow to enable the voice of the researched to be heard.

Looking at the current study, the reliability of the data collected using the unstructured focus group interviews and questionnaires depends on the degree to which a similar set of data will be collected using the same type of data collection instruments if the process was to be repeated again. Any variations in the data collected by the same instrument over a series of administration and implementation will make the data less reliable. It will be difficult to trust the research findings and endorse them.

Gray (2014) point out that consistency can be achieved in interviews which are standardized, in which all the participants responded to a similar set of questions. While this is true of the 42 statements posed to the students about the specific aspects of their learning environment, questions in the focus group interviews were not standardized or pre-determined. This is an inherent challenge of unstructured interviews and a phenomenological study. However, the data collected through this approach can still be regarded as highly reliable since the researcher used other alternatives to promote reliability.

To have measures and observations that are reliable in this current study, the researcher ensured that the questions in the questionnaires and those posed to the students during the focus group interviews were clear and not ambiguous. The students did not have to guess the implied meaning of a question or statement as this could result in different responses, depending on the student's personal interpretation of the question and statement. Students' misinterpretations of questions and guessing of responses was therefore avoided or minimized at all costs.

As suggested by Cresswell (2012), reliability can be compromised if the study participants are fatigued or nervous. In light of this, conditions in which the focus group interviews were conducted made the students relaxed and feel at home. This allowed them to express themselves freely and openly.

3.6.2. Validity

Golafshani (2003) notes that validity in qualitative data can be achieved through honesty, depth, richness and scope of the collected data, the research participants, the degree of triangulation and the researcher's objectivity. To obtain valid and reliable results consistently, the researcher used a questionnaire which had already been tested for validity.

As noted by Babbie (2013), the researcher acknowledges that it is impossible for the research to have an absolute validity of 100%. This is because of some form of bias in the qualitative data, which depends on the subjectivity of the students, their opinions, attitudes and perceptions regarding their teaching and learning experiences.

According to Cohen *et al.* (2011) validity in qualitative research replaces certainty with confidence in research results and that since reality is independent of the claims made by the researcher, the research findings must be a representation of reality rather than a reproduction of it. It is of utmost importance to ensure that the methods used to collect the data are valid and trusted and that the results acquired cannot be manipulated in any way.

The upcoming section looks at the procedures that were used to analyze the data collected in the study.

3.7 DATA ANALYSIS PROCEDURE

Once was data collected, the next phase was the data analysis procedure and process. This is a very important aspect of any research study because data analysis gives sense and meaning to the data collected using the different data collection tools. Once meaning and sense have been attached to a set of data, it can then be used to answer the research questions surrounding perceptions of Accounting 1 students about their classroom environment.

3.7.1 ANALYSIS OF DATA FROM THE QUESTIONNAIRES

As noted by Creswell (2012), the first step in processing data from questionnaires is editing, which is meant to identify and correct respondents' mistakes. Editing of questionnaires comprises of three main checks, which are; completeness, accuracy and uniformity. A completeness check is made to ensure that every question has been responded to. If necessary, the respondents will be requested to answer those sections or questions that have been omitted. On the other hand, to determine whether or not all questions have been answered as accurately as possible, an accuracy check was made. A uniformity check is meant to establish the extent to which all the research participants have interpreted questions and instructions in a similar way (Cohen *et al.*2011).

The responses to the open-ended section of the questionnaires were coded before being assigned unique codes for further analysis by the computer. Babbie (2013) notes that this coding process requires the researcher to provide interpretations of responses, a requirement which can lead to misinterpretation and researcher bias. However, the researcher tried as much as possible to give objective and unbiased response interpretations. According to Cohen *et al.* (2011), the main purpose of coding is to reduce responses to code numbers. Responses to open-ended questions can also be coded by the respondents themselves as a measure to increase validity. However, this

was not considered in the current study since it required some training to be given to the students on how to do it.

Responses to open-ended questions that are neither relevant nor related to the research purpose were regarded as invalid while those from close-ended questions were captured directly into a computer program for further analysis through measures of central tendency.

3.7.2 ANALYSIS OF DATA FROM THE FOCUS GROUP INTERVIEWS

Since the research methodology was largely qualitative, the researcher used a thematic approach to data analysis. This approach to data analysis classifies data into categories and the categories into themes. The identified themes were then used to present the study findings in terms of the students' perceptions of their learning environment.

Gay *et al.* (2011) suggest that when analyzing data obtained in a phenomenological study, the researcher looks for common understanding and themes that emerge from the data collected to give meaning to the interactions and perceptions of the participants in the study. Lodico *et al.* (2010) suggest that the interviews must be transcribed precisely as soon as they are complete and become the raw data for the study. This transcribed data is then analyzed carefully to gather the complete picture and create a deep understanding of the story being told by the study participants.

Savin-Baden and Major (2013) suggest that the researcher should look for themes from the data collected from the study participants and from these themes, make or construct a descriptive narrative of how the participants experienced the study phenomenon. This narrative should provide direct quotes from the interviews to substantiate the inclusion of individual themes.

Now that the data analysis procedure has been discussed, attention will be paid to the techniques used to analyze data collected. These techniques were used in line with both the qualitative and quantitative data that was obtained in the study.

3.7.3 TECHNIQUES USED FOR DATA ANALYSIS

The following principles will be followed in the analysis and interpretation of the quantitative and qualitative data to be collected from research study.

3.7.3.1 Data analysis techniques for the qualitative data

According to Cohen *et al.* (2011), the analysis of qualitative data entails organizing, summarizing, explaining and making sense out of the data collected in terms of definitions and responses provided as well as acknowledging patterns and variations. It is noted that qualitative data can be interpreted in many ways. The students' responses in part B of the questionnaire about what is actually happening in the accounting classroom were captured on a spreadsheet. They were then analyzed quantitatively by means of the arithmetic mean, standard deviation and range.

Fick (2009) posits that the main area of focus for qualitative research is to describe what is happening, and that the description should be detailed and should contribute to an understanding of the setting being studied. Furthermore, Fick (2009) proposes that qualitative analysis should provide a thorough description of what is happening and the way participants' perceptions and interpretations of reality are understood. This assertion is also endorsed by De Vos, Strydom, Fouche and Delpont (2005) who claim that the purpose of qualitative study is to produce findings that describe the phenomena.

Consistent with the above sentiments is the suggestion of Henning (2011) who contemplated that a research study employing multiple perspectives on the phenomena needs to include epistemological groundwork. By this, it is implied that the researcher should move forwards and backwards from the verbatim transcriptions to the theoretical orientations underpinning the study. The logic behind this ontological grounding is that the researcher should lead the reader to an understanding of the meaning of the experience being studied. As such, data analyses should bring order and meaning to the mass of collected data (De Vos *et al.* (2005). The following analyses of data were therefore used in this study:

3.7.3.1.1 Content analysis

Luttrell (2012) refer to content analysis as counting the frequency of word occurrences and coding them in different themes. Furthermore, Denscombe (2013) and Gray (2014) mention that content analysis allows the researcher to analyse what is communicated in order to provide insight into the communicator's intentions. Henning (2011) advise that content analysis should not be used to report facts alone, but should rather interrogate the data provided.

3.7.3.1.2 Qualitative coding

By this analysis, Henning (2011) and Lodico *et al.* (2010) imply that data collected is divided into small units and categorized into the possible meanings it infers. Lodico *et al.* (2010) notes that coding involves the examination of data to identify patterns, themes or categories that can emerge from this data. However, Henning (2011) warn that such data coding offers superficial descriptions of the facts of the phenomena which are not well interrogated. This technique was applied on the responses collected from the students mainly through the focus group interviews and the open ended section of the questionnaires. Qualitative coding was found to be a very useful technique in analyzing the students' responses and determining themes that represented different perceptions (cf.4.4).

3.7.3.1.3 Triangulation

Henning (2011) define triangulation data analysis as employment of different paradigm positions from various angles towards a measured position on the phenomena studies. On the other hand, Lodico *et al.* (2010) define it as the use of more than one method of data collection in a single study and comparing the results obtained through these multiple methods. They argue that this technique does not only increase the validity of the qualitative findings, but also adds and increases thoroughness, richness and depth of understanding to the research study.

In the current study, questionnaires were used in conjunction with focus group interviews. Likewise, triangulation of data implies that interpretation of data is sourced from various points to build a complete picture of the story. Triangulation was used in this study to make comparisons on the findings from the questionnaires and the focus group interviews. The researcher interpreted students' responses that were provided on the questionnaires as well as in the focus group interviews to identify persistent and common themes conveyed by the students.

3.7.4 Data analysis techniques for the quantitative data

The data collected was analyzed using descriptive and inferential statistics. Descriptive statistics is a form of statistics concerned with organizing and summarizing the data at hand to render it more comprehensible through the use of univariate analysis and bivariate analysis (Creswell 2012). This was used to interpret and analyze the ratings provided by the students to each statement that was presented to them as well as in each broad category.

3.7.4.1 Univariate analysis

Univariate analysis is concerned with a single variable (Nolan and Heinzen, 2008). Single or univariate data analysis provides the researcher with a 'feel' of the data by examining one variable at a time. Thus, univariate analysis provides the researcher with frequencies regarding frequency distribution in, for example, percentages, tables, graphs, bar charts and pie charts. In such instances, the variable depends on nominal level data, which is frequency distribution in percentages on the variable being studied, which in this study was the students' quantified perceptions on their classroom learning environment.

Univariate data analysis focuses on measures of central tendency, degree of variability or dispersion and shape of distribution frequency in a data (Jackson, Riley and White 2011). The researcher made use of the mean, the mode, the median and range in describing the variations in students' responses per statement and per category. Areas

of the classroom learning environment that need improvement were thus identified based on the variations in the students' responses.

3.7.4.2 Descriptive statistics

According to Johnson and Christensen (2014), the main goal of descriptive statistics is to describe, summarize, explain and make sense of a given data set. Okeke and van Wyk (2016) note that the most commonly used techniques of descriptive statistics are the arithmetic mean, the median, the standard deviation and the interquartile range. Measures of central tendency are those that are used to represent a set of data distribution and are the most popular measure of numerical data. Johnson and Christensen (2014) define a measure of central tendency as the single numerical value which is considered to be the most typical of the values of a quantitative variable. In the same vein, Okeke and van Wyk (2016) note that measures of central tendency are single values that are meant to be representatives which can neatly characterize the entire group. While this technique involves various types of averages for different situations and purposes, the most popularly used is the arithmetic mean, which is the sum of the variables divided by its total number in non-grouped data.

Creswell (2012) define inferential statistics as statistics that allow scientists to draw conclusions about some property of the population of numbers from which the sample came. Inferential statistics is a form of mathematical measurement referring to the strength of the relationship between independent and dependent variables. Inferential statistics deals with the error of bias or random error in the analysed data. The more variability in the scores, the less important the strength of the relationship; and the less variability in the scores, the more important the strength of the relationship becomes.

3.8 Dependent and independent variables

According to Cohen, *et al.* (2013) dependent and independent variables exist in research studies where the researcher wants to examine, for example, the effects of effective teaching and propose a hypothetical statement. This is also consistent with Cohen *et al.* (2011) who note that dependent and independent variables are part of ex

post facto experiments in which the researcher seeks to discover possible causes for a phenomenon under investigation.

Babbie (2013) define a dependent variable as an attribute or variable whose value, nature or condition depends on the independent variable. Fraenkel and Wallen (2009) on the other hand define it as the variable that the independent variable is presumed to affect. The dependent variable depends on what the independent variable does to it and how this affects it. It is influenced and determined by the independent variable. The dependent variable of this study is the Accounting 1 students' perceptions of their learning environment. It was hypothesized that their perceptions depended on the approach to teaching and learning adopted by the lecturer and as well as some factors outside the classroom.

On the contrary, independent variables are those attributes that influence, cause, change or determine a dependent variable. According to Fraenkel and Wallen (2009), the independent variable is the variable which the researcher has chosen to examine in order to evaluate its potential effects on the other variable in the study. Babbie (2013) note that the value of independent variable is taken as given and is usually not problematic. The independent variable of this study is the approach to classroom instruction adopted by the lecturer. It is assumed that this can determine the students' perceptions of their learning environment. A cause and effect relationship can be established between the students' perceptions of the learning environment and the teaching strategy used by the lecturer in that specific subject.

3.9 Specific steps with regard to the research procedure

According to Teddlie and Tashakkori (2009), both qualitative and quantitative data can be collected in any research study. Babbie (2013) notes that these data sets can be collected from interviews, questionnaires, observation, field notes, memos, diaries, pictures and photographs, documents and reports and audio, video and film materials. The researcher obtained permission from the Management of the University to conduct the study and written consent from all the Accounting 1 students who participated in the study.

After obtaining written and informed consent, the researcher self-administered the questionnaires and allowed them to fill them up privately, in the researcher's absence. According to Cohen *et al.*, (2011), the main advantage of self-administered questionnaires which are completed in the absence of the researcher is that respondents have the opportunity to complete the questionnaires in their own private time and familiar surroundings, to dedicate enough time towards its completion and are not under any pressure which is associated with the researcher's presence to participate or give answers. This method is much cheaper and gives the respondents more anonymity.

However, Cohen *et al.* (2011) caution that the absence of the researcher can render the data less honest and reliable. Respondents get tempted to tell lies or not to give the complete truth in the absence of the researcher who can usually detect lies if present. In addition, the researcher is not present to address any questions and queries, which may force respondents to omit such items or even withdraw their participation. Moreover, answers given may also not be accurate as a result of misinterpretation of questions.

To address the above criticisms, the researcher carefully explained everything to the students and gave them an opportunity to ask questions before they could start answering them. They were then asked to sit down quietly and respond to the questions, while the researcher was standing at the entrance, collecting all the completed questionnaires from the students as they left the venue.

With regard to the focus interviews, the researcher conducted them in person with all the students involved. According to Savin-Baden and Major (2013), structured interviews are more suitable when the researcher is aware of the questions raised and knows what needs to be answered. This enables the researcher to design questions that will answer the research questions. This assumption is compatible with the current study because there are some specific research questions that have been advanced and need to be answered.

The researcher identified the topics and issues to be addressed in the focus group interviews in advance and decided the sequence and answering of all the questions. The responses were then captured on an interview sheet for further analysis.

3.10 SPECIAL ETHICAL CONSIDERATIONS

According to Babbie (2013) and Fraenkel and Wallen (2009) researchers in social sciences ought to know and understand the universal assumptions and agreements held by researchers regarding what constitutes proper and improper conduct in scientific inquiry. This is further reinforced by Cohen *et al.* (2011) who add that ethical issues arise from the nature of the research study being pursued in terms of the procedure, the context in which the study is conducted, the participants, methods of data collection and data reporting.

Briggs and Coleman (2007) in particular suggest that regardless of the research paradigm researchers select to locate their study, they make attempts to promote the trustworthiness or validity of its findings through executing it within a rigorous framework that deals with the epistemological complexities of a research study's methodological process and intellectual focus. They further argue that research is a form of disciplined inquiry which maintains some specific principles at its center and strives to contribute to a body of knowledge and theory as cautiously and as accurately as possible as to develop knowledge for the society.

On the other hand, Lewis and Lindsay (2000) argue that any research study which involves human beings as participants is intrusive in various ways. This makes the possible effects of the study on the participants to differ. It is unfair to suggest that the research participants can just participate in a study for limited duration and then move on with their lives unchanged. This explains why there are some special ethical considerations that need to be observed at all times throughout the study.

Lewis and Lindsay (2000) further point out that ethical codes and guidelines regarding social research explicitly or implicitly originate from core ethical principles such as respect for a person's rights and dignity, competence, responsibility and integrity. Hennink *et al.* (2011) agree with these ethical principles but add justice to the list.

Hennink *et al.* (2011) further note that the application of these core ethical principles in research lead to the following important ethical considerations.

3.10.1 Informed consent

As noted by Lewis and Lindsay (2000), research studies which involve children, such as the current one, give the researcher extra responsibility. It is imperative to ensure that the students fully understand, not only the immediate effects of the research, but also the long-term ones, such as being video- recorded. Denzin and Lincoln (2008) stress that all research participants have the right to be informed about the nature and consequences of studies and experiments in which they are involved. This assumption is in line with appropriate respect for human beings, which is based on two major conditions. Firstly, the research participants must agree voluntarily to participate, without any form of force and secondly, their agreement must be based on full and open information being provided to them by the researcher.

However, contrary to the assumptions enshrined in this ethical consideration is the assumptions of de Vos, *et al.* (2011) who warned that the ethical consideration of informed consent may lead to compromised and contaminated research findings. They argue that the study participants may act differently after knowing what is being studied. As such, the researcher cannot rule out the possibility of students giving a false impression of their perceptions about their teaching and learning environment. It can also not be denied that some students even attempted to manipulate the perceptions of others during the focus group interviews because they were aware of the purpose of the study or because they wanted to pursue a specific agenda. However, these concerns cannot nullify the study findings but simply made the researcher to be more cautious and objective when interpreting the data collected.

According to Lewis and Lindsay (2000), consent must be given and must also be informed. Informed consent is when the learner participants are given an opportunity to decide on participation in a research study after being made aware of facts that are likely to influence their choices. Hennink *et al.* (2011) point out that this consideration implies that research participants ought to be given sufficient information regarding the

research, in a manner that is clear to them and allow them to make a voluntary decision to participate in the study. Cohen *et al.* (2011) note that it involves competency, voluntarism and full information. It is important to obtain the consent and cooperation of participants and anyone who may be involved in the study.

Lewis and Lindsay (2000) maintain that consent which is freely and voluntarily given means that due care and consideration is made to ensure that the participants do not feel obliged to participate in the study. Researchers who seek the participation of children such as teachers and caregivers in powerful positions are cautioned by Lewis and Lindsay (2000) to always remember that children may feel that they have to agree or will be punished if they refuse to participate. It is their responsibility to ensure that this does not happen.

The researcher obtained written consent from all the participants and stakeholders involved in the study. Since all the students involved in the study had the legal capacity and independence to decide on their participation in the study, it was not deemed necessary to obtain the informed consent of their parents or any other adults acting *in loco parentis*. The researcher explained everything about the study to them as well as the implications of their involvement or participation. The decision to participate and be involved in the study was put in writing and filed as evidence.

Among others, Crow, Wiles, Heath and Charles (2006) advocate for informed consent in research and argue that it results in much more reliable data. This is because participation is a result of a harmonious and understanding relationship as well as trust which may lead to improved participation rates and full cooperation. It was for this reason that the researcher made efforts to establish a relationship of open trust and mutual understanding with the students. This was also meant to make them feel comfortable to express their perceptions of the learning environment without any fear or doubt.

3.10.2 Voluntary participation/ self-determination

According to Hennik *et al.* (2011), research participants have the right to determine their own participation in any study and may refuse to participate without any negative

consequences. Babbie (2013) points out that participation must be voluntary and researchers may not force participants to participate. This is mainly because as Babbie (2013) puts it, most social research studies signify an invasion into the participants' lives. Participation requires a lot of effort, time and energy from the participants and usually disturbs their daily regular routines. This explains why it was important to inform the participants in this study from the onset that they have the right to withdraw from the study at any time when they no longer wanted to or felt comfortable to carry on participating. All the students were informed about their rights within the confines of the current study. This also applies to interviews.

However, as noted by Babbie (2013), the ethical principle of voluntary participation has its own shortfalls. Findings cannot be generalized in studies where all the participants are only those who voluntarily chose to participate, especially if they represent a smaller sample of the study population which participated in the study. The limitation on the generalizability of study findings is further explained by, Babbie and Mouton (2008) who point to the norm of voluntary participation as a norm which is against a number of scientific concerns. They argue that the scientific goal of generalizability is defeated and threatened when the participants in the study are only the people who voluntarily decide to participate. In this current study, all the students voluntarily participated. Hence, the findings fairly represent their overall perceptions of the learning environment.

3.10.3 Confidentiality

Denzin and Lincoln (2008) note that, confidentiality implies that all personal data must be secured and get published behind a shield of anonymity. Research participants must be protected from any harm or embarrassment that may be caused by the improper disclosure and publication of information obtained from them. Hennink *et al.* (2011) and Lewis and Lindsay (2000) maintain that research confidentiality implies that considerable care is made not to pass information to those connected to the study participants and disclose information in ways that protect the identity of those who gave it.

This idea of confidentiality is also raised by Babbie (2013) who argues that a research study can only guarantee confidentiality when the researcher can identify a response given by a participant but promises not to do so publicly. Lewis and Lindsay (2000) suggest that confidentiality can be achieved by anonymizing the participants, giving them some pseudonyms and omitting or changing those facts that may identify them.

In the current study, the researcher ensured and promoted confidentiality by advising the research participants not to write their real names on the questionnaires. To improve anonymity and confidentiality, the students were given the opportunity to complete the questionnaires in the absence of the researcher. It is acknowledged that the researcher knows all the research participants in this study by their names but this knowledge did not compromise the confidentiality of the information they provided on the questionnaire.

3.10.4 Access and acceptance

According to Lewis and Lindsay (2000), any research study is likely to raise ethical issues of access. Cohen *et al.* (2011) expands this point by noting that access to the organization where the research is going to be conducted and acceptance by those whose permission is necessary follows the principle of informed consent. They argue that efforts to gain access and acceptance create a perfect opportunity for researchers to present their own credentials as serious investigators and establish their own ethical position regarding the proposed study.

Since the study was largely carried out within the boundaries of a normal classroom and a familiar environment, where the researcher is currently working, access to the premises and the students was not a problem at all. However, the researcher still had to apply to the management of the university to conduct the study.

3.10.5 Minimization of harm/ no harm to participants

As noted by Fraenkel and Wallen (2009), researchers have the fundamental responsibility of taking all the possible and necessary steps to ensure that the study participants are protected from physical, psychological harm, discomfort and any form of

danger that may arise as a result of research procedure. A similar sentiment is echoed by Babbie (2013); de Vos *et al.* (2011) and Hennink *et al.* (2011), when they caution that all research studies may not in any way harm their participants or pose a threat to their health, lives, physical and psychological well-being.

It was therefore imperative that throughout this study, the physical, psychological and emotional well-being of the participants was promoted and protected. This was achieved by making sure that the venue for the study is safe, with aspects such as ventilation, classroom temperature, lighting and furniture arrangements taking top priority. The participants in the study were also encouraged to promote their own safety and that of their classmates. Informing respondents thoroughly about the potential impact of the study was also important in the decisions on whether or not to participate.

3.11 CONCLUSION

This chapter gave a description of the research design and methodological aspects of the current study, the justification of choosing such an approach and the data collection tools. Research design and methodological logistics were informed by the theoretical framework underlining the current study as well as the research topic. On the other hand, the data collection tools were selected based on the research design and their applicability to the study variables, research questions and the types of data sets required.

A description of the study population, the study sample, the sampling procedure has also been given in this section. This chapter has also provided some explanations regarding the data collection and data analysis procedures. Lastly, the ethical considerations observed and their relevance to the current study have also been highlighted.

CHAPTER 4

PRESENTATION, ANALYSIS AND DISCUSSION OF DATA

4.1 INTRODUCTION

This chapter primarily focuses on the presentation and analysis of data that was collected from the Accounting 1 students regarding their perceptions of teaching and learning and classroom environment at Central University of Technology, Free State, Welkom Campus. In discussing and analyzing the data collected through the constructivist learning environment questionnaire, emphasis will be put on the responses given by the students to each category based on the various means and standard deviations per category. The discussion will proceed to analyze the qualitative responses given by the students under the section of general comments and remarks, where they gave their recommendations in terms of modifying their lectures. The qualitative data obtained from the focus group interviews will be discussed based on the dominant themes that emerged from the data analysis that was done.

4.2 PRESENTATION, ANALYSIS AND DISCUSSION OF QUANTITATIVE DATA

4.2.1 Biographical data

A total of 112 students answered the questionnaire. Of the 112 students, 54 were males and 58 were females. While gender was not perceived to have any influence on the students' perceptions of the learning environment in this study, it is worth mentioning that there is a fair gender balance, which to some degree increases the credibility of the research findings since each gender was fairly represented. There was no significant bias towards any specific gender. It is also important to point out that being a typical classroom in a South African context, which is characterized by student diversity, these students were different in terms of their academic ability, ethnicity, expectations and socio-economic orientations, all of which could have potentially influenced their perceptions about the learning environment.

This information is summarized and presented below:

Table 4.1 Sample Profile of the Respondents (N=112)

Gender	Number of Students	Percentage
Females (2)	58	51.79%
Males (1)	54	48.21%
Total	112	100%

Table 4.2. Presentation of Students' Ratings of all the 42 Statements

	Statements	Mean	Standard Deviation
	In this class		
1	I learn about the world outside of school.	4.21	0.75
2	My learning starts with problems about the world outside of school.	3.62	1.19
3	I learn how Accounting can be part of my out-of-school life.	4.32	0.83
4	I get a better understanding of the world outside of school.	4.07	0.98
5	I learn interesting things about the world outside of school.	3.91	1.02
6	What I learn has nothing to do with my out-of-school life.	2.48	1.40
	In this class		
7	I learn that Accounting cannot provide perfect answers to problems.	3.14	1.42
8	I learn that Accounting has changed over time.	3.58	1.30
9	I learn that Accounting is influenced by people's values and opinions	3.42	1.37
10	I learn about the different Accounting concepts used by people in	3.63	1.33

	other cultures.		
11	I learn that modern Accounting is different from the Accounting of long ago.	3.58	1.44
12	I learn that Accounting is about inventing theories.	3.38	1.36
	In this class		
13	It is acceptable to ask the teacher "why do we have to learn this?"	4.24	1.15
14	It is acceptable to question the way I am being taught.	4.27	0.98
15	It is acceptable to complain about activities that are confusing.	4.34	1.03
16	It is acceptable to complain about anything that prevents me from learning.	4.46	0.87
17	It is acceptable to express my opinion.	4.63	0.74
18	It is acceptable to speak up for my rights.	4.32	1.08
	In this class		
19	I help the lecturer plan what I am going to learn.	2.74	1.33
20	I help the lecturer decide how well I am learning.	2.77	1.28
21	I help the lecturer decide which activities are best for me.	2.60	1.38
22	I help the lecturer decide how much time I spend on activities.	2.62	1.40
23	I help the lecturer decide which activities I do.	2.36	1.29
24	I help the lecturer assess my learning.	2.94	1.50
	In this class		
25	I get the chance to talk to other students.	4.43	0.84
26	I talk with other students about how to solve problems.	4.47	0.84
27	I explain my ideas to other students.	4.21	0.93
28	I ask other students to explain their ideas.	4.31	0.89
29	Other students ask me to explain my ideas.	4.08	0.97
30	Other students explain their ideas to me.	4.22	0.93
	In this class		
31	I am interested in Accounting lessons.	4.98	0.19
32	I am willing to learn.	4.63	0.88
33	What we do in this Accounting class is important to me.	4.82	0.68
34	I try my best.	4.82	0.54
35	I pay attention.	4.77	0.57

36	I enjoy Accounting lessons.	4.70	0.61
	In this class		
37	The lecturer is friendly to me.	4.56	0.91
38	The lecturer helps me with the work.	4.31	1.02
39	The lecturer is interested in my problems.	4.00	1.32
40	The lecturer goes out of his/her way to help me.	4.15	1.24
41	The lecturer moves around the class to talk to me.	4.14	1.27
42	The lecturer considers my feelings.	4.01	1.27
		3.9	1.05

The overall mean for the full scale which is made up of 42 statements is 3.9, which is closer to 4, meaning “often”. On the other hand, the overall standard deviation for the 42 statements is 1.05.

For a comprehensive and analytical analysis, each category of the classroom environment will be presented and discussed individually in terms of how it was rated by the students below. The analysis will focus on the ratings per individual statements as well as the overall rating of the category.

4.3 STUDENTS’ PERCEPTIONS OF ACCOUNTING

The information below reflects the perceptions of students about what is actually happening in their Accounting 1 classroom.

Table 4.3 on the next page shows how the students responded to the first set of six statements that were meant to obtain their perceptions on what they have learnt in the accounting classes and how it is related to the real world and to their personal experiences in real life. The statements sought to establish the relevance of the Accounting 1 course content according to the students’ real lives and the importance they ascribe to it.

As indicated in chapter 3, the responses were measured on a five point Likert type scale ranging from 1 to 5. Taking 3 as the median, scores falling below three will be

considered low, those falling on three as average, and those above three as moderate to high.

Table 4.3 A. Learning About The World (Real Life, Personal Voice)

	Statements	Mean	Standard Deviation
	In this class		
1	I learn about the world outside of school.	4.21	0.75
2	My learning starts with problems about the world outside of school.	3.62	1.19
4	I get a better understanding of the world outside of school.	4.07	0.98
5	I learn interesting things about the world outside of school.	3.91	1.02
6	What I learn has nothing to do with my out-of-school life.	2.48	1.40
	Overall mean	3.77	1.05

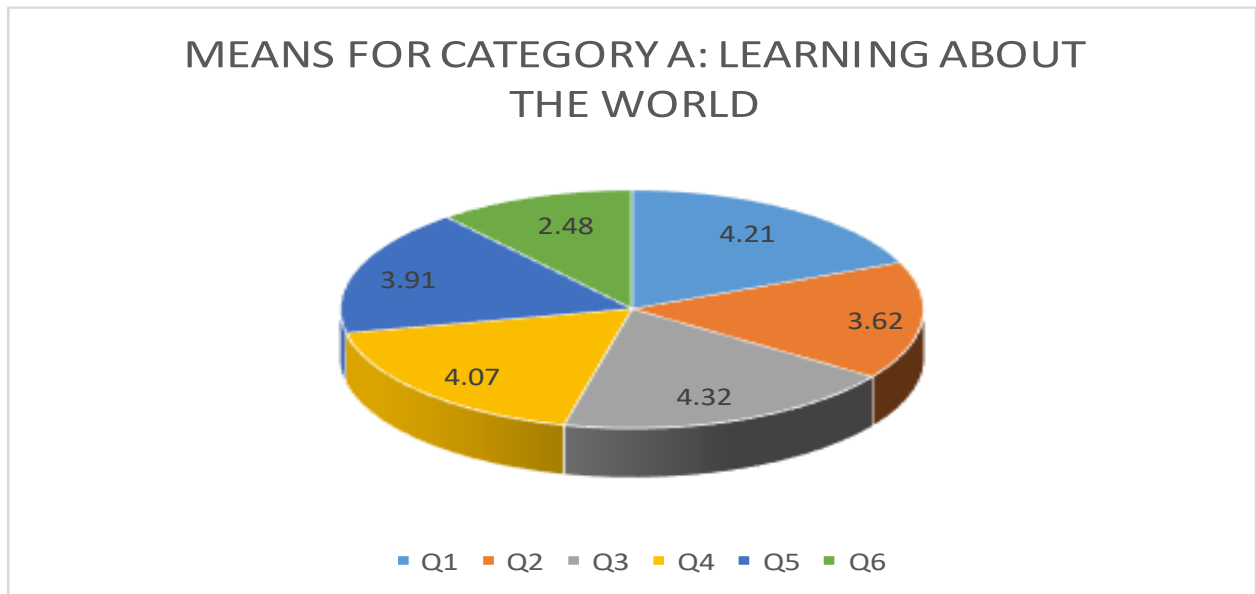


Figure 4.1 Pie chart representing means on learning about the world

Table 4.3 and **Figure 4.1** The overall mean for this category is show that on the basis of the students' ratings to all the statements on this category on learning about the world, the overall mean is 3.77, which is closer to 4, while the standard deviation is 1.03. A rating of 4 implies often (frequently), which means that the students agreed that they often (frequently) learn about the world in their accounting classroom. As revealed by the scores above, especially on responses to statement 1 and 4, the majority of the students responded to statements on learning about the world in the affirmative. They acknowledge and realize the important relationship between accounting and their real lives. They also perceive a strong connection between what they learn in the classroom and their personal experiences. Reference can be made to the lowest mean of 2.48 on statement number 6 and the highest standard deviation in the category, in which the majority of students disagreed that what they learn in the classroom has nothing to do with their out-of school life.

An explanation can be the reason that these students are specializing in B.Ed., Economic and Management Sciences, which includes Accounting, Economics and Business Studies as major subjects. It is thus assumed that they have been exposed to Accounting long enough to realize how it is related to their daily lives and how much their career success in life depends on it. This awareness of the relationship between what transpires in the classroom and in the real world is one of the most important assumptions of constructivist learning environments, which constantly seek to establish and maintain that awareness in the process of learning.

In addition, this finding is also consistent with the underlying belief of social constructivism, which places the students' experiences at the center of the teaching and learning process. For instance, as earlier alluded to, constructivists believe that meaningful teaching and learning can only take place when the students can perceive and establish a meaningful relationship between what they learn in the classroom and the reality in the world (Jacobs *et al.*, 2012; Mayer, 2009; Rowe and Wertsch, 2002 and Snowman and McCown, 2012).

Table 4.4 on the next page shows how the students responded to statements about

their perceptions on learning regarding accounting. This broad category was an extension of the first one on learning about the world. The statements in this category were meant to establish the students' perceptions about accounting as a subject and what it entails as a whole. Therefore, the ratings to these statements depended on the individual student's understanding of the general subject.

Table 4.4 B. Learning About Accounting (Uncertainty)

	Statements	Mean	Standard Deviation
	In this class		
7	I learn that Accounting provides perfect answers to problems.	3.14	1.42
8	I learn that Accounting has changed over time.	3.58	1.30
9	I learn that Accounting is influenced by people's values and opinions	3.42	1.37
10	I learn about the different Accounting concepts used by people in other cultures.	3.63	1.33
11	I learn that modern Accounting is different from the Accounting of long ago.	3.58	1.44
12	I learn that Accounting is about inventing theories.	3.38	1.36
	Overall Mean	3.46	1.37

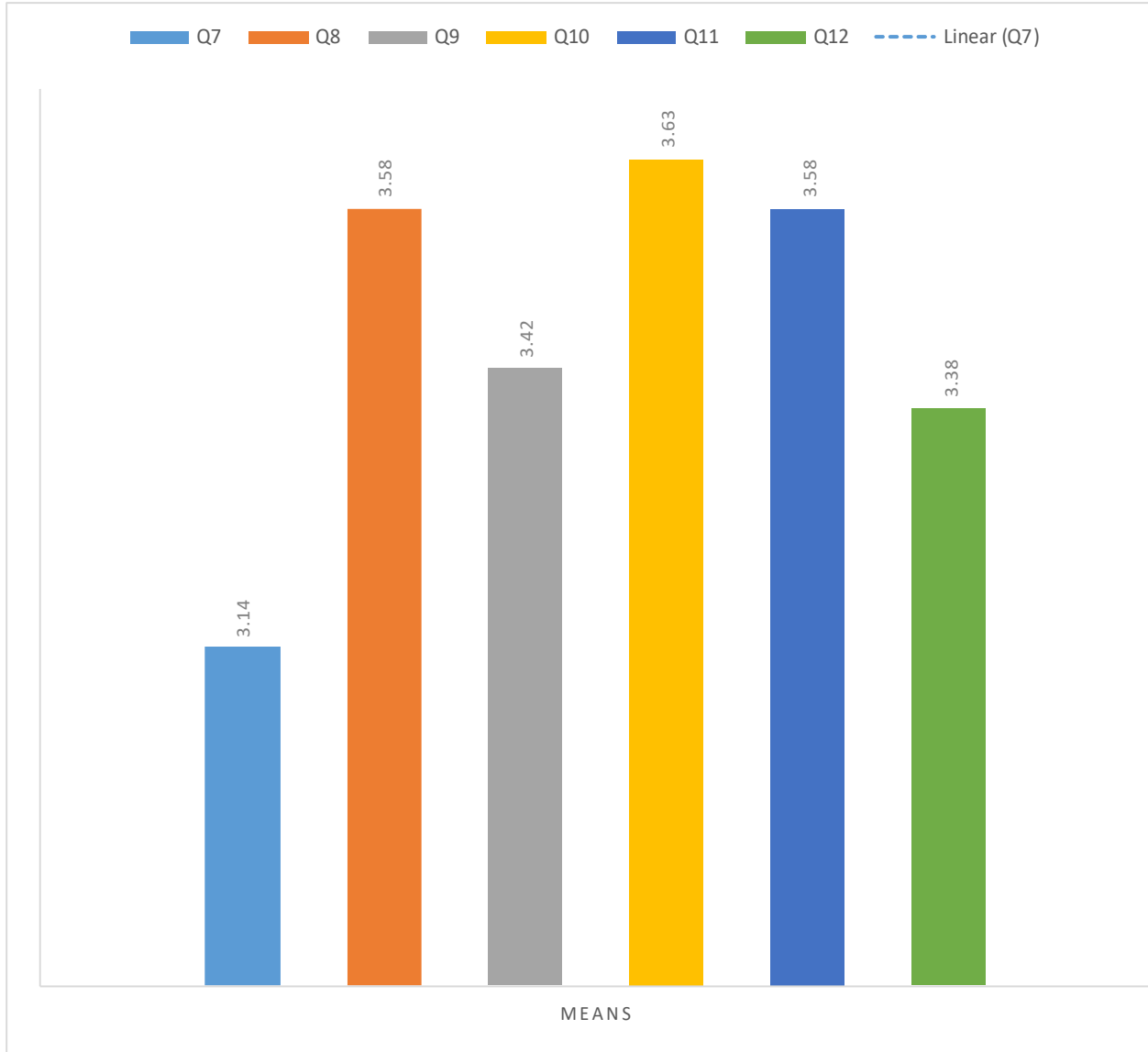


Figure 4.2 Bar graph representing means on learning about Accounting

Similar to the category on learning about the world, **Table 4.4** and **Figure 4.2** show the means per statement which indicate that the majority of students agreed that the teaching and learning of accounting as a subject has undergone some changes over the years, that it cannot provide perfect and absolute answers to their problems and that it is influenced by the views and opinions of different people. The students' responses to statements 7, 9 and 12 are close to three, which means that the students feel that they sometimes learn that accounting cannot provide perfect answers to problems, that accounting is influenced by people's values and opinions and that

accounting is about inventing theories. Their responses to statements 8, 10 and 11 indicate that they feel that they often learn that accounting has changed over time, learn about the different accounting concepts used by people in other cultures and learn that modern accounting is different from accounting of long ago.

While the means in this category are fairly and consistently similar, specific attention needs to be paid to statements number 10 and 12 in relation to social constructivism. The majority of students agreed that they learn about the different accounting concepts used by people in other cultures. This indicates how important students' awareness is about how culture affects and influences their learning. Snowman *et al.* (2009) argued that Vygotsky emphasized the role of culture and psychological tools in the teaching and learning.

The mode for statement 12 also indicates that a huge number of students agree that accounting is about learning about inventing theories. Reference can be made to the all-important and famous principle of double entry in accounting. This is an example of a psychological tool for the cognitive development of students as argued by Vygotsky (McInerney 2005). Psychological tools are the cognitive devices and procedures through which the students learn, understand, communicate in the classroom, and explore the world around them.

Table 4.5 represents the students' ratings on specific statements under the category of learning to speak out, which is all about the students' critical voices. These specific statements in this category were meant to determine how the students perceived the classroom learning environment in terms of expressing themselves and the extent to which they were actively involved in selecting and determining the teaching and learning activities. This category is about getting the views of students on how constructivist the classroom learning environment is.

Table 4.5 C. Learning To Speak Out(Critical Voice)

	Statement	Mean	Standard Deviation
	In this class		
13	It is acceptable to ask the teacher "why do we have to learn this?"	4.24	1.15
14	It is acceptable to question the way I am being taught.	4.27	0.98
15	It is acceptable to complain about activities that are confusing.	4.34	1.03
16	It is acceptable to complain about anything that prevents me from learning.	4.46	0.87
17	It is acceptable to express my opinion.	4.63	0.74
18	It is acceptable to speak up for my rights.	4.32	1.08
	Overall Mean	4.38	0.98

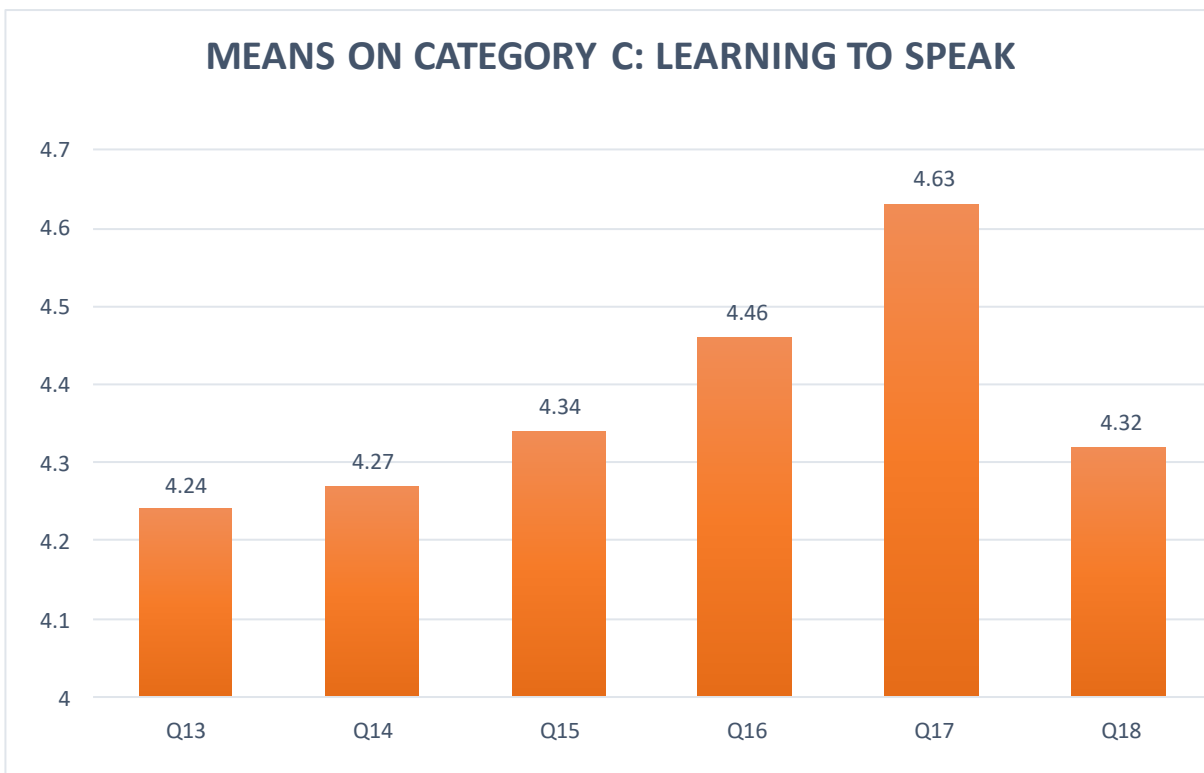


Figure 4.3 Bar graph representing means on learning to speak out

As indicated by the means in this category in **Table 4.5** and **Figure 4.3**, the students are unanimous that the learning environment often allows them to speak out about

their learning. Responses to statement 17 indicate that the students agree that it is always acceptable for them to express their opinions in the classroom. In a nutshell, all the students rated the statements in this category very high. This can be attributed to the fact that the lecturer uses an open door policy and always involves the students in the teaching and learning process. The students are unanimous that they are given the opportunity to express themselves clearly in the classroom and to actively engage with their classmates in the classroom. Thus judging from the responses in this category, one can say that the students are fully empowered and are in charge of their own learning and determine the pace as well. This confirms the earlier findings by Greenway (2005) who discovered that academic engagement is a significant predictor of success among students and therefore students need to be always actively engaged in all teaching and learning matters.

This implies that the conditions in the classroom support social constructivism and cooperative learning arrangements where students can learn from each other. These findings also demonstrate that the classroom learning environment promotes the relationship dimension as explained in the socio-ecological model (Moos, 1974; Arisoy, 2007; Lakhan and Ekundayo, 2013; Rakici, 2004 and Rodavan and Makovec 2015). The means in this category are generally high and the lecturer should therefore keep up the good work and sustain it.

Another picture emerges when it comes to the next category, which is the students' dissatisfaction in shared control of their teaching and learning.

Table 4.6 on the next page focuses on the responses provided by the students to statements which were meant to get their opinions as to the degree in which the lecturer involves them in the planning and selection of teaching and learning activities. The statements also provided the lecturer with feedback from the students in terms of how he created learning opportunities for students.

Table 4.6 D. Learning To Learn (Shared Control)

	Statements	Mean	Standard Deviation
	In this class		
19	I help the lecturer plan what I am going to learn.	2.74	1.33
20	I help the lecturer decide how well I am learning.	2.77	1.28
21	I help the lecturer decide which activities are best for me.	2.60	1.38
22	I help the lecturer decide how much time I spend on activities.	2.62	1.40
23	I help the lecturer decide which activities I do.	2.36	1.29
24	I help the lecturer assess my learning.	2.94	1.50
	Overall Mean	2.67	1.36

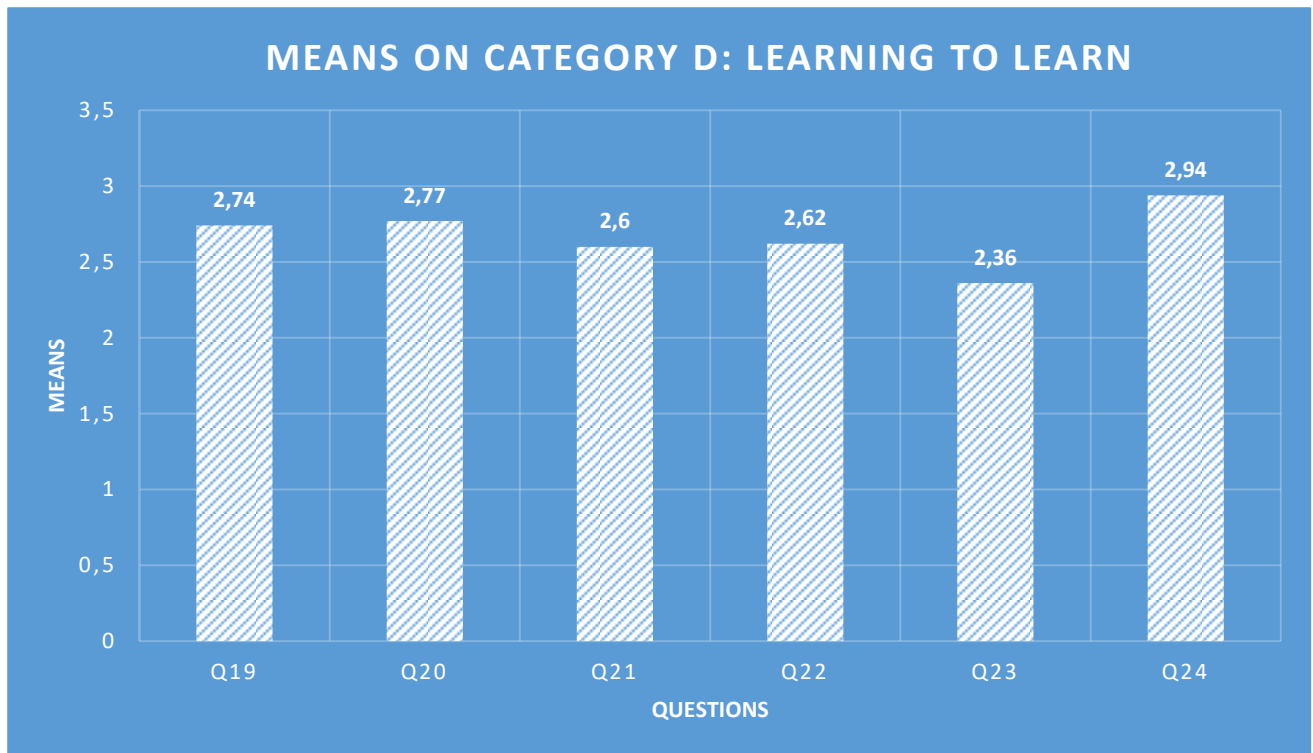


Figure 4.4 Graphical representation of means on learning to learn

Table 4.6 and **Figure 4.4** above display the students' responses which revealed that they perceive the learning environment to sometimes enable them to learn while they believed that they seldom helped the lecturer to decide their learning. These findings

highlight that the prevalence and amount of collaborative learning and lecture support in teaching and learning activities was underscored. All the means to statements that were presented to the students in this category are below 3.0, which is a very worrying factor. These findings also indicate that the conditions in the classroom were perceived by the students as not promotive of the personal development dimension and the systems maintenance and systems change dimensions of the socio-ecological model. The findings also do not conform to the notion of autonomy and active involvement of students for active learning (Abraham *et al*, 2008 and Bakhshialiabad *et al*, 2015). The students' concerns in this regard were also raised in the focus group interviews in their responses to questions on the personal dimension of their learning environment.

The responses and the mean in this category indicate that the students are not satisfied with their levels of involvement in issues relating to their teaching and learning of Accounting. The students feel that the lecturer does not involve them in planning and designing their learning. This can be used to explain the generally poor academic performance of some students in the course. As demonstrated by Greene *et al*. (2004), improved lecturer support and student collaboration among students, promotes academic success and the students' satisfaction in the course.

While the students have a genuine concern in this category, it is important to note that the size of the classes does not give the lecturer the time to tailor make instruction and consider, let alone involve, different, individual students. These findings are also corroborated by the themes that emerged from the qualitative data obtained from the focus group interviews, where students lambasted and lamented the fact that their critical voice was ignored by the lecturer in academic and instructional planning.

The lecturer is always under pressure, not only to finish the lesson and move on to the next class but to complete the work schedule as well. More than often, lecturers have to compete with time in setting tests and exams, marking and meeting the deadlines for the submission of marks to the exam department. This leaves them with no time to consult and involve students when it comes to the planning and selection of teaching

and learning activities.

In light of the above, the lecturer becomes more task oriented than student or people oriented and ignores their feelings and views. This explains why the means per statement in this category are very low. It also shows an area that needs ongoing improvement.

Table 4.7 below presents the students' perceptions on the extent to which the classroom learning environment allows them to negotiate and actively engage with other students in teaching and learning activities. This category represents the relationship dimension of the socio-ecological model of learning environments.

Table 4.7 E. Learning To Communicate (Student Negotiation)

	Statements	Mean	Standard Deviation
	In this class		
25	I get the chance to talk to other students.	4.43	0.84
26	I talk with other students about how to solve problems.	4.47	0.84
27	I explain my ideas to other students.	4.21	0.93
28	I ask other students to explain their ideas.	4.31	0.89
29	Other students ask me to explain my ideas.	4.08	0.97
30	Other students explain their ideas to me.	4.22	0.93
	Overall Mean	4.29	0.90

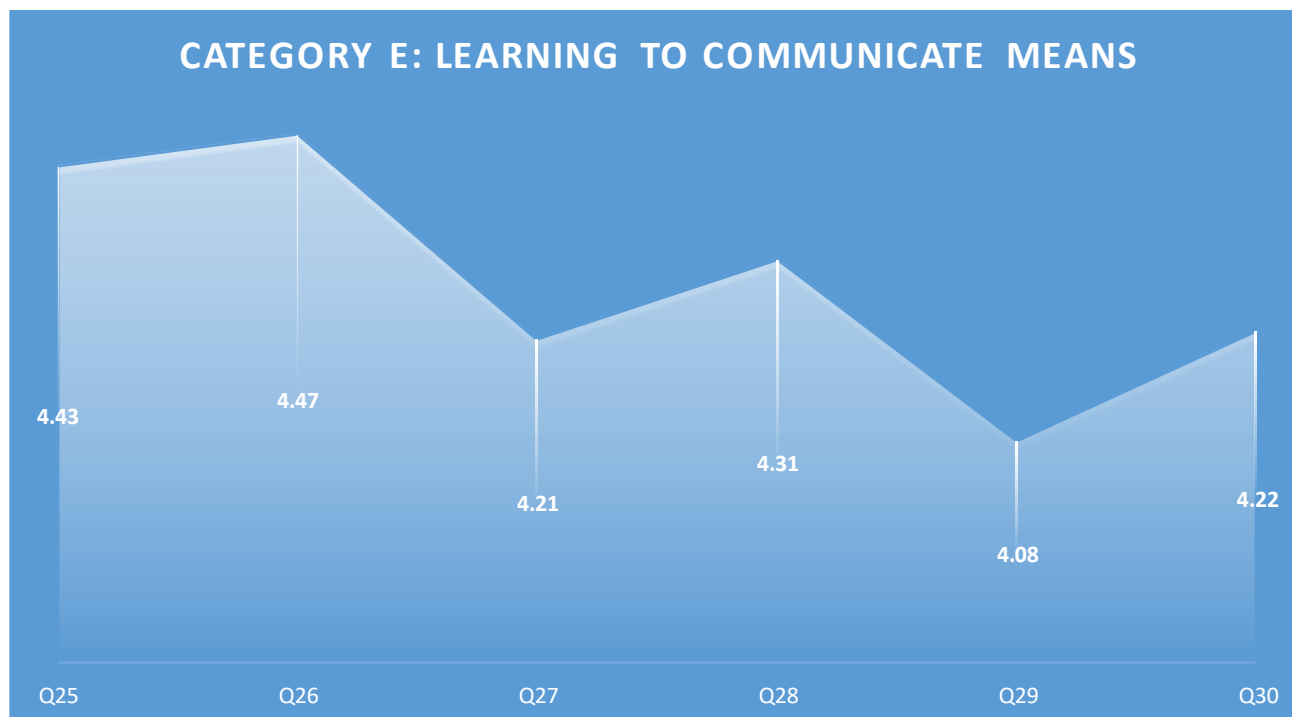


Figure 4.5 Diagrammatical presentation of means on learning to communicate

Table 4.7 and **Figure 4.5** above reveal that the students' ratings of all the individual statements in this category scored a mean of 4, which means that the learning environment often promoted student negotiation and their ability to communicate in the classroom. Under this category of learning to communicate and student negotiation, the students seem to be unanimous that communication in the classroom and among themselves is very satisfactory. This is evidenced by the means to each statement which are all above 4.20 and all the standard deviations which are below 1.

These responses indicate that students perceive their classroom learning environment to be very promotive and supportive of student negotiation, communication and open dialogue in the learning process. This is one of the most important fundamental principles and pillars of social constructivism and the relationship dimension of the socio-ecological model of the learning environment. The lecturer should maintain and sustain the good work being done under this category.

Table 4.8 represent the students' perceptions on the effort and commitment they put in

learning accounting.

Table 4.8 F. Attitude In Learning Accounting (Commitment)

	Statements	Mean	Standard Deviation
	In this class		
31	I am interested in Accounting lessons.	4.98	0.19
32	I am willing to learn.	4.63	0.88
33	What we do in Accounting class is important to me.	4.82	0.68
34	I try my best.	4.82	0.54
35	I pay attention.	4.77	0.57
36	I enjoy Accounting lessons.	4.70	0.61
	Overall Mean	4.78	0.58

Table 4.8 above displays the six statements in the category of attitude in learning accounting. All the statements have a mean of 5, which implies that the students believe that they are always committed to accounting. All the students admit that they are interested in Accounting. This can be attributed to the fact that Accounting forms part of the compulsory course requirements of their study program. This is also explained by the fact they purposefully chose to take the subject as one of their specialist learning areas. This revelation corroborates and support the findings made by Tinto (1993) who established that motivation is an important predictor of academic success of first year students and for the rest of their careers, where they consciously direct their actions and pursue a premeditated purpose in their lives.

These findings indicate that the classroom learning environment supports and promotes some of the variables in the personal domain of the socio-ecological model. It also shows the importance of creating self-awareness, autonomous and self-regulated students.

However, looking at the way the students rated statements on learning to learn, one would expect them to rate this category very poorly as well. Most studies on student motivation demonstrated that students are less motivated to learn when they are not actively involved and consulted in the planning and selection of the learning material.

For instance, some investigations by Daniels, Kalkman and McCombs (2001); McLoughlin and Luca (2004); and Tella (2007) showed high motivation and commitment towards teaching and learning in cases where the students are involved and low motivation to learn when their critical voice was ignored. Thus there seems to be a contradiction between these scores and the responses from the focus group interviews in which students lambasted lack of involvement in decisions related to their teaching and learning.

Nevertheless, it is important to note that student motivation is not a function of a single variable, but depends on several factors. To this end, one can cite the scores given by the students in other categories such as the ratings on learning to learn and student negotiation as a plausible explanation for this contradiction.

Table 4.9 below shows the responses of students to statements on the nature and magnitude of support they receive from their lecturer in the classroom. The statements also allowed the students to give feedback to the lecturer as an individual on how supportive he was in promoting their academic success.

Table 4.9 G. Lecturer Support In Learning Accounting

	Statements	Mean	Standard Deviation
	In this class		
37	The lecturer is friendly to me.	4.56	0.91
38	The lecturer helps me with the work.	4.31	1.02
39	The lecturer is interested in my problems.	4.00	1.32
40	The lecturer goes out of his/her way to help me.	4.15	1.24
41	The lecturer moves around the class to talk to me.	4.14	1.27
42	The lecturer considers my feelings.	4.01	1.27
	Overall Mean	4.2	1.17

Table 4.9 indicate that while the findings on the statements on learning to learn demonstrate that the lecturer is more task oriented than student oriented, the means in this category indicate that lecturer support is often there and seems to be satisfactory. Reference can be made to the overall mean of 4.20 in this category. Thus the means in this category are high and inconsistent with the mean to responses given to statements

on the category about learning to learn. It is thus debatable and raises suspicion that the students were simply being rhetoric. One would have expected the students' responses to give a low mean, especially because the lecturer has very little time to consider their feelings and offer support at a personal level in the classroom. The students appear to have shown some bias towards the lecturer and failed to respond to statements in this category objectively, which shows some inconsistencies in their perceptions when compared with other related categories in their learning environment.

This finding also contradicts the rationale for the request made by the students for supplementary instruction in the focus group interviews and the open-ended section of the questionnaires. Since they claimed to have been receiving tremendous support from the lecturer, one would assume that there was no need to spend more time again with them regarding this subject. However, the request can only be interpreted to be a reinforcement of the interest and motivation the students have in accounting.

Table. 4.10 Summary of Descriptive Statistics

Category	Mean	SD	Min Value	Max Value	Range	Rank Order
Learning About the World	3.77	1.03	2.48	4.32	1.84	5
Learning About Accounting	3.46	1.37	3.14	3.63	0.49	5
Learning to Speak out	4.38	0.98	4.24	4.63	0.39	2
Learning to Learn	2.67	1.36	2.36	2.94	0.58	7
Learning to Communicate	4.29	0.90	4.21	4.47	0.26	4
Interest in learning Accounting	4.78	0.58	4.63	4.98	0.35	1
Teacher Support in learning Accounting	4.2	1.17	4.00	4.56	0.56	3

Table 4.10 shows a summary of descriptive statistics for the quantitative data. The range is the difference between the highest and the minimum values. Johnson and Christensen (2014); McMillan and Schumacher (2010) and Terre Blanche *et al.* (2011) criticize the range for taking on the two most extreme numbers into account. As such, they agree that researchers do not use it very often with McMillan and Schumacher (2010) emphasizing that it is the least measure of variability and can be biased while

Johnson and Christensen (2014) point out that it is adversely affected by the presence of a single extreme number.

Notwithstanding these limitations, the range was used in the current study to measure variability of students' perceptions on issues relating to the classrooms and their actual learning of Accounting. As indicated in **Table 4.10** above, the highest variability was on the students' perceptions on learning about the world. The range in all the other categories is below 1, which is very low and suggests that most of the students share similar views and perceptions about them. Thus the data demonstrate some degree of uniformity on the students' perceptions of their classroom and learning environment, which increases the reliability and validity of the study findings.

Below is a presentation of all the means for the individual 42 statements or questions as rated by the students.

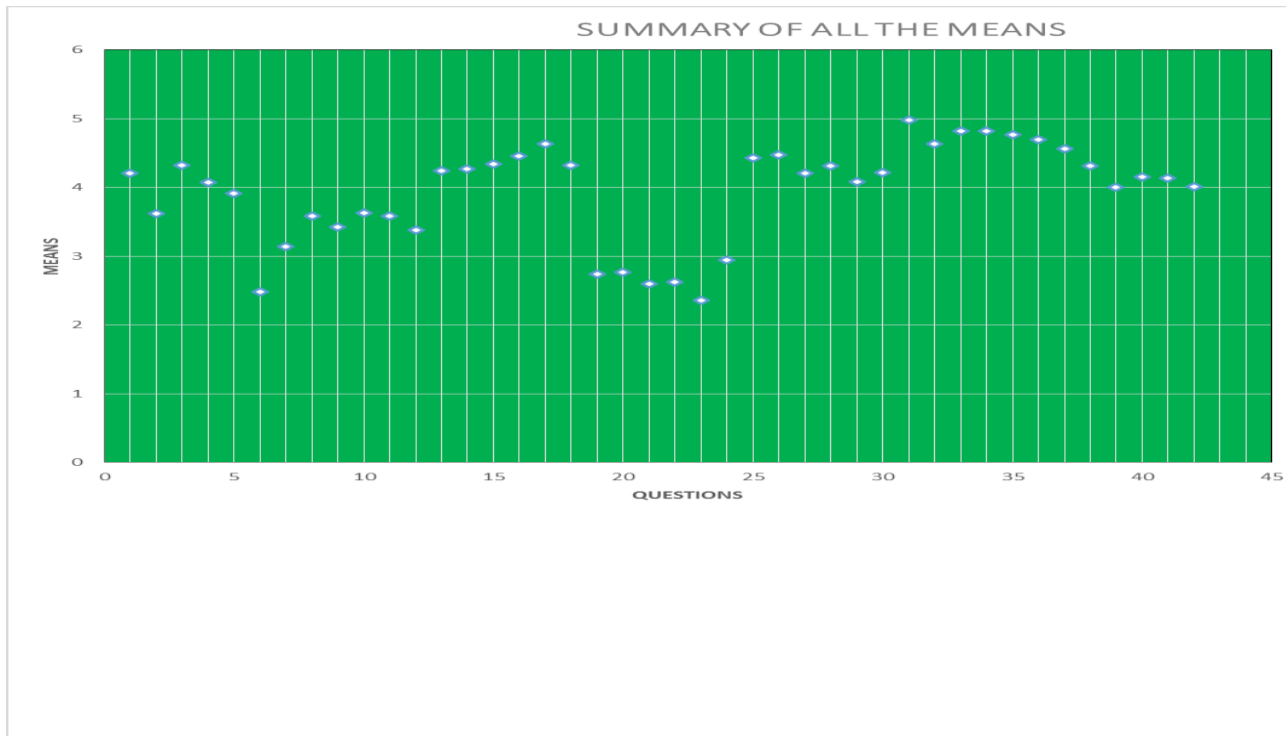


Figure 4.6 Scatter plot representing all the means in each category

The upcoming discussion will focus on the analysis of the data that was obtained from the students through the focus group interviews that were administered. These interviews were also meant to validate and corroborate the findings from the constructivist learning environment questionnaire.

4.4 PRESENTATION, ANALYSIS AND DISCUSSION OF QUALITATIVE DATA FROM THE FOCUS GROUP INTERVIEWS WITH STUDENTS

From the 108 students who participated in the study, the researcher used convenient sampling to select 48 students to participate in the focus group interviews. These 48 students were then divided into 8 groups of 6 students each. All the groups responded to a similar set of questions as indicated below. The themes and sub-themes that emerged from a thematic analysis of their responses are presented below as well.

Table 4.11. Focus Group Interview Questions and themes that emerged from the data

RELATIONSHIP DIMENSION		
QUESTIONS	THEMES	KEY ISSUES EMERGING FROM THEMES
1. How does the classroom learning environment and learning arrangements affect the way you relate to the lecturer and your classmates?	<ul style="list-style-type: none"> Formal and friendly learning environment. 	<ul style="list-style-type: none"> Professional relationship with the lecturer. Academic/learning relationship with classmates. Warm and friendly. Academic and lesson related jokes.
2. What do you think are the specific variables in the classroom which have a direct effect on your relationship with both the lecturers and other	<ul style="list-style-type: none"> Classroom rules and norms. Lecturer attributes or variables. 	<ul style="list-style-type: none"> Respect for each other. Tolerance of each other's differences. The lecturer's approach to teaching and learning can create either a friendly or

students?		intimidating learning environment.
3. How does your relationship with the lecturer and other students affect your academic performance in accounting?	<ul style="list-style-type: none"> • Student involvement needed in teaching and learning process. 	<ul style="list-style-type: none"> • Communication. • Expressing oneself. • Asking questions. • Confidence.
4. What can be done to enhance and promote positive and academically enabling relationships among all the stakeholders in the learning environment for accounting?	<ul style="list-style-type: none"> • Classroom rules and practices. 	<ul style="list-style-type: none"> • Open door policy from lecturer. • Improved communication. • Demolishing the social and political boundaries that separate students. • Tolerance and acceptance.
PERSONAL DIMENSION		
QUESTIONS	THEMES	KEY ISSUES EMERGING FROM THEMES
5. How does the learning environment promote your orientation towards teaching and learning tasks, enhance a competing atmosphere, encourage a spirit of academic research and self-regulated learning	<ul style="list-style-type: none"> • Lecturer intervention. • Negative Responses. 	<ul style="list-style-type: none"> • Lecturer simply presents lessons. • Feedback after tests- not enough. It should identify top and low achievers. • Achievement positions

behaviour?		
6. To what extent does the classroom atmosphere and learning tasks promote your academic growth and cognitive development?	<ul style="list-style-type: none"> Limited class and assessment activities. 	<ul style="list-style-type: none"> Few class activities to monitor academic progress. Academic growth is only determined by one formative assessment per term. Need for continuous assessment tasks during the term.
7. In what ways do you benefit as an individual and dynamic student from the learning environment and the way through which learning tasks are arranged and carried out in the classroom?	<ul style="list-style-type: none"> Academic and social benefits. 	<ul style="list-style-type: none"> Group activities improve interpersonal and communication skills. Better understanding of the content through sharing and exchanging of ideas. Different perspectives of reality.
8. How often does the lecturer give you opportunities for expanded learning and learning beyond the classroom? Do you think these opportunities are enough?	<ul style="list-style-type: none"> Limited expanded opportunities. 	<ul style="list-style-type: none"> Homework is not strictly supervised and marked in class by the lecturer. Only one supplementary instruction session per week.
9. What would you suggest as an ideal measure to make the learning environment for accounting	<ul style="list-style-type: none"> Consider and acknowledge student needs. Student-centeredness 	<ul style="list-style-type: none"> Avoid one size fits all approach to classroom instruction. Attempt to address the

<p>more value adding and beneficial to you?</p>		<p>learning needs of individual students such as slowing down the pace when dealing with slow learning students.</p> <ul style="list-style-type: none"> • Use of visual aids. • More supervised exercises.
<p>SYSTEM MAINTENANCE DIMENSION</p>		
<p>QUESTIONS</p>	<p>THEMES</p>	<p>ISSUES EMERGING FROM THEMES</p>
<p>10. Are there clear expectations of both the students and the lecturer in the accounting classroom?</p>	<ul style="list-style-type: none"> • Lecturer expectations. 	<ul style="list-style-type: none"> • The lecturer tells us about his expectations from us, which is active participation and satisfactory academic performance in the tests and examinations. • Expectations must be based on individual students in terms of their personal abilities and attributes.
<p>11. Do you think you have control of the environment and physical comfort that you need during the lesson?</p>	<ul style="list-style-type: none"> • Inadequate physical resources. 	<ul style="list-style-type: none"> • The furniture in the classroom is old (the old buildings). • No air conditioner to suit the prevailing weather. • The air conditioner in the new building (O007) is difficult to operate for both

		<p>the lecturer and the students.</p> <ul style="list-style-type: none"> • Students are not at liberty to decide where they want to have the class.
<p>12. How does the classroom learning environment respond to changes in terms of your learning needs as students and the overall approach to teaching and learning?</p>	<ul style="list-style-type: none"> • Modern technological based media used. 	<ul style="list-style-type: none"> • Projectors have been installed in both venues for accounting in the old and new buildings. • White boards have been installed in O Block classrooms. • The lecturer uses both the whiteboard and projector for teaching and learning.
<p>13. What are your opinions on the differentiation of lessons, how clear the classroom rules and instructions are and how differences in terms of thinking are accepted in the classroom?</p>	<ul style="list-style-type: none"> • Differentiation of lessons to be more visible. • Classroom rules and instructions. 	<ul style="list-style-type: none"> • With the exception of new topics that may require a new approach, most lessons are the same. • Classroom rules such as no eating and use of cellphones in class are usually ignored by the students. Which often angers the lecturer because it's a sign of disrespect and disregard of rules. • Students are only given the classroom rules once in the first lesson of the term. There is a need for constant reminders. • Students need to be involved in designing of

		<p>class rules and instructions.</p> <ul style="list-style-type: none"> • Some students laugh at incorrect responses while others make fun of the student who gave the wrong answer.
<p>14. To what extent does the classroom learning environments embrace student diversity and always keep pace with their individual needs?</p>	<ul style="list-style-type: none"> • Diversity is accommodated. 	<ul style="list-style-type: none"> • The classroom has students of mixed academic ability. • The formal language of instruction during the lesson is English. • Students are allowed to speak in vernacular when they consult the lecturer in the office for better understanding. • The classrooms are friendly for physically challenged students such as those with wheel chairs.
<p>15. How do you want future lessons to be structured to give you improved control over the learning environment and offer clearer expectations?</p>	<ul style="list-style-type: none"> • Active involvement and engagement. 	<ul style="list-style-type: none"> • Involve students in planning for lessons. • Allow students to determine the pace of the lesson. • Involve students in deciding about the types and nature of classroom activities. • Constant feedback on academic progress.

CONSTRUCTIVIST IDEAS		
QUESTIONS	THEMES	ISSUES EMERGING FROM THEMES
16. Can you attribute your performance in accounting to the way in which the lessons are structured and delivered to you in class?	Interested and challenging lesson preparation.	<ul style="list-style-type: none"> • The lecturer always tries to make learning more interesting and enjoyable by adding a sense of humour during the lesson presentation. • The lessons are sometimes presented in ways that challenge students for further research or study into the topic. • The calling of non-volunteers to answer questions during the lesson forces students to come to class prepared.
17. In your own views, to what extent do you think the classroom learning environment is student centred?	<ul style="list-style-type: none"> • Controlled lecturer involvement . 	<ul style="list-style-type: none"> • Only the lecturer decides on the teaching and learning material. • The lecturer dictates the pace of the lesson. • The lecturer dominates most lessons.
18. What strategies do you think need to be incorporated into the teaching and learning process to make it more student-centred?	<ul style="list-style-type: none"> • Group work and cooperative teaching strategies. 	<ul style="list-style-type: none"> • More group discussions. • Cooperative learning. • Group homework. • Research and presentations.

4.5 NARRATIVE ANALYSIS AND INTERPRETATION OF STUDENTS' RESPONSES TO QUESTIONS

The following codes will be used to denote each of the eight focus group interviews that were formed from the 48 students who participated in the focus group interviews and the individual 6 students in each one of them.

Table 4.12 Presentation of participants in the Focus Group Interviews

FOCUS GROUP INTERVIEWS (8 Focus group interviews)	CODE	STUDENTS (48 Student participants)	PARTICIPANT CODE
	FOCUS GROUP INTERVIEW: A Assigned Group Code: FGIA.	STUDENT:01	A1
		STUDENT:02	A2
		STUDENT:03	A3
		STUDENT:04	A4
		STUDENT:05	A5
		STUDENT:06	A6
	FOCUS GROUP INTERVIEW: B Assigned Group Code: FGIB.	STUDENT:07	B1
		STUDENT:08	B2
		STUDENT:09	B3
		STUDENT:10	B4
		STUDENT:11	B5
		STUDENT:12	B6
	FOCUS GROUP INTERVIEW:C Assigned Group Code: FGIC.	STUDENT:13	C1
		STUDENT:14	C2
		STUDENT:15	C3
		STUDENT:16	C4
		STUDENT:17	C5
		STUDENT:18	C6
		STUDENT:19	D1
		STUDENT:20	D2
		STUDENT:21	D3

	FOCUS GROUP INTERVIEW: D Assigned Group Code: FGID.	STUDENT:22	D4
		STUDENT:23	D5
		STUDENT:24	D6
	FOCUS GROUP INTERVIEW: E Assigned Group Code: FGIE.	STUDENT:25	E1
		STUDENT:26	E2
		STUDENT:27	E3
		STUDENT:28	E4
		STUDENT:29	E5
		STUDENT:30	E6
	FOCUS GROUP INTERVIEW: F Assigned Group Code: FGIF.	STUDENT:31	F1
		STUDENT:32	F2
		STUDENT:33	F3
		STUDENT:34	F4
		STUDENT:35	F5
		STUDENT:36	F6
	FOCUS GROUP INTERVIEW: G Assigned Group Code: FGIG.	STUDENT:37	G1
		STUDENT:38	G2
		STUDENT:39	G3
		STUDENT:40	G4
		STUDENT:41	G5
		STUDENT:42	G6
	FOCUS GROUP INTERVIEW:H Assigned Group Code: FGIH.	STUDENT:43	H1
		STUDENT:44	H2
		STUDENT:45	H3
		STUDENT:46	H4
		STUDENT:47	H5
		STUDENT:48	H6

4.5.1 RELATIONSHIP DIMENSION

1. How does the classroom learning environment and learning arrangements affect the way you relate to the lecturer and your classmates?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Formal and friendly learning environment. 	<ul style="list-style-type: none"> • Professional relationship with the lecturer. • Academic/learning relationship with classmates. • Warm and friendly. Academic and lesson related jokes.

All the students in the focus group interviews seemed to agree that the manner in which teaching and learning takes place in the classrooms creates a formal relationship between them and the lecturer and their classmates. This corroborates the findings of Akar and Yildirim (2005) and Collins (2008) who established that there is always a formal relationship between the educator and the learners in any teaching and learning context. The students further acknowledged that while there is a professional relationship between them and the lecturer, the use of humour and jokes coupled with an ever smiling face and friendly voice make the learning environment more friendly and welcoming.

However, some students indicated that since they spend most of their time together, they sometimes overlook the academic relationship among them with their classmates during the lesson. This in a way compromises their learning since they tend to forget that they are in a classroom where formal teaching and learning takes place. For instance, **student A1** in (Focus Group Interview A) **FGIA** commented:

“Thina we live together as a group, go to the same church and we are all members of SASCO, we share similar interests and hobbies. This blurs the line between our academic relationship as classmates and social or personal relationships outside the classroom”

This concern was also confirmed by **student C2** in (Focus Group Interview C) **FGIC** who alluded that:

“Because we are very close friends on social media and other platforms, it becomes tricky to be more serious with each other when we are in the classroom. But it is different with you sir as the lecturer because we only interact in the classroom, which makes it easy for us to relate to you as a professional”

It can be tempting to assume that based on the above responses, the students did not understand the questions correctly and very well. On the contrary, these responses suggest that while the relationship dimension of the learning environment is largely dependent on some specific variables in the classroom such as the learning atmosphere or climate, it can also be influenced by factors and forces outside the classroom such as the kind of relationships and bonds students have with each other outside the classroom. This argument is evident in the responses given to question two as shown below.

2. What do you think are the specific variables in the classroom which have a direct effect on your relationship with both the lecturers and other students?

THEMES	ISSUES EMERGING FROM THEMES
<ul style="list-style-type: none"> • Classroom rules and norms. • Lecture attributes or variables. 	<ul style="list-style-type: none"> • Respect for each other. • Tolerance of each other’s differences. • The lecturer’s approach to teaching and learning can create either a friendly or intimidating learning environment.

The students commented on the classroom variables which they believed have a direct effect on their relationship with each other and the lecturer (Naroth, 2010 and Olusegun, 2015). Their responses demonstrated that they believe classroom rules and the lecturer’s overall personality and approach to teaching and learning to be the most influential variables in this regard.

Referring to classroom rules, **student B5** in **FGIB** commented that:

“The fact that we are expected to respect each other in this classroom makes it difficult to make jokes about each other or laugh openly on wild answers, sir, you told us to be tolerant of each other’s different views and we simply wanna do that”

This view of classroom rules as a determinant of the nature and type of the relationship between the occupants of any given environment is also endorsed by Bak, Bahardien, Morrow and Pendlebury (2010) who contended that for institutions to be able to offer services and for their specific practices to flourish smoothly, there is a need for both constitutive and regulative rules. Bak, *et al.* (2010) further argue that these rules are important in regulating and controlling the behaviour and conduct of people in those institutions and environments.

Commenting on the lecturer’s role on the relationship dimension in the classroom, student **D6** in **FGID** said:

“Sir, you talk to us and teach in a friendly yet firm manner, which makes the classroom climate more warm and welcoming. You treat us with respect and like adults”

Most of the students in other focus group interviews nodded to this, while **student C4** in **FGIC** in another group added:

“Mr Mapuya, we always feel at home in the accounting classroom because you make it possible”

On the basis of these responses, it can be suggested that the lecturer has the most powerful positional and subject expert authority in the classroom which make it very easy to influence the relationship dimension in the classroom. This sentiment also subscribes to the findings of Collins (2008) and Olusegun (2015) which emphasised the role played by educators in making constructivist learning environments a reality in all classrooms. This can be done through the adoption and enforcement of very strict and stringent classroom rules and a dictatorial approach to classroom related and instructional matters. This finding is consistent with the sentiments of Rodavan and Makovec (2015) who argued that the relationship dimension of the learning environment

emphasizes the nature, quality and power of personal relations between the different occupants of the environment in any given context.

The next question sought to obtain the students' perceptions on how the relationship dimension affected their academic performance in accounting.

3. How does your relationship with the lecturer and other students affect your academic performance in accounting?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Student involvement needed in the teaching and learning process. 	<ul style="list-style-type: none"> • Communication. • Expressing oneself. • Asking questions. • Confidence.

The responses to this question suggest that students believe that their levels of engagement and involvement in the teaching and learning process depends largely on their relationship with the lecturer and classmates. It is this level of engagement and involvement in the teaching and learning process which ultimately have an effect on their performance in accounting, as reported by Aldridge, Fraser and Sebela (2004) and Collins (2008). The students indicated that they are naturally more likely to adopt a positive attitude towards a subject and be actively involved in the teaching and learning process if they perceive a positive relationship between them and the lecturer. This finding is confirmation of the work of Lakhan and Ekundayo (2013), Rakici (2004) and Rodavan and Makovec (2015) who argued that when there is a positive relationship between the occupants in the learning environment, there is bound to be fruitful and successful collaborations and partnerships towards the attainment of educational goals and objectives.

The students' responses also confirm the findings of Arisoy, (2007); Lakhan and Ekundayo (2013) and Rakici (2004) who argued that students benefit academically through improved communication and confidence when they relate positively with the

other occupants in the learning environment. To this end, **student H3** in **FGIH** pointed out that:

“We can communicate with each other effectively in class because we understand each other very well. We are also free to ask questions and express ourselves, even though we sometimes risk being laughed at by others. In this way, we are able to learn new content which boosts our scores”

This was also supported by student **F6** in **FGIF** who remarked that:

“I am always high on confidence levels after answering questions and actively participating in class and I take this confidence to the test and examination venues with me”

The next question was meant to obtain the students’ views on strategies that can be adopted and implemented in the accounting classroom to promote positive and academically enabling relationships among all the occupants of the learning environment.

4. What can be done to enhance and promote positive and academically enabling relationships among all the stakeholders in the learning environment for accounting?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Classroom rules and practices. 	<ul style="list-style-type: none"> • Open door policy by lecturer. • Improved communication. • Demolishing the social and political boundaries that separate students. • Tolerance and acceptance .

Again, the students re-affirmed the need for classroom rules and regulations as postulated by Bak, *et al*, (2010) who argued that to have an orderly environment which benefits its members fairly and equally, it is not only important to have rules in place but to also ensure that such rules are strictly followed and adhered to. This call places some

extra responsibilities upon all the occupants of the learning environment to ensure that they develop a set of rules that bind them equally and unconditionally. However, the reality in the accounting classroom is that the currently existing classroom rules are not always enforced and observed, as indicated by the students' responses to question 13.

In addition, the students are of the opinion that there is a genuine need to break down the social and political boundaries that sometimes separate them and their groups from each other. They also pointed to the importance of improved communication among themselves and being more tolerant with each other and embracing diversity as possible steps towards enhancing and promoting positive and academically enabling relationships among all the stakeholders in the learning environment for accounting.

Student E1 in **FGIE** remarked:

“Sir, sometimes how we relate to each other outside the classroom makes it a challenge for us to change that relationship when we are in the classroom”

Upon further probing, **student E5** in the same group explained:

“As members of specific cultural, ethnic, religious and even political groups, sometimes we are reluctant to interact with other students who belong to different groups, but eish, sir, this is just not how it should be”

This point was expanded further by **student F3** in **FGIF**, who simply said:

“We are just not comfortable around and opening ourselves up to people who share different religious and political ideologies with us, it's simply not safe”

Considering these responses, it is quite evident that while students are aware of the need to embrace diversity in its various forms, some of them are still reluctant to interact with other students in the classrooms owing to various differences in student profiles. This revelation endorses the earlier findings of Aldridge, *et al.* (2004), Collins (2008) and Naroth (2010) who reported on the effect of diversity as a possible barrier towards creating constructivist classrooms. This affects the kind and quality of relationships they

create with the other occupants of the learning environment. Such challenges can be addressed through constructivist teaching and learning arrangements as suggested by Church, *et al.* (2001); Daniel and Bimbola (2010); Greene *et al.*, (2004); Lizzo, *et al.*, (2002); Nie, *et al.* (2010) and Urdan (2010). They are all unanimous that such an approach to teaching and learning can assist in social cohesion among students, make them put aside their personal differences and prioritize their education.

The upcoming questions were designed to obtain the students' perceptions of the personal dimension aspect of the learning environment.

4.5.2 PERSONAL DIMENSION

5. How does the learning environment promote your orientation towards teaching and learning tasks, enhance a competing atmosphere, encourage a spirit of academic research and self-regulated learning behaviour?

THEMES	ISSUES EMERGING FROM THEMES
<ul style="list-style-type: none"> • Lecturer intervention. • Negative responses. 	<ul style="list-style-type: none"> • Lecturer simply presents lessons. • Feedback after tests- not enough. It should identify top and low achievers. • Achievement positions.

The students' responses to this question about the personal dimension of the learning environment corroborate the findings from section D of the constructivist learning environment questionnaire, which was about learning to learn. In support of the research findings by Aldridge, *et al.* (2004) and Collins (2008), the students revealed that the learning environment does very little to promote their orientation towards teaching and learning tasks. They also perceived it as not enhancing a competing atmosphere which encouraged a spirit of academic research and self-regulated learning behaviour.

To justify the above perceptions, some students pointed out that the lecturer's focus is simply on presenting lessons and covering the course content without any attempts to

challenge, inspire and encourage them. Based on these responses, together with the ones to the students' ratings of the statements under the category of learning to learn of the constructivist learning environment questionnaire, it can be argued that the lecturer needs to create a learning environment which promotes the personal dimension attributes of the classroom. This claim is also endorsed by Aldridge, *et al.* (2004); Collins (2008) and Naroth (2010), whose earlier findings in a similar investigation revealed that the educator is responsible for creating and enhancing a classroom environment which promotes constructivist ideas and principles. However, since this investigation has also revealed that time constraints is one of the instructional challenges faced by the lecturer, there is a need to provide training on how to create such a learning environment in the midst of a busy working schedule and with limited time.

The next question sought the views of students regarding the degree to which learning tasks and activities promote their academic growth and cognitive development.

6. To what extent does the classroom atmosphere and learning tasks promote your academic growth and cognitive development?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Limited class and assessment activities. 	<ul style="list-style-type: none"> • Few class activities to monitor academic progress. • Academic growth is only determined by one formative assessment per term. • Need of continuous assessments tasks during the term.

To further demonstrate their dissatisfaction in the lack of support for the growth and development of the personal dimension attributes of the learning environment, the students claimed in one voice that very few learning activities were administered to monitor academic progress. Student participants were concerned that they only had one chance to have their learning measured by means of a controlled test each term. Their performance in these two assessments were used by the University to determine whether or not they were eligible to sit for the semester examinations in accounting.

Students **F3** and **G5** conveyed similar sentiments with student **D5** who had earlier lamented:

“Sir, at high school we write a number of school based assessment tasks to keep us on our toes and monitor our learning progress, but here it is very different because we are all on our own”

To this, student **D1** added:

“And the marks that we obtain in the school based assessment activities also contribute towards our final marks at the end of the year”

The aim of this study was not to investigate the possibility or even need of administering multiple learning tasks during the course of the term, however, the importance of continuous assessment throughout the learning phase has been found to be very pivotal towards promoting the academic growth and cognitive development of the students. This finding endorses what Killen (2016) and Kreber and Cranton (2000) referred to as obtaining feedback on the effectiveness of the teaching and learning process and about student learning through timely student evaluations.

In support of continuous assessment, Yong and Sam (2008) and Young and Jackman (2014) note that it plays a significant role in education because it is used by educators to help learners achieve the aims and objectives of the curriculum. It gives learners the opportunity to account for their learning over a given period of time. Consequently, continuous assessment should not be regarded as an end of the learners' learning experience but a means to accomplish and realise educational aims and objectives. Investigations into the educational significance of continuous assessments by Cheng and Lee (2010); Kapambwe, (2010); Veloo and Md-Ali (2016) and Yong and Sam (2008) also demonstrated that if well planned and administered, continuous assessments can be used to enhance the variables in the learning environment that are important for the personal dimension.

This call implies extra duties and challenges to the lecturers as observed by Lumadi (2013). However, there seems to be a need to develop and implement a comprehensive and coherent continuous assessment structure during the course of the term. As suggested by Cheng and Lee (2010), the students can be evaluated weekly or monthly and their marks will be summed up at the end of the term to have a continuous assessment mark which will be added with the examination mark.

The following question was meant to obtain the students' perceptions on the benefits they derived from the learning environment and the arrangement and implementation of learning tasks.

7. In what ways do you benefit as an individual and dynamic student from the learning environment and the way through which learning tasks are arranged and carried out in the classroom?

THEME.	ISSUES EMERGING FROM THEME.
<ul style="list-style-type: none"> • Academic and social benefits. 	<ul style="list-style-type: none"> • Group activities improve interpersonal and communication skills. • Better understanding of the content through sharing and exchanging of ideas. • Different perspectives of reality.

The responses to this question confirm the research findings by Collins (2008); Nie *et al*, (2010) Olusegun (2015); Rodavan and Makovec (2015) and Urdan (2010) who documented the educational gains and implications of group learning techniques. The research participants commented that they benefited academically and developed some social and interpersonal skills through their interactions with the lecturer and other students in the classroom. They pointed out that the technique of group learning which is used by the lecturer for every second lesson after introducing a topic helps them to understand the content very well and from different perspectives.

To attest to these claims, student **B4** confessed that:

“I personally don’t simply believe that what I know about a topic is correct until it is confirmed as correct by my group members and so, I always participate to get that sort of feedback on my understanding, which helps me a lot.”

Responding to the same question, student **C2** answered:

“When we discuss questions, we always learn that there are many ways to kill a cat, which makes it very easy to kill it. And when you know multiple approaches on how to solve a problem, you can always try to prove your answer which pushes confidence levels to higher levels”

From **FGIF**, students **F3** and **F6** subscribed to the earlier responses from **FGID** in which students **D1, D3, D5 and D6** claimed in one accord that:

“Sometimes we just join the groups at stage 6 of load-shedding and by the time we leave the groups, the lights would have been restored.”

By this, they meant that they sometimes enter into the group learning activities knowing very little or nothing about the activity or task. But as a result of the sharing and exchanging of ideas among themselves in the group with the more knowledgeable group members, they become enlightened and knowledgeable as well. This attests to the sentiments of Koohang (2012); Snowman and McCown (2012); Taole (2015); Visser and Vreken (2013) and Ozuru *et al*, (2009). They emphasise the significance of negotiated learning and peer collaboration in group learning and other social constructivist learning arrangements.

The next question sought the views of the students on the frequency of opportunities for expanded learning provided by the lecturer.

8. How often does the lecturer give you opportunities for expanded learning and learning beyond the classroom? Do you think these opportunities are enough? If not what should be done to improve the situation?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Limited expanded opportunities. 	<ul style="list-style-type: none"> • Homework is not strictly supervised and marked in class by the lecturer. • Only one supplementary instruction session per week. • E-learning.

The responses to this question indicate that students are not satisfied with the opportunities they are given by the lecturer for expanded learning through monitored tasks and controlled written work. This was also revealed in the investigation carried by Aldridge *et al.* (2004) and should thus be regarded as a key area with needs to be improved if students are to perceive the learning environment in terms of the personal growth dimension. They lamented the fact that the lecturer is not very strict with homework, does not follow up with all the students in the next lesson and thus become discouraged in doing it.

Student **B3** responded to the above question as follows:

“Because it’s not marked and there are not consequences for not doing it, we sometimes get tempted to overlook or postpone doing it”

All the other group members nodded their heads in agreement, with student **B1** adding that:

“We are coming from a learning culture which emphasises strict inspection of homework, classwork and assignments. Now all of a sudden, we are our own bosses in learning, eish, mina I struggle to take that accountability and responsibility without a driving force”

What can be concluded from these remarks is that the students are still in the transition and adjustment phase from high school to tertiary learning and thus miss the close monitoring and supervision on their classwork and learning activities from their educators, class teachers and parents at home. The students still need to be pushed to do their work and therefore, a simple instruction for them to do a task on a specific page in the textbook in preparation for the following lesson is not enough. This revelation is consistent with the findings and observations of Hodgson *et al.* (2010); Makola (2016); Millet (2015); Naong *et al.* (2009) and Pieterse (2015) in which they highlighted some of the adjustment problems and challenges faced by first year students in tertiary institutions. These responses also point to the importance of creating self-regulated students in the classrooms who can actively pursue learning beyond the classroom. To this effect, the students proposed E-Learning as a viable option.

The issue of E-learning bears more resemblance to the needs of the majority of the students who participated in this study. They are of the opinion that E-Learning can be adopted as one of the alternative strategies to compensate for the shortcomings and challenges associated with large classes, where the lecturer has very limited time to give special attention to individual students in the classrooms. It shows the confidence the students have on the internet and technology in supporting and promoting their learning.

This call by the students is consistent with the observations made by Browning, Gerlich and Wistermann (2011) and Tamayo and Cruz (2014) who argued that the current crop of students is exposed to various types of technology across the different facets of their lives and this exposure should be exploited to promote their studies. Abdulahi, Samadi and Gharleghi (2014) cite Cassidy, Griffin, Manolovitz, Shen and Turney (2011) to have noted that students use desktop computers, laptops, E-readers, tablets and cellphones daily to participate and engage actively in social networking, content sharing, blogging, text messaging and online learning. The internet has become an inherent part of every learner and internet user, thereby establishing itself as a major tool for communication, especially among students (Abdulahi *et al.*2014).

Student **F4** in the focus group interviews suggested,

“Sir, it would be nice if you can put the lesson presentations on E-Thuto so that we can refer back to them anytime we want long after the lesson” This suggestion was followed by applause from the students in the group interview.

While student **F6** added, *“we find it difficult to follow you in the classroom because most of the times you are very fast”* while another said, *“ nna I sometimes get lost in class and start wondering in wilderness of confusion”*

The researcher acknowledges that students can only concentrate and be meaningfully engaged in a lesson if they are on the same page with the lecturer and are able to follow the lesson content and class activities. Should they get lost along the way, they become discouraged and their motivation to pursue the lesson and learn becomes diminished. This is corroborated by the findings on several studies on the relationship between the students understanding of the lesson, learning activities and their ability to remain focused and motivated in the learning process (Al-Rahmi and Othman, 2015; Atta and Jamil, 2012; Christiana, 2009 and Williams and Williams, 2013). Students tend to maintain their interest and motivation in a lesson if they understand it or can at least relate the content of the lesson to their previously acquired knowledge.

Thus this suggestion for E-learning needs to be seriously considered, especially considering that the internet and social media (Social Networking Sites) have become a significantly integral and yet important part of every student’s life. Research findings indicate that since its inception, and over the past decade, the majority of learners and students use the internet and social media daily, with 1 in every 7 students on earth being on Facebook (Abdulahi *et al.*2014). In South Africa, the situation is exacerbated by the fact that almost every student has uncontrolled and unlimited access to the internet.

Among other documented factors, the internet has emerged as one of such factors which can both negatively and positively affect students’ academic performance (Divjak

and Peharda, 2015; Helou and Rahim, 2014; Ndaku, 2013 and Ogedebe, Emmanuel and Musa, 2012). For instance, Divjak and Peharda (2015) and Ogedebe, *et al.* (2012) are unanimous that the students' academic performance is positively affected by the informative and educational use of the internet and social media while it is negatively affected by recreational use.

The students believe that recording the lecturers and uploading them on E-Thuto can assist them to re-visit and revise the lessons and promote learning beyond the classroom. Such a move can also assist students who are very slow in grasping the lesson content or those who get lost during the lesson. A video recording of the lesson can also play a very important role in increasing the amount of time spent on lecturing. Students are less likely to ask questions which may slow down the pace of the lesson if they know that they can refer back to the lesson during their own time. After the lesson, they can access the lesson recording and identify questions, which they can then take to the lecturer for consultations. This can drastically reduce the subject failure rates.

The following question was posed to the students to get their opinions on what can be done to improve the learning environment for accounting.

9. What would you suggest as an ideal measure to make the learning environment for accounting more value adding and beneficial to you?

THEMES	ISSUES EMERGING FROM THEMES
<ul style="list-style-type: none"> • Consider and acknowledge student needs. • student-centeredness . 	<ul style="list-style-type: none"> • Avoid one size fits all approach to classroom instruction. • Attempt to address the learning needs of individual students such as slowing down the pace when dealing with slow learning students. • Use of visual aids. • More supervised exercises.

To make the learning environment for accounting to be more value adding, the students believed that instruction should be designed to suit the needs of different students in the classroom and move away from a one-size fits all approach. These calls are consistent

with the remarks of Nel, *et al*, (2012) who warned that educators need to tailor make their instructional approaches to accommodate students with various learning needs in their classrooms. There is research evidence on the educational gains of instructional approaches that complement the preferences of individual students in a classroom. Investigations by Akkoyunlu and Soylu (2008); Munyaradzi (2013); Tebabal and Kahssay (2011) and Van Wyk (2010); produced compelling evidence to suggest that students find the learning environment more value adding when teaching and learning activities are designed to accommodate all their different learning needs in the classroom.

Responding to the above question, student **B3** said:

“Mnr, nna I believe that for our experiences in the classroom to be more value adding, they need to touch and speak to each and every student in the classroom. As students, we tend to feel that attending a class is a waste of time if we cannot identify with the experience in the classroom”

This statement was later reinforced by students **E1** and **E5** who said:

“The truth is that we learn more in class when we are actively engaged in the teaching and learning process. We learn better when we are allowed to learn according our strengths and weaknesses.”

To the applause of all the other group members in **FGIF**, student **F4** said:

“Mosuwe, when we are not treated as members of a congregation whose only duty is to listen to the preacher and say Halleluiah, we learn more and better. We need to feel the difference of being in a church and in a classroom”

The response of students in **FGIC** was summed up student **C2** who commented that:

“Being preached to in class makes us feel useless and stupid and gets worse when we are given orders on how we should learn and master the subject content”

These themes and responses further reinforce and correspond with the findings on the students' ratings of the six statements in the category of learning to learn, whose overall mean was 2.67 (c.f. Table 4.6). The students emphasised their need to be placed at the centre of the teaching and learning process. They also revealed that they strongly preferred a learning environment which empowers them and recognises that they are not empty vessels but equally knowledgeable occupants of the learning environment in their own unique and different ways. These are some of the major assumptions and principles of constructivist and student-centred learning environments as promoted by Taole (2015) and van Wyk and Dos Reis (2016).

The students' responses confirmed the above findings and further established that lecturers have the obligation to develop and administer teaching and learning tasks which can accommodate all the students in the classroom. This is also in line with the provisions of both primary and secondary legislation in South Africa which deals with education and learning. Reference can be made to the Bill of Rights and the Constitution of the Republic of South Africa (1996) which provide for the equal right to education for all and place a huge responsibility on the shoulders of those directly involved in teaching and learning to ensure that these rights become a reality. The National Curriculum Statements (Grades R – 12) and the Curriculum Assessment Policy Statement (2015) of Accounting also make similar calls to educators in all schools.

The upcoming set of questions was based on some aspects of the system maintenance dimension of the learning environment.

4.5.3 SYSTEM MAINTANCE DIMENSION

To establish the students' perceptions on the clarity of expectations among all the occupants of the learning environment, the following question was posed to them.

10. Are there clear expectations of both the students and the lecturer in the accounting classroom?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Lecturer expectation. 	<ul style="list-style-type: none"> • The lecturer tells us about his expectations from us, which is active participation and satisfactory academic performance in the tests and examinations. • Expectations must be based on individual students in terms of their personal abilities and attributes.

Contrary to the recommendations of Jacobs *et al*, (2011) and van Wyk and Dos Reis (2016) the responses to this question and the subsequent sub themes that emerged indicated that there is no clear cut expectations that are well communicated to the students by the lecturer. The students lambasted the absence or lack of clearly defined expectations of both the students and the lecturer in the classroom. They pointed to the fact that the lecturer only emphasises that he does not expect any student to fail the module. They further bemoaned the fact the lecturer never gave them the opportunity or platform to indicate and state their expectations from him as students. They also pointed out that the lecturer is only concerned about getting good results from them and does not care about their expectations, especially regarding their teaching and learning. Research findings demonstrate that both the educators and the students get frustrated by the confusion that emanate from unclear expectations in the learning environment (Aldridge *et al* (2004). This can result in students having negative perceptions about their learning environment which may limit their academic progression and success as revealed by the findings of Arisoy (2007); Bakhshialiabad, *et al*. (2015); Kaplan *et al*, (2002); Myint and Gog (2001); Radovan and Makovec (2015); Stipek (2002) and cf 2.4.2.2.

Student **A3** responded as:

“Mr Mapuya, all I remember is that you said you do not expect any failures in this class, end of story.”

While student **D5** commented:

“Sir, it’s clear you expect us to pass accounting but you do not know our expectations from you for us to pass”

This was later reinforced by student **H5**, who said:

“As far as I am concerned, you expect good behaviour and good results from us. You do not tolerate misbehaviour and failures but as students, we always have our expectations from you, for instance, carefully and well planned lesson presentations, which you always do”

Establishing clear expectations among all the stakeholders involved was found to be one of the lacking aspects of the learning environment for accounting. This can be achieved through establishing and communicating clear cut learning objectives at the beginning of every lesson as suggested by Jacobs *et al.* (2011) and van Wyk and Dos Reis (2016).

The following question looks at how the students perceive their control over the learning environment.

11. Do you think you have control of the environment and physical comfort that you need during the lesson?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> Inadequate physical resources. 	<ul style="list-style-type: none"> The furniture in the classroom is old (the old buildings) No air conditioner to suit the prevailing weather. The air conditioner in the new building (O007) is difficult to operate for both the lecturer and the students. Students are not at liberty to decide where they want to have the class.

Similar to the findings of Aldridge, *et al.* (2004), the students indicated that they do not have any form of control over their learning environment, especially the physical

aspects such as furniture. They indicated that they hate the old buildings in which they usually have their accounting classes because the furniture there is not comfortable. This ultimately affects their concentration in class and ultimate quality of the learning they experience.

Responding to the above question, student **B5** said:

“When we are having classes in the old building, it feels like we are a two double periods. It is just not good there.”

This was put differently by students **D3** by saying:

“Sir, sometimes we hate class because of that venue. It is simply not comfortable at all, no air conditioner, some windows are broken”

In addition, this revelation also attests to the findings of Abraham *et al.* (2008); Arisoy (2007) and Bakhshialiabad *et al.* (2015) who emphasized the importance of the physical comfort of the learning environment and the degree of control the students have over such a learning environment. Research findings confirm that students are likely to have some negative perceptions of a learning environment which is uncomfortable and gives them less control over what is happening in it.

12. How does the classroom learning environment respond to changes in terms of your learning needs as students and the overall approach to teaching and learning?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Use of modern technological based media. 	<ul style="list-style-type: none"> • Projectors have been installed in both venues for accounting in the old and new buildings. • White boards have been installed in O Block classrooms. • The lecturer uses both the whiteboard and projector for teaching and learning.

In support of the sentiments and research findings of Collins (2008) and Olusegun (2015) about technology in constructivist learning environments, the students revealed that their learning environment was conscious of their learning needs and tried to keep pace with them through the use of modern technological based media.

To support their claims, students **E1** and **E4** exclaimed:

“Mnr, we really appreciate the fact that you always make use of the projectors when presenting lessons and thanks to the university for installing them”

In a separate focus group interview, student **G3** responded:

“This modern educational teaching media creates a huge difference with the traditional chalkboard. Projectors make lessons more live and interesting.”

The following question was designed to obtain the students’ perceptions about the differentiation of lessons and clarity of classroom rules and instructions in the classroom.

13. What are your opinions on the differentiation of lessons, how clear the classroom rules and instructions are and how differences in terms of thinking are accepted in the classroom?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> Lesson differentiation needs to be more visible. 	<ul style="list-style-type: none"> With the exception of new topics that may require a new approach, most lessons are the same. Classroom rules such as no eating and use of cell phones in class are usually ignored by the students. Which often angers the lecturer, because it’s a sign of disrespect and disregard of rules. Students are only given the classroom rules once in the first lesson of the term. There is a need for constant reminders. Students need to be involved in designing class rules and instructions. Some students laugh at incorrect responses while others make fun of the student who gave the wrong answer.

The themes and sub themes that emerged from the students' responses revealed a gap in the learning environment which the lecturer needs to attend to and are also in harmony with the sentiments of van Wyk and Dos Reis (2016). Jacobs *et al.* (2011) and Killen (2016) highlight the significance of establishing a clear set of rules in the classrooms and constantly reminding the students about them. van Wyk and Dos Reis (2016) further advise educators to set clear and specific expectations in their classrooms at the beginning of the lesson about what they expect from the students regarding learning tasks.

The above sub themes also subscribe to the suggestions of van Wyk and Dos Reis (2016) who suggested that educators need to let the class determine the rules and regulations that will direct them in terms of procedures and expectations for acceptable behaviour. This issue of collective agreement on classroom rules was better expressed by student **D3**, who said:

“Of course we need to have some classroom rules, but it is equally important for us as a class to be actively involved in drafting them. This makes them more binding to us”

Students **D1** and **D5** added:

“All we need is shared responsibility and control in the classroom, collective classroom leadership”

Thus from the above findings, setting very clear expectations and classroom rules still remains one of the most important concerns for students. The question below was posed to the students to determine their perceptions on how their learning environment embraced student diversity and kept pace with their individual needs.

14. To what extent does the classroom learning environments embrace student diversity and always keep pace with their individual needs?

THEME	ISSUES EMERGING FROM THEMES
<ul style="list-style-type: none"> • Diversity is accommodated. 	<ul style="list-style-type: none"> • The classroom has students of mixed academic ability. • The formal language of instruction during the lesson is English. • Students are allowed to speak in vernacular when they consult the lecturer in the office for better understanding. • The classrooms are friendly to the physically challenged students such as those on wheel chairs.

The theme and sub themes which emerged from the above question are consistent with the requirements of constructivism as suggested by Daniel *et al.* (2010); Driscoll (2005); Eggen and Kauchak (2014) and Visser and Vreken (2013). These sub themes are also supported in the literature review done by the researcher for this study (cf.2.5.2, cf. Figure 2.2 and cf.2.6).

The overall response to the above question was that student diversity is highly accommodated and encouraged in the classroom and that attempts are always made to accommodate different and dynamic students. Embracing and emphasizing student diversity is one of the core and fundamental underlying precepts of constructivism and constructivist learning environments. To this end, the learning environment catered for every student who occupied it.

The following question was formulated to obtain the students' suggestions on future lessons that can be structured to give them improved control over their learning environment and offer clearer expectations.

15. How do you want future lessons to be structured to give you improved control over the learning environment and offer clearer expectations?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Active involvement and student centered engagement. 	<ul style="list-style-type: none"> • Involve students in planning lessons. • Allow students to determine the pace of the lesson. • Involve students in deciding the type and nature of classroom activities. • Constant feedback on academic progress.

The students' response to the above question substantiated the findings documented in a host research study on constructivism and constructivist learning environments (cf. 2.5.5; Radovan and Makovec (2015); Ramsook and Thomas (2016) and Osguthorpe and Graham (2003). To reiterate their exclusion from the planning and designing of their teaching and learning activities, the students indicated that they wanted to be more actively involved in all issues relating to, and which affected their teaching and learning.

The responses also support the findings of Killen (2016) and Naroth (2010), who emphasised the importance of feedback towards creating a learner-centered learning environment. The responses further highlighted that the students valued an approach to classroom instruction which empowered them and made them autonomous individuals in the teaching and learning process.

4.5.4 CONSTRUCTIVIST IDEAS

16. Can you attribute your performance in accounting to the way in which the lessons are structured and delivered to you in class?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Intended and challenging lesson preparation. 	<ul style="list-style-type: none"> • The lecturer always tries to make learning more interesting and enjoyable by adding a sense of humour during the lesson presentation. • The lessons are sometimes presented in ways that challenge students for further research or study into the topic. • The calling of non-volunteers to answer questions during the lesson forces students to come to class prepared.

The responses to this question supported the findings of an investigation by Tse-Kian (2003) in which students responded positively and improved their interpersonal and collaboration skills and ultimately, their academic performance. While measuring the effect of a constructivist learning environment on the academic performance of students was not within the scope of this study, the students attributed their academic performance in accounting to the nature and way in which the lessons are structured and presented to them.

This finding also supports the important role played by the educator in a constructivist learning environment to promote academic performance as emphasised by Collins (2008) and Naroth (2010). The way in which lessons are structured and presented to the students in a constructivist learning environment stands out to be a significant indicator of effective and meaningful learning which is appealing to students, and which culminates in positive academic results.

17. In your own views, to what extent do you think the classroom learning environment is student centred?

THEME	ISSUES EMERGING FROM THEME
<ul style="list-style-type: none"> • Controlled lecturer involvement. 	<ul style="list-style-type: none"> • Only the lecturer decides on the teaching and learning material. • The lecturer dictates the pace of the lesson. • The lecturer dominates most lessons.

The responses to this question corroborate the findings of Aldridge, *et al.* (2004) and Collins (2008) which revealed that more than often, educators find themselves facing some serious time management challenges when they consistently implement and incorporate constructivist ideas and principles in their classrooms. Faced with very little time to complete the lesson and syllabus, they get tempted to revert back to a more teacher-centred approach to instruction and either minimise or eliminate student involvement in the teaching and learning activities. This makes the students to have

some dissatisfactions with the learning environment and they will in the end perceive it negatively.

To support the above claims, students **A6, A7, E2, F5, H1** and **H4** all claimed in one accord, but on different occasions that:

“Sir, sometimes we feel like we are in a long church service. Sometimes you appear to be in a rush to finish the planned lesson without checking our understanding of the content.”

Student **F3** went further to say:

“And at times, you do not even give us the chance to ask you questions during the lesson, even though you have always maintained that asking questions in class in an important aspect for an effective teaching and learning process”

The students’ concerns as raised above are also supported by their rating on the learning to learn category where they rated the statements in this category very poorly (c.f. Table.4.6). The learning environment was found to be rarely student-centred.

18.What strategies do you think need to be incorporated into the teaching and learning process to make it more student-centred?

THEME	THEMES EMERGING FROM THEME
<ul style="list-style-type: none"> • Group work and cooperative learning skills. 	<ul style="list-style-type: none"> • More group discussions. • More consultation hours after the lesson. • Cooperative learning. • Group homework. • Research and presentations.

In a quest to understand the perceptions of the students about their learning environment, a participative approach and student involvement in the planning of classroom instruction was identified as one of the areas that needed improvement. True to the perceptions of the students about their classroom learning environment was the

revelation that they felt marginalized and excluded from academic and instructional planning. The students bemoaned the fact that the lecturer did not involve them in deciding their teaching and learning activities.

Student **F6** commented;

*“Sir, you treat us like a bunch of students without brains”, while **F3** remarked, “We need our voices to be considered when it comes to matters relating to classroom instruction” and **F1** said, “I wish you understood how we prefer to be taught this accounting”*

Again, this correlates with the poor scores rated by the students on the six specific statements on learning to learn and emphasizes that the students remain alienated and marginalized from issues and decisions related to the learning to learn category of their learning environment. The finding further affirms the need for the teaching and learning environment to offer students their prerogatives such as autonomy and individuality.

The students’ perceived lack of active involvement in academic matters need to be viewed in light of the time constraints earlier alluded to. Owing to time considerations, the lecturer can hardly consult the students about the type of exercises they want to do and the time they need to spend on them. The lecturer simply plans and designs teaching and learning activities based on the outcomes and attributes of the module than on the needs of different students.

However, the educational gains of a participative approach to teaching and learning in which students are consulted and get actively involved in instructional decisions cannot be underestimated, or even ignored on the basis of limited time. Investigations conducted by McLoughlin and Luca (2004) and Tella (2007) revealed that students’ motivation to learn and achieve educational goals and outcomes is sometimes dependent on how involved they are in academic planning and the setting of educational goals and objectives.

The need for more contact sessions and more consultation hours was raised by the majority of students who participated in the focus group interviews and commented at the end of the questionnaire.

“We need more exercises and supervised group learning sir”, the students in **FGIE** suggested with one accord.

This request is consistent with the students’ poor arithmetic average on statements about learning to learn (cf. Table 4.6). The students indicated in this category that they were not satisfied with the amount of support the learning environment gave them to promote their learning. This must also be viewed in light of the very large classes which the lectures have to deal with on a daily basis. Creating more contact sessions and consultation hours for students will mean that the lecturer has more time to address individual students with some learning barriers. It is also important to note that students learn and grasp subject content in different amounts and different paces and more contact sessions will enable the lecturer to design instruction according to the learning needs of different students in the classroom. This will ensure that no students will be left out, left behind or excluded in the mainstream classrooms as warned by Killen (2016) and van Wyk and Dos Reis (2016).

While the researcher acknowledges that this is a genuine concern which needs to be reviewed, it is subject to the discretion of the university and the office bearers who act on its behalf in allocating resources such as time. This suggestion can also be regarded as a supplement to the envisaged E-learning and other strategies students perceive as viable in supporting their learning.

4.6 SUMMATION: DATA DISCUSSION AND FINDINGS

The study findings indicated that the students remained alienated and marginalized from the designing and planning of their academic activities and the overall classroom instruction. This was demonstrated by the low ratings they gave to statements in the applicable categories and well as from the responses they gave during the focus group interviews. The findings also pointed to the need for the teaching staff to move away

from standardized lecturers to customized instruction which acknowledges that every student in the classroom has different needs, abilities, dreams and gifts. Therefore, they need to tailor-make their approach to teaching and learning as opposed to a one size fits all approach.

The findings show that from an educational perspective, the general subject methodology should be informed by the reality of student needs. Furthermore, the findings also affirmed the imperative of creating and maintaining learning environments that promote all the elements within the three environmental domains enshrined in the socio-ecological model and offer students their prerogatives such as individuality and autonomy. A constructivist learning environment was found to be in harmony with the study findings because it does not only promote creativity, individuality, group learning, high levels of motivation, student support but also matches the ideal learning environment envisaged and perceived by the students.

4.7 CONCLUSION

In conclusion, the dominant views and themes that emerged from the study participants in light of the data collected were that the students are generally satisfied with some broad categories of their learning environment. Special reference can be made to the categories such as learning about the world, learning to communicate, interest in accounting and teacher support in the subject. However, there is a need to direct efforts towards improving all the relevant aspects and variables related to wanting to learn. These measures need to consider the various recommendations made by the students on how to improve the overall learning environment and make it perceived positively.

The next chapter will focus on the discussion of the study findings, recommendations and conclusion that will be made in light of these findings.

CHAPTER 5

DISCUSSION OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

This chapter deals with the discussion of the findings that emerged from the study and then proceeds to make some recommendations based on these findings and the new revelations that came out of the investigation. The recommendations consider and acknowledge the themes that emerged from the qualitative and quantitative data. In this regard, reference is made to the data gathered from the open ended sections of the questionnaires where students had to give their recommendations and suggestions on what else they wanted to see happening in their Accounting classes as well as in the focus group interviews.

It is important to note that the perceptions of students and the recommendations obtained in this study should not be considered and understood outside the context of their entire actual learning experience and their expected ideal learning experience. The findings of this investigation therefore suggest that the perceptions and recommendations of students are a reflection of some discrepancies in pedagogical dynamics between the reality in the classrooms and their expectations and perceptions of what should actually be happening in those classrooms.

5.2 RESEARCH FINDINGS

The findings of the study will be discussed in relation to the research questions raised in chapter 1 (cf.1.5). This study sought to assess the perceptions of Accounting 1 students about their teaching and learning environment experiences and to develop strategies to improve and enhance a positive constructivist learning environment. Therefore, the findings are discussed and presented in the context of both the main and sub research questions presented below.

Pertaining to the first main research question posed in this study, which is;

5.2.1 How do first year Accounting students perceive their classroom learning environments?

The students' perceptions of their classroom learning environment were determined by their ratings on the six individual statements in the four broad categories of learning to speak out (cf. Table 4.5), learning to learn (cf. Table 4.6), learning to communicate (cf. Table 4.7) and lecturer support (cf. Table 4.9). These categories contained statements which were specifically related to their classroom learning environment. Based on their ratings to the statements in these broad categories, the students indicated that they have some positive perceptions about most aspects of their learning environment (cf. Table 4.5, cf. Table 4.7 and cf. Table 4.9). They perceive the classroom learning environment as supportive and academically enabling.

However, it was also found that the students felt alienated and marginalized from the designing and planning of their academic activities and the overall classroom instruction (cf. Table 4.6). This was revealed by the low means and overall mean in the category of learning to learn (cf. Table 4.6) which were all below 3. This quantitative finding is also consistent with the students' qualitative responses where most students indicated that they needed to be more actively involved in matters relating to their teaching and learning (cf. 4.5.4), cf. 2.4.1 and cf. 2.5.1.

5.2.2 What are the implications of students' perceptions for teacher educators?

The answer regarding the above second main research question did not come directly from the data collected from the students but from literature review. A comprehensive review of related literature revealed that the perceptions of students about their learning environment have some important implications for teacher educators which they need to be constantly conscious of (cf. 2.4.2, cf. 2.4.2.1, cf. 2.4.2.2, cf. 2.4.2.3 and cf. 2.4.4). Teacher educators have to ensure that students always have some positive perceptions of their learning environment. They also need to always remember that the students' perceptions of their learning environment directly affect their motivation, attitude and academic achievement in the subject. Thus the students' perceptions of their learning environment remain a key variable which determines academic success and the

students' overall satisfaction with the teaching and learning process. This assumption has been well documented in the literature review (cf.2.4.2, cf.2.4.2.1, cf.2.4.2.2, cf.2.4.2.3 and cf.2.4.4).

Lastly, teacher educators have an important role to play in ensuring that the learning environment is positively perceived by the students. At classroom level, teacher educators are regarded as the gatekeepers, promoters and custodians of any constructivist design features and principles and ultimately, the students' perceptions of their learning environment. Any reference to the quality of the learning environment and how it is perceived by the students should therefore be made in conjunction with the role played by the teacher educators.

The four sub research questions developed from the main research questions posed above, will now be discussed in light of the research findings.

5.3.1 What are the constructivist design features and principles that are being used by the lecturers to improve the teaching and learning environment of first year students?

With regard to the first sub research question posed above, the findings from both the qualitative and quantitative data collected from the students revealed that group work, peer collaboration and tutoring and real life learning experiences which students can relate to are some of the constructivist design features and principles that are used by the lecturer to improve their teaching and learning environment (cf. Table 4.3 and cf. Table 4.7). The students' ratings to statements in the learning to communicate and learning about the world categories were very high, with an overall mean of 4 in each category. The statements in these categories had some salient constructivist design features and principles embedded in them.

This finding also emerged from the focus group interviews where students responded to questions that sought to determine whether or not there were any constructivist design features and principles being used in their learning environment by their lecturer (cf.4.4). However, it must be pointed out that the students felt that these constructivist design features and principles were not enough (cf.4.4 and cf.4.6). Thus there is a need for a

more radical shift towards the adoption and implementation of constructivist design features and principles in the learning environment. This need is also echoed in the students' responses to questions on what can be done to improve their learning environment and make it more constructivist oriented (cf.4.5.1).

5.3.2 To what extent are these constructivist ideas and principles implemented in the Accounting classroom?

Pertaining to the above research question, there is a contradiction between the quantitative and qualitative findings. The students rated very high the statements in the categories in learning to communicate (student negotiation) (cf. Table 4.7). The overall mean in this category implies that the students felt that the constructivist design features and principles discussed above were effectively implemented in their classroom (cf.5.4) However, in their qualitative responses to questions in the focus group interviews, the students indicated that they were not satisfied with the extent to which the constructivist design features and principles were implemented in the classroom (cf.4.4, cf.4.5.1 and cf.4.5.4). Moreover, the students' dissatisfaction in the extent to which constructivist design features and principles were implemented in their classroom also emerged in the quantitative findings where students poorly rated statements in the category of learning to learn (shared control) (cf. Table 4.6). It was revealed that these constructivist design features and principles are not effectively and constantly implemented in the classroom.

5.3.3 Do these strategies assist the students in understanding Accounting 1?

Most students revealed that they benefit significantly from the constructivist strategies used by the lecturer in their classrooms (cf.4.5.1) and cf. 2.5.3. Students pointed to the huge educational benefits they reap from group work and peer collaboration. Group learning was found to be value-adding to the teaching and learning process (cf.2.5.3) Reference can be made to the development and improvement of student's interpersonal skills, self-efficacy and ultimately academic performance in accounting which students alluded to in the focus group interviews. (cf.4.5.1). This is also in harmony with the qualitative findings from the questionnaire where students rated very high statements regarding learning to communicate (student negotiation) and attitude in accounting

(commitment) (cf. Table 4.7 and cf. Table 4.8). Furthermore, it confirms the literature findings on the educational benefits of constructivist learning environments (cf.2.7)

While it is acknowledged that the constructivist design features and principles used by the lecturer in the learning environment are not enough, it is important to highlight that students have benefited academically from them and they have indeed been able to improve the students' understanding of Accounting 1 (cf.4.5.1) and cf.2.7

5.3.4 How are students' perceptions of their learning environment connected to their academic performance and motivation to succeed?

In respect to the last research question posed above, the findings proved that there is a direct relationship between the students' perceptions of their learning environment and their academic performance and motivation to succeed. A review of literature revealed that when students have some positive perceptions about their learning environment, they are likely to be intrinsically motivated and goal oriented, they become self-driven autonomous individuals (cf.2.4.2. cf. 2.4.2.1, cf.2.4.2.2, cf. 2.4.2.3 and cf.2.4.2.4). There is compelling research evidence to hypothesize that the more positive perceptions students have about their learning environment, the higher their academic performance and the more their motivation to succeed becomes. (cf.2.4.2, cf.2.4.2.1, cf.2.4.2.2, cf.2.4.2.3 and cf.2.4.4). In addition, the quantitative findings in this study also corroborate the findings in literature that was reviewed on the relationship between students' perceptions of their learning environment and their academic performance and motivation to succeed (cf. Table 4.8.) The statements in the category regarding attitude towards accounting (commitment) scored an overall mean of 4.78 which is very close to 5. This implies that the students are more committed to accounting and have a positive attitude towards it because they have some positive perceptions about the learning environment in which the teaching and learning of the subject takes place.

In light of the above findings, it can be concluded that the students' perceptions of their learning environment and their academic performance and motivation to succeed are variables in the teaching and learning process which are correlated and cannot be separated. Therefore, any attempts to address and improve the academic performance

of students and their motivation to succeed should not be made in isolation of the students' perception of the learning environment in which teaching and learning takes place. These strategies should start by focusing on the learning environment and ensure that the students positively perceive it.

The upcoming paragraphs will now discuss the recommendations made by the researcher, in light of the findings and the answers that were generated to answer the research questions raised in the study.

5.4 RECOMMENDATIONS

These recommendations are made in terms of the influential stakeholders involved in any learning environment who have the potential to influence the learning processes in the classrooms and the quality of that environment. These are the lecturers and the university itself. The recommendations are also made in light of the possible strategies that can be developed to improve the learning environment and how it is perceived by the students.

RECOMMENDATIONS TO THE UNIVERSITY (A University perspective)

By virtue of its jurisdiction over all matters and activities relating to the learning environment and academic programs, the university is viewed as the gatekeeper and custodian of the quality of the learning environment and experiences of the students. Hence, the successful implementation of any recommendations made in this study depends entirely on the university's willingness and ability to take the necessary measures and initiatives towards their implementation. The university is thus the most influential stakeholder in promoting the academic success of first year students.

Reference can be made to the University of Stellenbosch, which provides comprehensive orientation programs at the beginning of each year through a compulsory Academic Literacy Course. This course is designed to provide first year students with an introduction and orientation into academia and the necessary academic skills that are required for success in the teaching and learning process and in their studies. In addition, the university also offers tutorial programs which are done

on a continuous basis to support first year students and promote their academic progress in all their modules. While Central University of Technology, Free State, offers programs of a similar nature, their effectiveness still needs to be verified and tested, especially looking at the overall academic performance of first year students who participated in this study. The university therefore needs to put in place mechanisms to monitor the progress of students and the effectiveness of such initiatives, also making sure that all the students are obligated to attend.

5.4.1 STAFF DEVELOPMENT AND TRAINING

Somenarain, Akkaraju and Gharbaran (2010) warn that providing quality learning environments and experiences is not only a goal, but a responsibility of educational institutions. As such, they need to ensure that those who are directly involved with students in the classrooms are not only aware, but also have the necessary resources and competencies to present the academic curriculum using strategies that promote program success of students.

As revealed in literature review, the educational importance and relevance of a student centered learning environment cannot be overlooked or underestimated. It is therefore recommended that universities need to organize regular workshops and seminars with their lecturing staff to equip them with the adequate skills on how to create sustainable constructivist learning classrooms that prioritize all the classroom elements under each of the three central dimensions identified by Moos (1974). These staff development initiatives need to give the lecturers concrete and practical examples of how to increase and maintain each of the relationship, personal development and systems maintenance and systems change dimensions.

They should also empower the teaching staff with the knowledge and skills that can enable them not only to understand, but to effectively address the dynamic learning needs and preferences of individual students in their classrooms. Training programs need to focus on the content presentation abilities, competencies and skills of lecturers and to make them more confident to use cooperative learning methods for different students.

Furthermore, these professional staff training and development programs also need to constantly engage and consult with all the stakeholders involved, especially the students, to get feedback and keep pace with their perceptions of the conditions under which they learn. This might ensure that any potential complaints and negative perceptions about the learning environment are addressed timeously before they lead to dissatisfaction, poor motivation, high failure and dropout rates or even strikes and demonstrations.

Moreover, lecturers need to be trained on designing and implementing continuous assessment activities for students in their classrooms. Such training might assist them to enhance and promote the personal dimension variables of the learning environment as suggested by Moos (1974).

5.4.2 IMPROVED TECHNOLOGY AND E-LEARNING

Technology has become an inherent and integral part of every student and internet user, thereby establishing itself as a major tool for education related communication, especially among students. This explains why higher institutions of learning have been increasingly utilizing technology to communicate with their students and distribute course learning material.

Iorliam and Ode (2014) maintain that the improvement and development in technology together with the increased availability of devices which can access the internet have increased the students' access and use of the internet by a very high margin. Globally, social media has gained significant prominence as a communication and social cohesion mechanism for students.

The value of technology in promoting and supporting student learning should be explored by CUT authorities. The integration of social media and web technologies should create opportunities for lecturers to integrate content knowledge and current affairs and as such apply them in their classrooms. Students should be exposed to more frequent technological use of computers.

Virtual learning environments should be used in both distance and on campus learning to enable students to access learning materials, class activities and assignments (Borwarnginn and Tate 2014). E-Learning should be promoted amongst student users. It has a wide coverage of students and could provide them with a learning environment which is independent of time and place.

Thus Central University of Technology, Free State needs to improve and intensify the students' access to the internet and promote E-Learning which is arguably one of the most effective ways to encourage and promote learning outside the classrooms. It creates opportunities for the students to work in the comfort of their homes, at times which are convenient to them. The University can expand and add more contents and interactive learning material to its E-Thuto initiatives- this can be done by making lesson presentations available on-line for students. E-Learning increases the students expanded opportunities and promote inquiry learning and further research about course content.

This recommendation is also made in light of the current global trend on technology and internet usage. For instance, Ndaku (2013) points out that modern technology has turned the world into a global village while Browning, Gerlich and Wistermann (2011) point out that the current crop of students is exposed to various types of technology across the different facets of their lives. Most of these students use technology to access social network sites. This recommendation should be viewed as realistic and possible, especially in light of the fact that video lectures have already been implemented at the University of Cape Town to support student learning (<http://.news24.com/SouthAfrica/News/uct-to-stay-open-despite-disruptions-price-20161004?isapp=true>).

Being a University of Technology, CUT needs to exploit the improvements and developments in technology together with the increased availability of devices which can access the internet to increase the students' access and use of the internet by a very high margin. Abdulahi, Samadi, and Gharleghi (2014), note that electronic communication is emotionally gratifying and can thus be considered as an idealistic venture in terms of enhancing students' understanding of a subject.

The challenges experienced by most academic and support staff at Central University Technology, Free State, during the 2016 fees must fall protests provide enough evidence to suggest that there is a need for huge capital investment in technology if it is to be a success story in most institutions. Following the disruptions on the academic calendar and formal lectures by the protests, the Management of Central University Technology took a collective decision to offer support to students and distribute course learning material through the famous E-Thuto platform.

The availability of being online should be supported by strict control measures and the monitoring of access to the video recordings of the lesson. For instance, there can be a unique code given to individual students in the class at the end of the lesson to access the lecture online and once they access it, they will have to answer a few relevant questions about the lecture before they get full access to the entire video footage of the lesson.

5.4.3 COMPULSORY CONTACT SESSIONS WITH A STUDENT INSTRUCTOR

On Tuesday, 13 September 2016 at 08:31, the academic support coordinator (Ms Liesl Hoare, Coordinator: Academic Support Welkom Wellness Centre) sent an internal communication to all programme heads and lecturers to nominate and appoint Student Instructors for their respective modules, especially those with high failure rates. Student Instructors are students who have a better understanding and command of the subject content and are therefore appointed to assist their classmates who struggle with the same subject content.

This can be regarded as the University's identification and acknowledgement of the need to provide supplementary instruction to students, especially for those modules in which students struggle or seem to have high failure rates. Accounting is one of such modules. This also points to the University's commitment towards promoting the academic wellness of its students. Institutions of higher learning need to provide students with additional instructional time, over and above the one allocated in the institution's academic planning (Makola 2016).

It is also recommended that Student Instructor sessions be made compulsory for all students to attend before they attend the lesson with the lecturers. Compulsory attendance can be achieved through establishing a direct link between the SI sessions and the lessons offered by the lecturers. For instance, a Student Instructor can introduce a topic to the students, and allow them to identify any possible questions which will be addressed by the lecturer in class. The lecturer can also initiate some classwork during the lesson which will be completed during the sessions with the Student Instructor.

5.5 A LECTURER PERSPECTIVE

The shift in focus to modern educational theory from traditional recall of facts, principles and correct procedures towards creative thinking, problem solving, analysis and evaluation presents educators with serious challenges (Tse-Kian, 2003) in the classrooms. However, this transition also offers those individuals who interpret the curriculum to students opportunities to restructure the curriculum to meet the ever increasing needs of the knowledge based society.

In any learning environment, the lecturer has the positional and expert authority to decide on the nature, sequence, and duration of learning activities. It is highly important for the lecturers to recognize and acknowledge the role they play in creating a learning environment which promotes and enhances all the features of the relationship, personal development and systems maintenance and systems change dimensions of the socio-ecological model.

Therefore, the recommendations made in this section refer to the lecturers and thus, their effectiveness towards improving the students' perceptions of the learning environment depending on how individual lecturers will respond to them. However, the university is still expected to play a significant role in terms of giving them the support they may deem necessary to implement the recommendations.

5.5.1 Approach to teaching and learning (Classroom activities)

There is substantial research evidence to support the active involvement of students in designing and determining their teaching and learning activities. The approaches used for classroom instruction should therefore seek to improve students' perceptions of their learning environment and experiences in the classrooms. This recommendation is also made in light of the findings of this study, in which the students bemoaned the lack of participation and involvement in academic and instructional planning of their teaching and learning activities.

Noting the compelling nature of evidence embodied in the research findings from previous studies (Arisoy, 2007; Penlington, Joyce, Tudor, and Thompson, 2012; Rakici 2004 and Pintrich and Schunk, 2002), it is recommended that lecturers need to adopt a more participative approach to teaching and learning in their classrooms. Students in participative learning environments have positive attitudes towards the course and therefore, are bound to succeed academically. Lecturers are advised to use the non-student participative styles cautiously and sparingly. This should always be considered, even when the teaching and learning context does not support participative learning.

Belt, Leisvik, Hyde, and Overton (2005) note that lecturers need to guide their students when solving problems in the classrooms. Most of the students who participated in this study rated their involvement in deciding and determining their teaching and learning activities poorly as well as the kind of support they got from the lecturer in the classroom. To remedy this situation, Vygotsky's zone of proximal development is encouraged. Lecturers need to offer support to students when they do not understand questions and instructions.

To promote the autonomy and self-regulation of the personal development dimension of the learning environment, the adoption and implementation of problem based learning which emphasizes student research, is proposed. This recommendation is also consistent with the suggestions of Abraham (2006) who recommended the adoption of a student centered and active participatory approach in all teaching and learning initiatives.

5.5.2 Regular feedback from students

Lecturers are further advised to recognize and acknowledge the social character of the learning environment and make it a comfortable place for students to share learning experiences and help each other to become self-regulated scholars and academics. To achieve this, it is recommended that they create and enhance two-way communication between themselves and their students. This is important to ensure that there is constant and regular feedback regarding the entire learning experience of students in the learning environment.

Regular feedback from the students about their learning experience and perceptions assist the lecturers in keeping up with the students' learning needs and interests.

Lecturers need to be mindful that instructional pedagogy is not a static concept, but is a dynamic one which constantly changes. Monthly reviews can be done through software programs which might allow students to rate certain aspects of the learning environments.

5.5.3 More Exercises/ additional work outside the classrooms

This recommendation is made on the basis that students requested better monitored and structured course related work. The use of homework and individual assignments should be considered as a strategy to encourage and promote student learning beyond the classroom and the university. Since students believed that they were not getting enough exposure to the course content, it is recommended that more work should be given to them in the form of homework. To make it effective, the lecturer is expected to go through the answers to the learning tasks in the following lesson and do the remedial work with them.

However, this would mean that more time will have to be allocated on the timetable for the course, which is currently a serious challenge faced by most lecturers at the university. Nevertheless, lecturers can still be creative in saving and maximizing time, for instance, they can simply concentrate on the remedial work and request students to mark themselves.

5.6 LIMITATIONS OF THE STUDY

The analysis of the learning environments cannot be done in isolation regarding the views of all the role players involved in the teaching and learning process. This argument is also supported by Fraser (1998) who pointed out that defining the learning environment must be done in terms of the shared perceptions of both the students and the lecturers. This approach is believed to have the benefit of characterizing the setting through the eyes of both participants involved in the teaching and learning process and of capturing data which can sometimes be missed or overlooked by an external observer.

This study was employed at one University of Technology and therefore the findings cannot be generalized to other settings.

5.7 RECOMMENDATIONS FOR FURTHER RESEARCH

Based on the methodological limitations which the researcher earlier alluded to, it is recommended that future investigations into learning environments should focus on the views of both the students and lectures. This will make it possible to compare and contrast the perceptions of students and educators in the same learning environment. A more accurate and objective view of the learning environment is required for meaningful intervention programs and modifications. Further research is also recommended to identify the underlying factors and reasons that influence the students' perceptions of their learning environments.

Attempts to compensate for the shortcomings and limitations of E-learning and technology as identified in literature review, provide scholars in education with new opportunities for further research to investigate the possibilities and prospects of new learning environments which provide aspects of both technological and traditional learning environments combined together. This recommendation is further echoed by Akkoyunlu and Soylyu (2008) who agree that the rapid growth in the use of technology in learning, especially web based technologies and communications gives lecturer's opportunities to investigate the most suitable learning environments which complement and support the learning styles of their students.

5.8 CONCLUSION

This study has revealed that the quality of the learning environment plays an important role on the academic performance of students who experience teaching and learning within them. Their perceptions of the learning environment are significant factors regarding their motivation to succeed and ultimate success in their studies. Research findings from related literature and the current study revealed that learning environments which promote the three main dimensions which define and differentiate the components of the learning environment enshrined in the socio-ecological approach by Moos (1974) are positively perceived by students. When students experience teaching and learning in such an environment, they are bound to thrive and achieve academic success in their studies. Universities and lecturers/ teacher educators have been found to be very influential stakeholders in creating and maintaining learning environments which are positively perceived by the students.

Studies on the educational benefits of social constructivism in teaching learning and its implications to both the lecturers and students provide compelling evidence to suggest that social constructivism is an appropriate approach to teaching and learning which may assist towards creating and maintaining learning environments which are envisaged by the socio-ecological model. Thus a radical adoption of constructivist design features and principles in the classroom become a key strategy that can be developed to improve the learning environment and how it is perceived by the students. To this effect, lecturers and teacher educators need to be empowered and well equipped with the necessary skills and competencies to create social constructivist classrooms and learning environments.

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APPENDICES

APPENDIX 1. CONSTRUCTIVIST LEARNING ENVIRONMENT QUESTIONNAIRE

Purpose of the Questionnaire

This questionnaire asks you to describe important aspects of your Accounting 1 classroom and rate specific areas of the learning environment. There are no right or wrong answers. This is not a test and your answers will not affect your assessments in the subject. Your opinion is what is required. Your answers will enable the lecturer to improve future classes towards creating a sustainable supportive teaching and learning environment which is informed by your perceptions and feedback as a student. These improvements and modifications of future classes will promote your academic success in the subject.

Your evaluative feedback will also be used to mirror and reflect on your teaching and learning experiences in the classroom and ultimately to understand your dynamic teaching and learning needs as a unique and individual student. This reflection and understanding will be critical in dealing with some of the challenges that you experience in your classrooms, which can potentially hamper your academic performance.

This investigation is guided by universal ethical considerations which bind researchers in social and educational contexts. Thus, your participation in answering this questionnaire is strictly based on informed consent and your voluntary participation. No financial gains or any form of benefits will accrue to you as a result of your participation in this study. However, it is assumed that you will gain substantially from the recommendations that will be made in response to your perceptions of the classroom and learning environment and your feedback on the reality in your accounting classroom.

	of school.					
5	I learn interesting things about the world outside of school.					
6	What I learn has nothing to do with my out-of-school life.					
	B. LEARNING ABOUT ACCOUNTING	5	4	3	2	1
	In this class					
7	I learn that Accounting cannot provide perfect answers to problems.					
8	I learn that Accounting has changed over time.					
9	I learn that Accounting is influenced by people's values and opinions					
10	I learn about the different Accounting concepts used by people in other cultures.					
11	I learn that modern Accounting is different from the Accounting of long ago.					
12	I learn that Accounting is about inventing theories.					
	C. LEARNING TO SPEAK OUT	5	4	3	2	1
	In this class					
13	It is acceptable to ask the teacher "why do we have to learn this?"					
14	It is acceptable to question the way I am being taught.					
15	It is acceptable to complain about activities that are confusing.					
16	It is acceptable to complain about anything that prevents me from learning.					
17	It is acceptable to express my opinion.					
18	It is acceptable to speak up for my rights.					

	D. LEARNING TO LEARN	5	4	3	2	1
	In this class					
19	I help the lecturer to plan what I am going to learn.					
20	I help the lecturer decide how well I am learning.					
21	I help the lecturer decide which activities are best for me.					
22	I help the lecturer decide how much time I spend on activities.					
23	I help the lecturer decide which activities I do.					
24	I help the lecturer assess my learning.					
	E. LEARNING TO COMMUNICATE (STUDENT NEGOTIATION)	5	4	3	2	1
	In this class					
25	I get the chance to talk to other students.					
26	I talk with other students about how to solve problems.					
27	I explain my ideas to other students.					
28	I ask other students to explain their ideas.					
29	Other students ask me to explain my ideas.					
30	Other students explain their ideas to me.					
	F. INTEREST IN LEARNING ACCOUNTING (COMMITMENT)	5	4	3	2	1
	In this class					

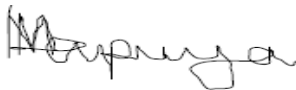
31	I am interested in Accounting lessons.					
32	I am willing to learn.					
33	What we do in Accounting class is important to me.					
34	I try my best.					
35	I pay attention.					
36	I enjoy Accounting lessons.					
	G. LECTURER SUPPORT IN LEARNING ACCOUNTING	5	4	3	2	1
	In this class					
37	The lecturer is friendly to me.					
38	The lecturer helps me with the work.					
39	The lecturer is interested in my problems.					
40	The lecturer goes out of his/her way to help me.					
41	The lecturer moves around the class to talk to me.					
42	The lecturer considers my feelings.					

C. Additional Information

What else would you like to see happening in this class?

Thank you for your co-operation and participation in this study

Yours faithfully



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APPENDIX 2: RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY AT THE CENTRAL UNIVERSITY OF TECHNOLOGY, FREE STATE, WELKOM CAMPUS

Dear Sir/Madam

The above-mentioned matter refers; I am currently a part-time junior lecturer and M.Ed. student at the Central University of Technology, Free State. I kindly and humbly request for permission to conduct an educational research study which investigates “The First year student teachers’ perceptions of their constructivist classroom learning environment in Accounting and implications for teacher educators”

This request to conduct the research study at Central University of Technology, Free State, Welkom Campus is based on the following main and specific research questions and objectives:

Main Research Questions

The main research questions posed in this study are:

1. How do first year Accounting students perceive their classroom learning environments?
2. What are the implications of students’ perceptions for teacher educators?

Sub Research Questions

From the main research questions posed above, the following sub research questions have been developed in this study:

1. What are the constructivist design features and principles that are being used by the lecturers to improve the teaching and learning environment of first year students?
2. To what extent are these constructivist ideas and principles implemented in the Accounting classroom?
3. Do these strategies assist the students in understanding Accounting 1?
4. How are students’ perceptions of their learning environment connected to their academic performance and motivation to succeed?

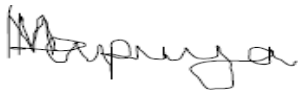
RESEARCH OBJECTIVES

The following are the objectives of this study, which are aligned to the research questions presented above:

1. To establish and describe the perceptions of B.Ed. students about their classroom learning experience in Accounting.
2. To determine the implications of student perceptions for lecturers and teacher educators and how these perceptions are connected to the students' academic performance and their motivation to succeed.
3. To identify constructivist design features and principles that are used by the lecturers to improve the teaching and learning environment of first year students and find out if these constructivist ideas and principles are implemented in the accounting classroom.
4. To determine the extent to which constructivist ideas and principles are implemented in accounting classrooms.
5. To develop strategies which lecturers can use to promote active learning and improve the academic performance of first year accounting students at Central University of Technology, Free State.

I hope this request will be granted.

Yours faithfully



Mr. MAPUYA MEDSON (M.Ed. Student)

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Email : mmapuya@cut.ac.za

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APPENDIX 3: CONSENT LETTER FROM STUDENTS

TO WHOM IT MAY CONCERN

Date: _____

REF: CONSENT TO PARTICIPATE IN AN INVESTIGATION INTO “First year student teachers’ perceptions of their constructivist classroom learning environment in Accounting and implications for teacher educators”

This letter serves to confirm that I, _____ with student number: _____, a first year B.Ed. student at Central University of Technology, Free State, Welkom Campus, has voluntarily agreed to participate in the study on “First year student teachers’ perceptions of their constructivist classroom learning environment in Accounting and implications for teacher educators”

I understand that no financial or any form of benefits may be accrued to me as a result of my participation in the study. I made the choice to voluntarily participate after being informed about the data collection procedure and all the possible implications of my involvement in the study, both to me as a student and to the University as a whole. I have also been informed of my right to withdraw from the study any time I feel I can no longer carry on with it for whatever reasons and that such a decision will not negatively affect me.

Yours Faithfully

Student’s signature

Witness 1 _____

Witness 2 _____

APPENDIX 4. QUESTIONS FOR THE SEMI-STRUCTURED INTERVIEWS THAT WERE ASKED TO STUDENTS.

The following set of questions were asked to students to determine their perceptions about the classroom learning environment for accounting. The questions were based on Moos's Relationship, Personal and System Maintenance dimensions as well as the extent to which constructivist ideas or principles were applied in the classroom. The questions were meant to capture the students' collective voice on how they perceived certain aspects of the learning environment for accounting.

RELATIONSHIP DIMENSION

19. How does the classroom learning environment and learning arrangements affect the way you relate to the lecturer and your classmates?
20. What do you think are the specific variables in the classroom which have a direct effect on your relationship with both the lecturers and other students?
21. How does your relationship with the lecturer and other students affect your academic performance in accounting?
22. What can be done to enhance and promote positive and academically enabling relationships among all the stakeholders in the learning environment for accounting?

PERSONAL DIMENSION

23. How does the learning environment promote your orientation towards teaching and learning tasks, enhance a competing atmosphere, encourage a spirit of academic research and self-regulated learning behaviour?
24. To what extent does the classroom atmosphere and learning tasks promote your academic growth and cognitive development?
25. In what ways do you benefit as an individual and dynamic student from the learning environment and the way through which learning tasks are arranged and carried out in the classroom?
26. How often will the lecturer give you opportunities for expanded learning and learning beyond the classroom? Do you think these opportunities are enough?

27. What would you suggest as an ideal measure to make the learning environment for accounting more value adding and beneficiary to you?

SYSTEM MAINTANCE DIMENSION

28. Is there clear expectations of both the students and the lecturer in the accounting classroom?

29. Do you think you have control of the environment and physical comfort that you need during the lesson?

30. How does the classroom learning environment respond to changes in terms of your learning needs as students and the overall approach to teaching and learning?

31. What are your opinions on the differentiation of lessons, how clear the classroom rules and instructions are and how differences in terms of thinking are accepted in the classroom?

32. To what extent does the classroom learning environments embrace student diversity and always keep pace with their individual needs?

33. How do you want future lessons to be structured to give you improved control over the learning environment and offer clearer expectations?

CONSTRUCTIVIST IDEAS

34. Can you attribute your performance in accounting to the way in which the lessons are structured and delivered to you in class?

35. In your own view, to what extent do you think the classroom learning environment is student centred?

36. What strategies do you think need to be incorporated into the teaching and learning process to make it more student-centred?

APPENDIX 5: LETTER FROM LANGUAGE EDITOR

To whom it may concern

I, Deborah Louise Green with I.D Number 6606030085086 declare that I am a teacher at St Dominics College Preschool.

I have proofread the Dissertation namely: **First Year student teachers' perceptions of their constructivist classroom learning environments in Accounting 1 and implications for teacher educators.** Written by Mr Medson Mapuya.

Thank you

Debbie Green