

UNIVERSITY OF ZULULAND



EFFECTIVE PEDAGOGIC PRACTICES FOR UNDERSTANDING THE ACCOUNTING EQUATION FOR GRADE 8 ECONOMICS AND MANAGEMENT SCIENCE IN SELECTED SCHOOLS IN THE UMHLATHUZE CIRCUIT

BY

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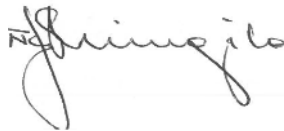
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Declaration

By submitting this dissertation electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

A handwritten signature in black ink, appearing to read 'Ntshingila', is written over a light gray grid background.

Signed: _____

T J Ntshingila

Signed: _____

Supervisor

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Abstract

The teaching of the accounting equation in Grade 8 presents a challenge to the pedagogical content knowledge of the teachers, which is seemingly a contributory factor to learner underperformance. As a point of departure, one of the objectives of this study was to look at the causes of learner underperformance in applying the accounting equation. Therefore, if there is urgency in addressing learner underperformance, it is imperative to look to what extent the usage of various pedagogical practices impact on addressing learner underperformance in the EMS Grade 8 accounting equation section. This prompted the researcher to conduct a study on the effectiveness of teaching and learning relating to the Grade 8 learners taking accounting, specifically using the accounting equation as the benchmark, with a view to improving learner understanding of accounting through the application of technologically aided pedagogic practices to facilitate the teaching and learning. In most instances, it is noted that the more teacher-centred methods of teaching, where memorisation of concepts and formula is common, are widely used. Most teachers rely on textbooks as the primary source of instruction; hence the accounting subject content is mainly abstract to learners who are unable to relate it to real-life situations in a manner that is meaningful. The effective teaching of accounting should concur with key documents such as the Generally Accepted Accounting Practice (GAAP), which is constitutionally derived and endorsed by the South African Institute of Chartered Accountant (SAICA). The participation of teachers to contribute to the accounting curriculum is compromised, in the way that they are called to assist in an ad-hoc fashion, which results in unsustainable learning environments. On the basis of the above, the study aims to formulate a strategy to create effective pedagogic practices for understanding the accounting equation and so improve learner performance in this section of the Economics and Management Science learning area. The study provides findings and recommendations such as recommending professional teacher development in the EMS learning area to enhance the subject content knowledge and pedagogical content knowledge of the teachers. The study also indicates possible future research and ways to open opportunities for improving the rate of underperforming learners. The main findings led to the conclusion that the teaching and learning of the accounting equation section should be optimised through

the use of effective pedagogic practices which are learner-centred and promote peer mentoring and self-regulated learning. The study ends by proposing curriculum development for Grade 8 learners in relation to creating a balance in EMS assessment curriculum weighting.

Key terms: Accounting Equation; EMS Grade 8 classroom setting; Effective Pedagogic practices; a Case Study; Curriculum; technological aided pedagogics.

List of abbreviations and acronyms

C (2005)	Curriculum 2005
CAPS	Curriculum and Assessment Policy Statement
CK	Content knowledge
DBE	Department of Basic Education
EMS	Economic and Management Sciences
FET	Further Education and Training
GET	General Education and Training
H E	Higher Education
IFRS	International Financial Reporting Standards
NCS	National Curriculum Statement
NQF	National Qualifications Framework
NSC	National Senior Certificate
OBE	Outcomes Based Education
PEDs	Provincial Education Departments
RNCS	Revised National Curriculum Statement
SAICA	South African Institute of Chartered Accountants
OBE-	Outcome-Based Education
PBL-	Problem- Based Learning
A=O+L	Assets = owner's + Liabilities

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CHAPTER 1

OUTLINE OF THE STUDY

1.1 INTRODUCTION

The teaching of the basic accounting equation as the fundamental knowledge of accounting as a subject is a significant challenge. The reason for this is that it aims at educating youngsters who are going to play active roles in the financial sector that requires advanced technology. The accounting equation forms the foundation of the accounting subject and should be the starting point of teaching elementary accounting formulas (Snyman, 2018). Changes in the teaching and learning of the accounting equation require constant attention and continuous adaptation on the part of both teachers and learners. In general, it is acceptable that if the accounting equation can provide the student with proper knowledge utilisation skills and necessary abilities, then the student will be able to adapt to the difficulties encountered in the content areas (Riccio & Sakata, 2000).

A qualitative research method is applied and used to explore the challenges faced by the learners. It is understood that the accounting equation is one of the most challenging sections of accounting as a subject; moreover is it the first chapter for the beginner's grade. Consequently, this study will try to find the reasons for learners underperforming in the accounting equation section of economics and management science (EMS) in Grade 8. The study aims to find strategies that could be used to address the challenges faced by learners in understanding the accounting equation and finding the most effective way of teaching and learning the accounting equation in Grade 8 using the EMS content.

Also, the EMS curriculum weighting needs to be looked at closely since the accounting content constitutes 40% of the EMS curriculum CAPS document (Department of Basic Education [DBE], 2011). Preferably, it should be 50/50 to create a balance in the EMS assessment. Therefore, by conducting this study, the researcher will also find solutions; among them will be to determine whether there is adequate accounting content in the EMS learning area.

Accounting has become a very important subject for learners who wish to pursue a career in the financial sector and grasping a sound foundation and a proper

background in the subject may result in learners developing an interest to choose accounting studies at institutions of higher learning. There is an assumption that learners lack background knowledge which should be grasped from the EMS learning area in Grade 8. This study will reveal the gap between the EMS policy and EMS practice, especially when there is very limited exposure to accounting-related content in Grade 8 (Schreuder, 2009).

1.2 THEORETICAL FRAMEWORK: SOCIAL LEARNING THEORY (SLT)

The Social Learning Theory was developed by Albert Bandura and Richard Walters in 1977, and the latest version “Empowering Social Learning” was adopted by Lazareska (2017). According to Bandura (1977), “the Social Learning Theory posits that people learn from one another through observation, imitation, and modelling. This theory is often called a bridge between behaviour and cognitive learning theory because it encompasses attention, memory and motivation”.

This study focuses on how to effectively teach the accounting equation as an introductory course in Grade 8, to improve learner-understanding and performance in this section.

1.2.1 The four stages of the SLT

The theory focuses on four stages of learning:

Attention stage: In this study, learners will learn by paying attention to the teacher by means of listening and taking notes. The attention span may increase as learners interact with the teacher during the lesson presentation.

Retention stage: As the teacher continues with teaching, learners will understand information logically by asking questions and seeking answers to problems as far as clarity is concerned; this may require further explanation by the teacher such that learners will be able to remember what they have been taught. On the other hand, the teacher may ask follow-up questions to give feedback on whether learners understood all aspects of the lesson taught.

Reproduction stage: The teacher's role is to give learners a task or class activity in the form of a worksheet to assess their responses by checking their answers. In this way, learners will understand what they have been taught.

The teacher must motivate his/her learners by positively encouraging them to do their schoolwork to progress to the next level. By motivating them, learners will change their perception by developing a positive attitude towards the subject. Sometimes learners might have a perception that the subject is difficult, and there is a possibility that some might drop out; but by continually motivating learners, perceptions will change. Also, the teacher must give more tasks to encourage underperforming learners to do work regularly until they master all concepts in the content of the section being taught. Moreover, the teacher for authenticity purposes, must relate the topic to a real-life setting - for instance, with the accounting equation, in particular, learners must apply accounting skills in their family life by looking at their parents' budget and not demanding things their parents cannot afford thus creating a "balancing" effect. In this regard, what they have learnt from school relates to real-life situations in their households, thus making learning meaningful.

1.2.2 Ontological stance of the Social Learning Theory

In every research paradigm, we need to develop ontology which is the study of what exists or is real (Hardas, 2006). Ontology purports that reality is constructed in the mind of the observer. The science of learning is the erroneous conception of school-as-environment, where education is thought to unfold according to when learning occurs and when there is an observable and demonstrable change in the learner's behaviour. The so-called classroom environment is representative of an "object that exists as a knowable space outside the subjectivities of those who occupy it" (Magrini, 2013).

In Social Learning Theory, learners as the observers will construct reality when they apply the accounting equation principle in the real-life situations of individuals, businesses and organisations. This is done by asking learners leading questions while working from the known to the unknown - in case there is no known knowledge in the area being taught; teachers are expected to explain (but not too much), just enough to get the learners' minds active again.

To become effective and efficient, the teacher is expected to keep learners active, alert and focused on finding real meaning about what they are learning. This means that learners must pay attention, absorb information, and reproduce what they have learnt in the form of problem-solving learning that is according to the Social Learning Theory (Lazarevska, 2017). For instance, for an individual to buy a house or a car, he/she needs to have money to buy these assets and must have a source of income; in this case - have a job. This also applies to business: to obtain assets such as a building, motor vehicle and equipment, one needs to have an income - a form of capital to finance the assets of the business. Therefore, when teaching learners this theoretical part of the accounting equation, it must apply to real-life settings, so that it becomes realistic and meaningful in the mind of the learner - this process is called ontology.

Since there is no single reality in this regard, reality is constructed from the context of the study. As this is a problem-solving study which tries to find out why learners face challenges in understanding the accounting equation section of EMS, the reality of the content will be imparted by relating theory to practical situations.

1.2.3 Epistemological view of the Social Learning Theory

Epistemology can be described as the criteria used in the study by which the researcher decides what is classified as knowledge and what is not (Bruner, 1966). Epistemology is about how one gets the knowledge that interprets reality. Therefore, teachers will help learners discover important facts; for instance, in the case where a teacher has taught the introduction to the accounting equation, teachers need to assess learners on the accumulated knowledge and skills. Teachers will ask questions, give guidance regarding answers, and this will indicate whether they (the learners) gained knowledge or not. For instance, in this section, the teacher will ask learners what they notice regarding assets and owner's equity. The learning sciences define learning in terms of "retention, retrieval, and the transmission and transfer of pre-determined skills, disposition or knowledge". Concerning this definition, knowledge is imparted by applying the retention stage of the Social Learning Theory.

1.2.4 Justification for utilising the Social Learning Theory

The reason for choosing the Social Learning Theory is that it is applicable in a classroom setting so that for the lesson to be successful the three stages should be practised. It must be noted that for a lesson to be conducted successfully, learners must pay attention, the order must be maintained, and the curriculum should be delivered without disruption. For learners to absorb information, interacting between learners and the teacher is encouraged. This can happen when the teacher gives instructions and learners participate by asking clarity-seeking questions that ensures “absorption” is taking place.

Also, learners must interact with each other when doing group work using problem-solving techniques in a collaborative fashion, thus highlighting the learner-centred approach. Furthermore, the accounting knowledge and skills acquired should be applied in social life or in formal learning, as learners are not only being prepared for classroom activities but are also expected to apply this knowledge in their own lives, community and the future workplace.

1.3 BRIEF REVIEW OF RELATED LITERATURE

The purpose of the literature review is to provide the broad orientation of the prospective research study with regard to the planned investigation, as well as to alert the researcher of certain challenges during the main investigation. The study employs a literature review to develop a good understanding and acquire more insight into the research problem (Sekhukhune, 2006). The section will be sequenced as described below.

The literature review section of this study investigates topics such as English proficiency, stagnating accounting curriculum, and limited resources as being the obstacles that hinder learner performance. Other topics to be considered include peer-mentoring as the effective method that helps address challenges, best practices for approaching the accounting equation as evidenced in other countries, and environmental factors affecting participating schools to ascertain whether it is a conducive and productive study environment.

The literature review of the study include sources such as books, internet, journal articles and other official documents from the Department of Basic Education diagnostic analysis and school subject report on accounting (DoE, 2017).

1.3.1 Obstacles that hinder learner-understanding and performance in teaching the accounting equation

Findings show that the major obstacles of learning and the source of negative perceptions learners have towards accounting courses are mainly related to the lack of proficiency in English. The researcher concurs with Tailab's (2013) findings that there are indeed obstacles that are associated with learners underperforming in their first-year of enrolling for the accounting subject. In particular, learners in secondary schools, especially those in rural areas, lack English proficiency skills and this is one of the serious problems that cause learners to have challenges in grasping new accounting concepts, and this results in underperformance. The Department of Basic Education together with communities must collaborate to develop policies that will cater for the needs of all learners; in particular, the language policy should be directed to upgrade all learners' English proficiency skills, coupled with assisting learners with all resources they need to improve their academic performance in accounting.

In another study by Barnes, Dzansi, Wilkinson and Viljoen (2009), it is argued that matric English (HL) is a significant factor influencing performance in accounting. This means that if learners were taught in their home language, then the pass rate in accounting could have been better. Also, according to Yu (2011), research reveals that English proficiency influences performance in accounting. Furthermore, Rammalla (2009) states that most learners who struggle to communicate in English are at a disadvantage.

With reference to Sayed et al. (2007), in his study conducted in South Africa and India, he found similar results when the language (English) used seemed to be a barrier. He explains that in India, learners use Hindi as a core language of communication, whereas in South Africa, we use English as the medium of instruction. Moreover, Paton (2007) from Australia states that non-English speaking background learners performed poorly in the Faculty of Economics and Business at the University of Sydney. Therefore, all the above findings prove that language usage is one of the obstacles that influence the performance of learners studying accounting. Even

learners at secondary school might experience this similar problem, thus it is advisable that in future learners must study the subject in their home language, which may have a positive impact on understanding accounting.

A number of these problems emanate from the accounting curriculum which is not evolving, inadequate resources available to learners from selected black empowerment partners, and the insufficient development of skills required by practice. This study focuses explicitly on the problems faced in secondary and tertiary education in the subject of accounting in South Africa, and the effects of these problems on practice Van Romburgh, (2014).

The researcher views underperforming by first-year accounting learners as being a result of limited resources and the stagnating accounting curriculum. Indeed, this also applies to learners who are studying accounting for the first time in secondary schools and this impacts negatively on learner-performance. Most schools have a shortage of human resources, physical resources, and textbooks; and this is exacerbated by overcrowded classrooms and not having facilities such as computer laboratories. Therefore, it is advisable to build a strong foundation at the very beginning of the teaching of the concepts related to the accounting equation to overcome the challenge of underperformance in accounting among learners.

In this study, in particular, it seems that there is a gap in the pass rate between learners from deep rural areas and those in urban areas; mainly due to insufficient resources in rural areas. At most, these learners have very limited exposure to the accounting curriculum where delivery of lessons are also of sub-standard quality because there are underqualified accounting teachers in secondary schools Kohler, as cited in Van Romburgh, (2014).

This results in the declining pass rate of first-year accounting tertiary learners due to being taught by underqualified teachers of accounting in secondary schools. The majority of these underperforming learners are from “Black” groups Barnes et al., (2009). Another factor that can cause learner-underperformance in grasping the concepts related to the accounting equation is previous performance in certain other related subjects such as mathematics which is regarded as the basis for assessing numeracy and analytical skills, which are prerequisites for performance in accounting Gull & Cheon-Fong, (2010). Therefore, schools should teach the accounting equation

by putting more emphasis on English vocabulary in conjunction with the mathematics that might improve learner performance as well as foster the understanding of the accounting equation.

1.3.2 Addressing challenges through the application of the peer-mentoring method

Leveraging mentoring by peers is used more and more in the UK to address learning problems in Education. Learners that are exposed to mentoring by their peers adapt quicker to the University environment, performing up to four times better than learners who have not experienced mentoring by their peers (more individuals who have not had the benefit of peer mentoring seriously considered leaving the university than the individuals who were involved in peer mentoring.) There was a strong demonstrable link between successful integration in the University activities and staying on at the university Collings, Swanson, & Watkins, (2014).

The researcher advocates high school learners to be involved in peer-mentoring, particularly for Grade 8 beginners of the accounting class, as it could be very beneficial. This beginners' class experience is increasingly important, and if learners could get quality support right from the beginning, then their attitude and performance might improve in the accounting class.

If schools could appoint senior accounting learners to support their junior counterparts especially where classwork and assessed-work are concerned, then the challenges experienced by junior learners might decrease and consequently, performance and understanding of the accounting equation content is improved. Mentoring has been found to increase learners' academic performance, success, social skills, self-efficacy, and the ability to refine learning disposition Leidenfrost, Strassnig, Schabmann, Spiel & Carbon, (2011).

The use of mentors who have shown expertise in the subject leads to quality support of mentees. According to Mahtani (2018), having a mentor to advise, direct, or simply alleviate our uncertainties, can be key to grasping the next few steps successfully, thus enhancing development. This is supported by Leidenfrost et al. (2011) who use the various peer-mentoring styles, and this contributes to academic success among

mentees who are continually improving their performance. Although this study was conducted in Australia, its applicability to the South African context is significant because accounting principles are the same throughout the world.

1.3.3 Global pedagogical practices in approaching the teaching of the accounting equation

In Tanzania, they use a new form of the accounting equation based on the regression model invented by Prot (2013), which use the rates of change of liabilities and owner's equity (capital) compared to the owner's assets. As a matter of principle, the accounting equation normally reflects equality between the assets of the company, its liabilities and capital. The researcher agrees with Prot that the accounting equation should have a different form which may facilitate the understanding of the equation by learners. This form should be expressed as follows: $A = \beta_0 + \beta_1 L + \beta_2 C$. L and C = β_0 , where, A= is assets.

$A = \beta_0 + \beta_1 L + \beta_2 C$ where β_0 is the constant term, β_1 = a rate of change of assets per unit of Liabilities, β_2 = a rate of change of assets per unit of capital. According to Strathmore University (2009), this equation is very relevant in drawing up the balance sheet indicating the financial position of a company, which forms the basis of financial accounting as a discipline. With reference to the new regression model of the accounting equation mentioned above, compared to the usual and common equation where Liabilities L 64%+ Capital C 36%= Assets A100%, the researcher is in favour of the Tanzanian approach because this will make learners visualise concepts and text in relation to the presented model. Consequently, this may improve the understanding of the accounting equation. This is regarded as one of the best creative ways of teaching the accounting equation.

Also, according to Sithole (2015) from the University of Wollongong, Australia, they make use of an instructional design to teach the accounting equation to junior accounting students' best practice to improve learning. Concerning their approach, they compare the split-source effect and integrated instructional design format. The finding shows that the split-source effect (separate diagram, and formulas from the text) impacts learning of the accounting principles negatively Mostyn, (2012). On the

other hand, integrated instructional design (which integrates text, formulas and diagrams) may enhance learner's learning. This tells us that the best way to impart knowledge is through integrating theory and practice at the same time.

Allen, McCourt and Low (2017) from New Zealand, state that playing a monopoly game is a technique for the active learning of accounting principles and practices. The author finds it very fascinating as this had improved learner's performance when it came to acquiring skills and knowledge, which fostered the understanding of aspects of the accounting equation. Hence, incorporating the accounting equation into Monopoly not just led to the understanding of the accounting transactions but also brought the "fun" aspect into the lesson. A feeling of the real-life practice was achieved as they had to continually "balance their books" during the gameplay, while they interacted with different sites on the board, receiving or spending money and even "going to jail". This study explains the teaching model applied that makes it fun for learners as they come to understand the effects of transactions; leading to the laying of the foundations for financial accounting in the process. In addition, Needles (2011) explains that the diversity reflected in the make-up of the group of students in the "Introductory Principles of Accounting" course makes it necessary to present the subject matter so that it will retain their interest because it is always a challenge to inspire them to want to learn accounting. In this regard, Glover (2013) advocated a "gamification" approach to motivate the learners, allowing them to learn through game play.

Lázaro-Gutiérrez, Barainca-Vicinay and Bilbao-Goyoaga (2017) also supported that gamification produced better performance. The games proposed in the Didactic Accounting Card (DAC) Project go beyond playful activity – though they are fun, they include the explanation of certain accounting concepts by learners themselves, which in our view boosts their comprehension of what is being taught. The researcher found that proper well-instilled accounting knowledge was accumulated by students from different approaches used by other countries that may be applicable to South African schools. However, this requires a better-informed accounting curriculum, teaching and assessment within the accounting discipline. In general, we see that other countries don't pay just attention to the use of textbooks, but go beyond by playing related games to teach the accounting equation, and this is a fun way of learning.

1.4 Problem statement

The researcher's main focus was to find effective teaching strategies which would help in delivering better lessons related to the accounting equation since it seemed that most learners tended to underperform in this section of Economics and Management Sciences, especially in the Grade 8 introductory courses. Since most learners experienced challenges in this regard, the study explored various strategies to deal with academic underperformance (Leepo, 2015). Consequently, this effort will lead to an improvement in the understanding of the accounting equation by using various effective teaching methods.

1.5 Aims and objectives of the study

1.5.1 Aim of study

The main aim of the study is to find effective pedagogic practices that could be used to address the challenges faced by the learners in the understanding of the accounting equation.

1.5.2 Objectives of the study

- To identify the problem areas that cause learners to underperform in the accounting equation section of Grade 8 EMS;
- To address the challenges faced by learners using various effective pedagogic practices to improve performance and understanding of the accounting equation; and
- To explore the best teaching practices employed by other countries for presenting lessons concerning the accounting equation.

1.6 Main research question

How will pedagogical practices be effective for addressing learner challenges related to the underperforming and the lack of understanding concerning the section on the accounting equation, Grade 8 EMS?

1.6.1 Subsidiary questions

- What causes learners to underperform in the accounting equation section of the paper?
- How will pedagogic practices be effective in addressing learners' performance and understanding of the accounting equation?
- What are the best pedagogical practices employed by other counties for teaching the accounting equation?

1.7 Intended contribution to the body of knowledge

This study intends to bring about a change in South African schools in terms of finding the best teaching methods that could bring improvement in learners' understanding of the accounting equation principles in the introductory course. Once learners have mastered the accounting equation content, they will develop an interest to pursue careers in accounting studies at higher learning institutions; and the number of accounting professionals will increase (Mkhize, 2017) seeing that there is a shortage of Black accountants in South Africa. The South African Institute of Chartered Accountants revealed that out of 36300 qualified Chartered Accountants in South Africa, only 21% are Black South African Institute of Chartered Accountants [SAICA], Rensburg, R., & Botha, (2014).

1.8 Delimitation of the study

The study had a focus on addressing the challenges faced by learners who underperform in accounting; therefore, the study embarked on finding effective teaching strategies that would improve learner understanding and performance in the subject. The main focus was on teaching and learning in classroom situations which would be conducive for learning purposes. However, there might be exogenous factors that could impact negatively on the study: community strikes on the day of the visit, and bunking of classes during lesson time. Also, there might be irrelevant information presented in the lesson that would not benefit the study.

The information gathered during the process has been treated with confidentiality, meaning that care has been taken of the ethical issues. The researcher established a friendly and professional relationship with participants, and no one felt compelled to participate in the study.

1.9 Research design methodology

1.9.1 Research design

According to Jamshed (2014), “research methodology is a comprehensive strategy that silhouettes our choice and use of specific methods” and “relating them to the anticipated outcomes, but the choice of research methodology is based upon the type and features of the research problem”.

This study can be viewed as an action research-based study because the researcher aims to interact with the research participants in a structured face-to-face way to gain first-hand experience of the phenomenon being studied. The researcher will, therefore, pursue a qualitative research approach in the participants’ comfort zone to get a detailed, rich description of their environment and their experience of it. Qualitative research deals in detail with a relatively small number of participants in order to enhance the quality of responses (Letshwene, 2014).

1.9.2 Research Paradigm

Constructivism is a philosophy of learning founded on the premise that “by reflecting on our experience, we construct our own understanding of the world we live in” (Nieuwenhuis, 2000). Constructivism is based on the premise that there are different realities for different individuals, because everyone constructs their own meaning for specific occurrences in their context based on their intellect, knowledge, the experience of the occurrence and their previous lived-experiences. A critical axiom for constructivism is that human mental activity is involved in the in the process of knowing reality. Applied to this study, it implies that the knowledge of the accounting equation will be constructed while the lesson on the subject matter is being taught and related to real-life examples. For instance, the teacher will give an example of a family who wants to buy a house which is an asset; and they will buy it using the money they have saved or borrowed – this is related to the principle of the accounting equation.

The researcher, therefore, chose this paradigm as qualitative research methods applied to the research being planned, making it a qualitative study. The paradigm suits the researcher’s intended study focused on a single concept namely, teaching Grade 8 learners the accounting equation.

The study is about teaching and learning, and constructivism is mainly related to a teaching philosophy that holds that a student’s understanding is formed via his reflection on specific personal experiences and is influenced by the knowledge that they already possessed and their other lived experiences to date (Kelly, 2012). Therefore, learners will be able to apply knowledge gained during the classroom lessons to practical situations; this is what constructivism emphasises when factoring human intellect and mental activity into the process of knowing the reality about a specific subject or occurrence. Once learners are taught new formats for the accounting equation by teachers using various teaching methods, they will gain knowledge and a better understanding of the accounting principles. Therefore, since we all know accounting is a practical subject, learners should apply accounting equation principles in their household environment. For instance, by knowing that for their parents to buy a house and furniture they need first to have capital in the form of income, and if their income is not sufficient, they need to borrow. That is known as the

creation of liabilities, and by doing so, it becomes an application of the accounting equation principle.

1.9.3. Target population

The site and the participants were selected in the Umhlathuze School Circuit. Three schools, one teacher per school, and a group of learners from top-achievers, moderate-achievers as well as under-achievers were selected. The same selection method applied to each participating school. The three schools in the Umhlathuze Circuit comprised one former model C school, one semi-urban school and one deep rural school.

Participant group and the actual number of participants:

Participant group	Number of Participants
Schools:	3
Teachers per school:	1/3
Learners per school:	3/3
Total:	15

The reason for choosing this population group stems from the researcher's access to the DBE's Annual Report of accounting matric results for this district. The district achieved position 13 out of 17 districts in KwaZulu-Natal in accounting, and this is a very low performance having a pass-rate of 54% which is far below the targeted 70% given by the Department of Basic Education (DBE, 2017). The researcher believes that if learners had obtained proper background knowledge especially that of the accounting equation as an introductory course, the pass-rate would have been better.

1.9.4 Sampling

Salvin (2007) defines a sample as a group chosen to help in data collection and findings for research; in this regard, it was three selected schools in the Umhlathuze Circuit where the investigation was conducted, and the associated participants.

This study employed purposive sampling, this is “a sampling technique that qualitative researchers use to recruit participants who can provide in-depth and detailed information about a phenomenon under investigation”. Gray (2014) refers to purposive sampling as “a non-probability sampling strategy” where the participants are chosen because they are considered typical of the wider population of interest for the specific phenomenon under study. The researcher chose to use this method because it was suitable for the study under investigation, as the researcher wanted to interact with participants (the teachers and learners) on a face-to-face basis to gather detailed information directly from the source to determine what causes learners to underperform, and find the best effective teaching methods that could be applied to improve learners’ understanding of the accounting equation.

1.9.5 Data collection

This study has made use of semi-structured interviews and observation instruments to collect data. An interview “is a way of gathering data from one person at a time” according to Curtis and Curtis (2011), whereas “observation is a process which involves the whole description and construction of meaning” Moyles, (2002).

The data collection process and specific data collection instruments which were used in this study to collect detailed information included interactive interviews and observations. I conducted a fieldwork data collection exercise, engaging with participants directly, as spending time in their environment - in this case, a school environment – was very important. In this way, the researcher became the main data collection instrument.

According to Letshwene (2014), interviews should be verbally conducted with each individual teacher per school, and a prepared list of questions should be set before the interview to insure a structured interview. The interview questions were prepared and

sent before-hand to teachers so that they could familiarise themselves with the questions, and the interview could be productive and efficient. The questions related to the study under investigation and they took into account the sensitivities of the participants when posing questions. This meant that the questions only covered the scope and purpose of the research. The researcher interviewed the teachers to establish what challenges they faced when teaching aspects of the accounting equation. In addition, the teachers were asked which method of teaching they used and how effective it was for this subject.

The interviews were audio-taped, where after the voice recorder was stored securely and safely, being accessible only to the researcher to ensure the confidentiality of the participants.

The observation instrument involved lesson presentations for an EMS Grade 8 class for each participating schools. The researcher then obtained feedback from one top achiever, one moderate achiever and one underachiever. During the observation process, the researcher observed an accounting equation lesson for the Grade 8 learners in each of the participating schools, which was conducted by the school subject teacher who participated in the study, to gain insight into a typical teaching process within a classroom setting.

Both instruments were relevant for the study to find the best effective teaching methods that might improve learner performance and understanding of the accounting equation.

1.9.6 Procedures for data collection

Consent form were issued to all the participating schools concerning the procedure and the purpose of the complete research process for the sake of transparency. The forms were signed by all the participants confirming their voluntary participation in the study. The processes put in place to ensure the anonymity of the participants and the confidentiality of the information provided were explained to the participants before their consent was obtained.

1.9.7 Data analysis and interpretation of results

The study was mainly qualitative in nature and the researcher analysed the data using the thematic analysis process. According to Braun and Clarke (2016), “thematic analysis is commonly used in qualitative research and is suitable for novice researchers; and one important advantage is that it can be used with any theory the researcher chooses” to test.

The purpose of the data analysis was to review the information collected and apply a logical, structured, systematic interpretation to resolve the research questions. It was important to be truthful, accurate and concise about what was found. The researcher also made use of paraphrasing, summarising and transcribing skills when studying and analysing the responses from the interview. By contrast, according to the literature guidelines, the researcher had to give a detailed description of what was found from the observation by putting it in writing. This included a detailed description of the event as well the behaviour of participants. Finally, the analysis of the results, the findings and conclusion led to a set of recommendations to informed decisions.

According to Bilken and Bolgan (as cited in Letshwene, 2014), the data analysis must be an efficient and effective way of critically dissecting all the information, organising transcripts, compiling field notes and other informative material that the researcher gathers for processing to present authentic findings. The data that was gathered by the researcher was be categorised under different headings. Through this process, common patterns were identified. Mouton (2011) stated that the data analysis entailed grouping the information into separate manageable themes, patterns, trends and relationships. In qualitative research studies, large bodies of descriptive information are organised into categories through coding to reduce information in a way that would easily facilitate interpretation and elicit findings Lauer (2006). A major part of the data in this study was in the form of the transcriptions of the interactive interviews, which were analysed so that similar topics emerging from the analysis could be grouped into categories and coded for analysis. The final step was to write a report on my findings in the form of this thesis (Letshwene, 2014).

1.9.8 Validity and reliability

It is critical that the data obtained in the qualitative research can be trusted and other researchers must be able to form an opinion about its applicability. This can be evaluated by looking at the quality, consistency and trustworthiness of the data. (Davies & Dodd, 2002). Therefore, I take a look here about how valid the tools used in the study were for the data collection (interview and observation). With reliability comes consistency and researchers, meaning researchers are expected to obtain the same results replicated or similar studies (Leung, 2015). The researcher believes if another researcher were going to investigate this problem statement, he or she would definitely obtain similar findings.

1.10 Ethical Consideration

According to Munro (2011), “ethics is a set of moral principles suggested by an individual or a group which is widely accepted, and which offers rules and behavioural expectations about the most correct conduct towards experimental subjects and respondents, employers, sponsors, other assistants and students”.

The researcher has followed the University’s prescribed Policy and Procedures on Researcher Ethics and its Policy and Procedures on Managing and Preventing Acts of Plagiarism. The researcher used alphanumerical codes to protect the participant’s identity in the study. Since it is unethical to mention the name of institution where data is collected, the schools’ names will also be coded to keep to anonymity

Accordingly, Lictchman in Letshwene (2014), asserted that “ethics means doing what is right, treating people fairly and not hurting anyone”. The Belmont Report describes three ethical requirements that all human subjects in research must conform to; namely, “informing participants in advance either to give or withhold consent to participate without being forced or threatened, evaluating the potential risks and benefits of research”, and lastly, “selecting the participants must be selected fairly without singling out individuals or groups” (Springer, (2010).

1.11 OUTLINE OF THE STUDY

The chapter outline of the study is as follows:

CHAPTER 1: AN OVERVIEW OF THE STUDY

This chapter dealt with the problem statement, research question, research aim, the objectives of the study, definition of operational concepts, and the plan of the study.

CHAPTER 2: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Chapter 2 focuses on the selected and relevant literature review and summarises the theoretical framework in line with the study.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

Chapter 3 deals with research design and methodology used in this study as well as the paradigm of the study.

CHAPTER 4: DATA PRESENTATION, INTERPRETATION AND ANALYSIS

This chapter comprises the detailed data analysis, presentation and interpretation of the results of effective teaching in the classroom learning environment.

CHAPTER 5: SYNTHESIS, FINDINGS, RECOMMENDATIONS FOR FUTURE RESEARCH, LIMITATIONS AND CONCLUSIONS

This chapter presents the synthesis of findings, recommendations, limitations and conclusions of the study for future research.

1.12 CHAPTER SUMMARY

In this chapter, the background and introduction of the research were enlightened, focusing on effective pedagogic practices. The experiences of the researcher in teaching and learning in Umhlathuze secondary schools are pronounced. It has therefore been necessary to determine the problem areas that cause learners to

underperform in the accounting equation section of EMS in Grade 8, hence the strategies to address these challenges have been identified.

The research problem was “to find effective teaching strategies which will help in delivering better lessons related to the accounting equation since it seems that most learners tend to underperform in this section of Economics and Management Sciences, especially in the Grade 8 introductory courses”. Irrespective of research having been conducted on pedagogic practices that can assist in addressing the causes of underperformance in schools, the study highlighted the following contributory factors: accounting subject content knowledge, limited resources available in schools, lack of pedagogical content knowledge by teachers, contributing to continued underperformance of learners.

The next chapter presents the theoretical framework and review of related literature that informs the empirical research.

CHAPTER 2:

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

2.1. INTRODUCTION

This chapter focuses on the theoretical position that is embedded in this study (i.e. Social Learning Theory), and the evolution of the theory; objectives of the theory; ontological position; epistemological stance; axiological view of the theory; and the justification for the choice of theory. The provisional purpose of this chapter is to give the broader conceptual orientation of the research project. This chapter provides a review of related literature to develop a good understanding and respond to the overarching research question, secondary questions and objectives of the study. Furthermore, this chapter will be discussing several constructs (i.e. Accounting Subject Content Knowledge [SCK]; Stagnation of Accounting Curriculum; Limited Resources; Pedagogic Practices; Peer-Mentoring; Learner Involvement; Regression model; Split-Source Effect and Integrated Pedagogic Design and Technological Aided Pedagogic Practice).

2.2 THEORETICAL FRAMEWORK: SOCIAL LEARNING THEORY

The study was anchored on the social learning theory developed by Albert Bandura, a well-known psychologist. The term theory and theoretical framework are widely defined and applied in research. A theoretical framework acts as a guide and supports the literature review. A theory is a scientific postulation that provides understanding about a particular phenomenon or is defined as a set of logically interrelated concepts, definitions, and propositions that are advanced to explain and predict facts. A theory can be explained or defined by the framework of assumptions and concepts in which it is embedded Kumar (as cited in Mngomezulu, 2018).

2.2.1 Historical Origin of the Theory

Albert Bandura, the Canadian psychologist, is the founding father who developed and conceived the Social Learning Theory. The origin of social learning theory is traceable back to 1930 when Freud's psychoanalytic theory with stimulus-response learning theories were combined by psychologist with an attempt to invent this theory. These psychologists had the ambition to relate more objective scientific guiding principle to the highly subjective nature of psychoanalysis so they could have a further solid

indulgent of how learning, personality traits, and social development occur over one's lifecycle (Grusec, 1992).

According to Bandura (1977), "the Social Learning Theory hypothesise that people learn from one another through observation, imitation, and modelling", while Lou in Edinyang (2016) in his famous Bobo doll experiment, agree with Bandura who established that children acquire and reproduce behaviours they have observed in other people. Albert Bandura was able to scrutinise how children obtain new behaviours in more observable ways. McLeod (2016) asserted that children witness the people around them behaving in different ways. The Social Learning Theory is often called a connection between behaviour and cognitive learning theory because it incorporates attention, memory and motivation. The latest version "*Empowering Social Learning*" was adopted by Lazarevska (2017). The foundation of this theory shows that a character does not only include observable behaviour, as traditional psychologists consider, but that cognitive processes play a critical role in the changing or learning of behaviour patterns.

2.2.2 Objectives of the Theory

2.2.2.1 Observing and Modelling the Behaviours

The objectives of Social Learning Theory (SLT) stresses the position of observing and modelling the behaviours, attitudes and emotional reaction of others because it incorporates attention, memory and motivation, Social learning theory spans both cognitive and behavioural frameworks.

2.2.2.2 Grounded On Self-Reflection

The goals of the social learning theory are to display that an individual can learn in numerous ways. People make choices grounded on self-reflection, but mostly the environment in which a person finds themselves impacts the way they behave and learn. The learner, the person who is at the centre of this theory, processes different desires in different techniques (Bandura & Walters, 1977).

2.2.3 Components of the Theory

Bandura in Mngomezulu (2018) classifies social learning as a means of learning new skills in which the copied behaviour of adult role models ends-up influencing the child.

The observational learning model highlight four processes, namely, attention, retention, reproduction, and motivation.

Attention stage: In simpler terms, attention processes determine what features of the modelled behaviours the observer will focus on that is according to Mngomezulu (2018). Janse (2018) agrees that the observation of a model with status is necessary for the reworking or imitation of actions. Imitation is not conceivable without the learner being able to reflect themselves to a model. In this study, learners will learn by paying attention to the teacher by means of listening and taking notes. The attention span may increase as learners interact with the teacher during the lesson presentation.

Retention stage: How well the behaviour is evoked, the behaviour may be perceived, but it is not always thought of, which prevents imitation. It is important, therefore that a memory of the behaviour is formed to be performed later by the observer (McLeod, 2016). Bethards (2014) argues that retention processes help the observer to imprint the observed behaviours to memory in symbolic form. Astray-Caneda, Busbee, and Fanning (2013) conclude by saying that remembrance plays a vital role as the observer may reuse what he/she has witnessed.

In retention stage as the teacher continues with teaching, learners will understand information logically by asking questions and seeking answers to problems as far as clarity is concerned; this may require further explanation by the teacher such that learners will be able to remember what they have been taught. On the other hand, the teacher may ask follow-up questions to give feedback whether learners understood all aspects of the lesson taught this whole process is referred to as retention.

Reproduction stage: Reproduction is about being able to reproduce what was learnt Lazarevska (2017), while Janse (2018) states that reproduction is the ability to execute suppressed reminiscences as behaviour. Many behaviour characteristics are remembered on a daily basis, but it is noted that not everything will be recycled later on. In some cases, the physical circumstance of the learner limits the aspiration to change behaviour. Hence, in this study, in particular, the teacher's role is to give learners a task or class activity in the form of a worksheet to assess their responses by checking their answers. In this way, learners will understand what they have been taught.

Motivation stage: According to McLeod (2016), the rewards and punishment that follow behaviour will be considered by the observer. If the perceived rewards outweigh the perceived costs (if there are any), then the behaviour will be more likely to be imitated by the observer. Bandura's (1977) views on behaviour are that, if the mediated reinforcement is not seen to be imperative enough to the observer, then there are very slim chances to imitate the behaviour.

It is the teacher's responsibility to motivate his/her learners by positively encouraging them to do their schoolwork to progress to the next level. Through motivation, learners will change their perception by developing a positive attitude towards the subject. Sometimes it might happen that learners have a perception that the subject is challenging and there is a possibility that some might even drop out; but by continually motivating them (learners), perceptions will change.

Likewise, the teacher must give more/ extra tasks to encourage underperforming learners to do work regularly until they master all concepts in the content of the section being taught. Furthermore, the teacher for authenticity purposes, must relate the topic to a real-life setting - for instance, with regard to accounting equation, in particular, learners may be taught how to apply accounting skills in their family life by looking at their parents' budget. In this regard, what they have learnt from school, they can relate to real-life situations in their households, thus making learning meaningful Lazarevska, (2017).

2.3 Ontological stance of the theory

In every research paradigm, we need to develop ontology which is the study of what exists or what is real Hardas, (2006). Ontology purports that reality is constructed in the mind of the observer. Namane (2017) points out that an ontological stance relates to the belief grounded on the premise describing the empirical nature of the world that is being studied. Furthermore, Qhosola (2016) indicates that ontology in critical accounting provides for multiple realities representing the economic and social world.

In Social Learning Theory, learners as the observers will construct reality (ontology) when they apply the accounting equation principle in the real-life situations of individuals, businesses and organisations. This is done by asking learners leading questions while working from the known to the unknown - in case there is no known

knowledge in the area being taught; teachers are expected to explain (but not too much), just enough to get the learners' minds active again.

To become effective and efficient, the teacher is expected to keep learners active, alert and focused in order to find real meaning about what they are learning. This means that learners must pay attention, absorb information, and reproduce what they have learnt in the form of problem-solving learning that is according to the Social Learning Theory Lazarevska, (2017). For instance, in order for the business to obtain assets such as a building, motor vehicle and equipment, one needs to have income - a form capital to finance assets of the business. Therefore, when teaching learners accounting equation, it must apply to real-life settings, so that it becomes realistic and meaningful in the mind of the learner - this is what is called ontology.

It can be concluded that reality is constructed in the mind of the observer, in this regard learning accounting equation can be made real when learners apply it their households belongings (to measure the value of Assets, Owner's equity and liabilities). This means that learning can be made real by relating accounting equation with reality of learner's world or environment. In the context of the study, as this is a problem-solving study which trying to find solution pertaining challenges faced by learners in understanding the accounting equation section, the reality of the content will be imparted by relating theory to practical situations.

2.4 Epistemological view of the theory

The term epistemology can be branded or referred to a philosophy that talked about nature of knowledge, Lofgren (2013) in agreement that epistemology is a theory relating to the study of the nature and grounds of knowledge, hence epistemology is about how one gets knowledge that interprets reality. This is, the technique or approach a teacher will use to teach, depending on the teacher's belief of nature of knowledge, while learners learn on assumption of what knowledge means to them.

Therefore, teachers will help learners discover important facts during lesson presentation; for instance, teachers will ask questions that give guidance regarding answers, and this will indicate whether they (learners) has gained knowledge or not during the lesson presentation. Knowledge is imparted by applying the retention stage of the Social Learning Theory Lazarevska, (2017).

2.5 Axiological position of the theory

Schroeder (2008) explains, “Value theory” describes the area of moral values that is concerned with theoretical questions about value and goodness of all varieties — the theory of value. In other words, Zerkina, Lomakina and Kostina (2015) collectively view value as something that belongs to an object; yet, unless it is recognised as value by the subject, it does not become actual. In this regard, learners will gain values of honesty, keeping records (financial accounting records) for accountability purposes. Axiology is regarded as a social value nature of knowledge. Teachers that teach, should emphasise the social values of the topic or subject and allow learners to participate in the process of teaching and learning monetary values versus social values so that learning of accounting can be made easy.

The role of the school should be significantly changed from an informative (to communicate knowledge) into a predominantly formative one (to teach learners to acquire knowledge). Cojocariu (2016) is in agreement with the fact that, action knowledge will trigger the mechanisms of theoretical knowledge, supporting and turning it into a passionate activity. With reference to the researcher’s view in applying Social Learning Theory (SLT) in the study, axiology refers to how does SLT assist the value of knowledge in pedagogical practices for understanding on accounting equation. According to Bandura (1977) behaviour is cultured from the environment through the process of observational knowledge, therefore in this regard, the learner will acquire ethical values of accounting by observing their teachers, also by observing their parents on how they manage family budget and financial resources.

2.6 Justification for the choice of this theory

The reason for choosing the Social Learning Theory is that it is appropriate in a classroom setting, because it applies the processes that are implemented in the classroom. For the lesson to be effective the first three stages (attention, retention and reproduction processes of social learning theory) should be practised, this supported by Lazarevska (2017) learners learn by paying attention through imitation of observable behaviour.

It is obvious that for a lesson to be conducted successfully learners must pay attention, the order must be maintained and the curriculum should be delivered without disruption. For learners to absorb information, interacting between learners and the teacher is encouraged, this is supported by McLeod (2016) when he says "...the observation needs to be stored before it can be reproduced". This can happen when the teacher gives instructions and learners participate by asking clarity-seeking questions that ensures "absorption" is taking place.

Similarly, Learners will interact with each other when doing group work using problem-solving techniques in a joint fashion, thus highlighting the learner-centred approach. Additionally, this may result in accounting knowledge and skills acquired being applied. In reality, learners are not only being prepared for classroom activities, but are also expected to apply knowledge learned in their own lives, community and the future workplace.

2.7 REVIEW OF RELATED LITERATURE

2.7.1 CAUSES OF UNDERPERFORMANCE IN ACCOUNTING EQUATION

The following constructs were identified as the causes of learners' underperformance in the accounting equation in Economics and Management Science (EMS). The researcher has been prompted by the following outlined factors that may have an influence on learners' performance.

2.7.1.1 Accounting Subject Content Knowledge (SCK)

Schmidt (2018) explains that content knowledge (CK) is the "knowledge about the actual subject matter that is to be learned or taught". Teachers are expected to be knowledgeable and clear about the content they are going to teach and the manner in which the nature of knowledge is different for numerous content areas.

According to Assan (2016), the implication with regard to EMS content was that only a very limited or small number of teachers have been trained or have received subject content knowledge (SCK) in this discipline. This resulted in a large number of teachers having little or no content knowledge, but they were obliged to teach the subject- EMS.

While Van der Berg (as cited in Leepo, 2015) acknowledged that weak content knowledge of the teacher contributes to poor results and underperformance of learners. Additionally, Mji & Makgato (2006) asserted that outdated teaching practices and lack of basic content knowledge of the subject caused poor teaching standards.

Ngwenya (2012) further emphasised that EMS teachers lacked content knowledge, especially accounting content, this was exacerbated by the fact that content was never specified in the curriculum. A collective view of Samkin, Low and Taylor (2012) clearly indicate that there is very limited academic research that has been conducted in accounting at the secondary school level. As a result, it is likely that challenges with regard to learner underperformance in accounting is due to the fact that teachers lack accounting subject content knowledge.

Since teaching is a multifaceted action that appeals for importance on content knowledge, Tsotetsi (2013) propose the implementation of policies such as Continuing Professional Teacher Development System and the Integrated Quality Management System (IQMS). Both of these policies will address the support of teacher development respectively and reflect current thinking to improve working teacher's abilities in subject content knowledge. Bett & Mulkeen (as cited in Mumhure, 2017), is in agreement with the fact that professional development which is conducted in the form of workshops is largely intended to provide teachers with the latest information on particular aspects of their work, as a result this will have a positive impact on teacher's capacity to improve their subject content knowledge in their respective subjects.

2.7.1.2 Stagnation of Accounting Curriculum

The term curriculum referred to a field of study, subjects or a plan of action or learners' involvement or practices at school that is according to Orstein and Hunkins (as cited in Venter, 2016). The explanation for this is that a learner needs 'desirable knowledge' to run a race of life successfully (Guglielmino, 2013). With reference to Cheng in Letshwene (2014), there are many complications in the present accounting education, a major one being the content and design of the curricula. Carr and Mathews in Lee and Bisman (2006) point out that accounting curriculum has been critiqued for being 'rule-based and demanding routine memorisation; while learners are being trained rather than educated', also Kachelmeier in Lethswene (2014) criticise a dull, rule-

based accounting curriculum that needs learners to learn by rote details without understanding concepts.

Nevertheless, Albrecht and Sack (2001) criticised the lack of creativity in accounting curriculum, by not empowering learners with skills to face the real business world. Wong and Pang in Moodley (2013) agree that there is ineffective curriculum initiatives and a lot of mismatches exist between the intended and implemented curriculum. It is noted teachers are hardly involved in the planning and in decision-making processes and that result in curriculum stagnation., Francisco, Kelly and Parham (2003) also concur that, “for years, the focus of accounting courses has been on the mastery of the accounting curriculum, with little emphasis on developing the learner’s necessary skills in analytical thinking, decision making and communication.

Teachers have no time to cultivate learners’ skills because they always focus on what the work schedule requires”. Kohler in Van Romburgh (2014) emphasis that one other reason that causes learners not to understand accounting equation is that, there are underqualified accounting teachers in most secondary schools. This results in learners having a very limited exposure to the accounting curriculum and consequently poorly perform in the subject in question. Fisher (2013) points out that the curriculum used by accounting instructors has not changed or kept pace with redefinition of accounting competency. Marshal, Dombroski, Garner, and Smith (2010) collectively suggest that accounting curriculum must be restructured in a manner that develops one’s capability to teach accounting effectively. It is clear that teachers face challenges with regard to curriculum implementation, because they are not involved in curriculum development, hence they are the key players in curriculum delivery and also understand how the learners learn better.

Past research has indicated that accounting education is stagnating while the current economic environment is constantly evolving and changing, Van Romburgh (2014). Furthermore, it is clear that with regard to accounting education, more research is encouraged to address the issues pertaining to the stagnating of the accounting curriculum. This is supported by Rebele and Pierre (2015) who assert that the accounting education literature indicate both signs of stagnation and a continuing disconnect between the accounting education literature and the accounting practices, whereas Conradie, Ludwig and Moyce (as cited in in Qhosola, 2016) argued that the

accounting curriculum is changing and will continue to change in response to speedily changing marketplace demands.

Since the accounting equation is an introductory course and a fundamental backbone of accounting as a subject. The researcher believes that transformation is definitely needed for the current stagnated accounting curriculum in order to encourage creativity in accounting. Stagnation in the accounting curriculum results in a situation where learners experience challenges in the accounting equation. Consequently this results in a declining rate of learners offering accounting in Grade 12, hence some underperformance.

2.7.1.3 Limited Resources

Leepo (2015) pointed out that, the shortage of learning material such as textbooks, workbooks, calculators and access to computer laboratories has a negative effect on the learning outcomes. Most secondary schools face academic underperformance due to both internal and external factors that comes from school. Internal factors include (but not limited to) inadequate/lack of resources that is a view of Leithwood (as cited in Leepo, 2015). With reference to Eastern Cape provincial education research report, Spaul (2013) support that another cause of underperformance is a severe shortage of textbooks, laboratory equipment and poor management controls. According to Tigere, (2016) from a report of the portfolio committee on education, culture sports and recreation in Mpumalanga department of education highlighted the key casual factors that lead to underperformance in certain subjects including accounting was the shortage of human capital. The department has a shortage of teachers as well as subjects' advisors (curriculum implementers) for effective curriculum implementation.

Manqele (2012) asserts that it is noted most schools have a shortage of human resources, physical resources, and textbooks; and this is exacerbated by overcrowded classrooms and having no facilities such as computer laboratories while Hallack as cited by Adeogun in Manqele (2012) emphasized that, the accessibility and adequacy of education resource contribute to academic achievement. He further affirms that unattractive school buildings, crowded or overcrowded classrooms, non-availability of playing grounds and environments that have no aesthetic good looks can contribute

to poor educational performance. The National senior certificate diagnostic report (DBE, 2017) is in agreement that due to lack of resources, this has resulted in the declining pass rate even in Grade 12 senior certificate accounting learners. Insufficient basic information and communication technology (ICT) infrastructure in rural schools poses a challenge for teachers, which is not necessarily the case in urban schools (Dzansi & Amedzo, 2014).

Generally, limited resources available to learners contribute towards the poor performance in most schools, therefore inadequacy of resources hampers not only effective teaching and learning but also derails performance of learners. The researcher recommends that Government, Businesses, Organisations, as well as all other stakeholders, must work together to re-build education system and try to find solutions that will improve educational resources in general.

2.7.2 PEDAGOGIC PRACTICES

In research carried out by Dunn in Letshwene (2014) suggest that it is convenient for teachers deliberately to consider how learners learn and also how teachers teach. In this regard, to consider techniques and approaches that can be useful to improve the teaching of the accounting equation in secondary schools. Additionally, Schreuder (2014) further state that teaching methodologies are a challenge because teaching methodologies need to distinguish the various sections of the curriculum and adapt to different groups of learners and teachers depending on who are sitting in front of them: there should not be a one-size-fits-all approach. Van Romburgh (2014) proposes that teachers need to move away from teaching rules to teaching concepts of accounting, instead of enhancing practical skills. Such skills should provide learners with a basis from which to comprehend and remember the rules better.

Msimanga (2017) points out that accounting equation needs an active learning strategy instead of inactive learning. By active learning, it means involvement of both learners and teachers. It is quite obvious that education is a two-way process where both the teacher and the learner are learning from each other. DBE, BCM (2015) ascertain that developing informal simulation activities on how to use source documents in the accounting equation and record business transactions could form part of active learning. For instance, accounting learners must be engaged in a practical situation for example by identifying source documents in the transaction and

relate them to the book of first entry, which will be a skill, in a practical situation which illustrates the lesson.

2.7.2.1 Application of Pedagogical Content Knowledge

Shulman hosted the concept of pedagogical content knowledge (PCK) that is according to Rahmi (2018), therefore PCK refers to teachers' interpretations and transformations of subject-matter knowledge in the context of facilitating learners learning. In agreement, Guerriero (2014) concur by saying pedagogical content knowledge refers to the specialised knowledge of teachers for creating effective teaching and learning environments for all learners. In recent years, Teachers' Pedagogical content Knowledge seems to be of a vital significance in addressing learner underperformance, therefore it is imperative to improve the quality of the teaching workforce, consequently improving learners' outcomes.

According to Modise (2016) teachers may have pedagogical content knowledge challenges in teaching Accounting as an integrated subject within the EMS. This especially occurs if teachers have been trained along the traditional discipline model, as a result they may lack the conceptual knowledge to integrate the subject effectively. Subsequently, this may results in learner underperformance in the accounting equation section of accounting. Pedagogical content knowledge seems to have an impact on the quality of instruction and has more impact on learner's achievement than content knowledge (Baumert et al., 2011). Agustina (2015) states that a qualified teacher not only transfers knowledge of the subject matter he/she owns, but without a good pedagogy content knowledge, it is difficult for future teachers to understand a new knowledge and construct it with the previous knowledge they have acquired.

2.7.2.2 Application of the Peer-Mentoring Method

In lieu of the purpose of this study peer mentoring method is identified as another way that could be useful to address the challenges of underperformance of learners. Colvin and Ashman (as cited in Collier, 2017) describe peer mentoring as a relationship where more knowledgeable learners help a less experienced learner improve overall academic performance and offers assistance, support, and knowledge to the mentee. Leidenfrost et al (2011) agree by saying that mentoring has been found to be useful in increasing learners' academic performance success, social skills, self-efficacy, and the ability to refine learning disposition. Thus, this is where one person who offers guidance, support, and concrete advice to someone else who is close in age and

shares common features or practices is being assisted that is according to the collective view of Yomtov, Plunkett, Efrat, and Marin (2017). Moreover, Allen, McManus, and Russell; Campbell (1999) and Campbell (as cited in n Leidenfrost et al., 2014) emphasises that mentoring programs have presented positive effects including academic performance reduced drop-out rates and improved social integration.

Nevertheless, the use of mentors with expertise in the subject the better the performance of mentees. This is supported by Mahtani (2018) who said having a mentor to advise, guide, or simply mitigate our qualms, can be key to grasping the next few steps successfully thus enhancing development, although peer mentoring is mostly practiced in higher education institutions, secondary schools can implement it as well. Ferrari in Casey (2013) point out that learners who are involved in school-based mentorship ingenuities such as a first-year mentoring program are testified to have higher intensities of cognitive and informational backing, a more favourable impression of educational aims, higher intensities of self-confidence, and a higher obligation to lifetime learning, when equated to learners who were not involved in mentoring. Fox and Stevenson (2005) further propose that if schools could appoint senior accounting learners to support their junior counterparts especially when classwork and assessed-work are concerned then challenges experienced by junior learners might decrease and consequently their attitude.

It is advisable to apply various peer-mentoring styles in order for the programme to be effective, this is supported by Leidenfrost et al. (2011) who state that the use various peer-mentoring styles contributes to academic success among mentees who are continually improving their performance. This study was conducted in Australia, its applicability to the South African context is significant because mentoring is needed throughout the whole world. Furthermore, Metros and Yang in Leepo (2015) asserted that actual mentoring is characterised by reciprocally valuable relationship. Participants should be prepared to openly share what they expect to achieve from the relationship and their vision for getting there. They need to be ready to learn and pay attention to each other's viewpoints. With regard to Topping (in Casey, 2013) give emphasis that peer mentoring can increase understanding, self-worth, and self-confidence as a result of feedback delivery from peers.

Peers as a source of psychosocial support have been increasingly recognised in this literature, therefore the researcher in this study advocates that secondary school learners need to be involved in peer-mentoring programs particularly for grade 8 beginners accounting class as it could be very beneficial. The beginners' class experience is increasingly important and if learners could get quality support right from the beginning their attitude and performance as well as an understanding of the subject in question might improve.

2.7.2.3 Application of Learner Involvement

Levenson (as cited in Sekhukhune, 2008) explains that there are various categories of approaches to the teaching of accounting, this include but not limited learner-centred approach. According to Emaliana, (2019) a learner-centred classroom is a domicile which encourage teachers to consider the needs of the learners, either as individuals or as a group, to actively participate in the learning process all the time. The teachers' roles are more facilitators than instructors. During the learning process, the teacher's main task is to guide the learners, manage their activities, and direct their learning. The teacher may assign work to the learners to do work on their own or without any assistance. The purpose is to encourage growth, a deeper understanding of the discipline and bring about change to how they interpret information.

Darsih (2018) affirms that Learner-centred teaching is an approach to teaching that is progressively being invigorated in education. Learner-centred teachers do not employ a single teaching technique. This approach stresses a variety of different types of methods that changes the role of the teachers from givers of information to facilitators in learner's learning. Furthermore, the Department of Basic Education in Assan (2014) encourage various approaches to education which can be useful to improve learner understanding while Moate and Cox, (2015) emphasise on the use of learner-centred pedagogy.

With reference to Leepo, (2015) it is noted that strategies/approaches teachers implement plays a significant role in underperforming learners in schools. Chandra and Jayaprakash (2005) agree by saying that the teaching strategies used must be in line with the contextual learning theory where the aim of education is the combination of content learnt with the real world experiences. The strategy of teaching accounting

cannot be a textbook only. The demonstration of knowledge and application of accounting equation principles in the lessons should form an integral part of teaching and learning process in accounting classroom. Chandra and Jayaprakash (2005) emphasis that teaching methods such as interactive case studies, simulations and games, group work are widely recommended by several research organizations.

A study by Maclaren, Wilson and Klymchuk (2017) explored on the importance of using educational technologies in the classroom. Their study sought to weigh which of the following tools are more usefulness in delivering class lessons: chalk and dust, overhead projector and computer related technology such as power point. Allison and Hayes in Sekhukhune (2006) agree that learners learn in different ways, therefore their academic performance depend on the approach used which may be an important determinant factor for their progress.

Sava (2016) indicate that “the interactive methods are modern ways of stimulating teaching, representing tools of learning which favour the interchange of ideas, experiences and knowledge. Interactivity is characterized by the desire for active cooperation and involvement with a deep active-participatory character. Learning is achieved through communication and collaboration. It is based on mutual relationships and it refers to the process of active learning, whereby, the learner acts on information in order to turn it into new, personal and internalized information. In a constructive way, the learner rebuilds senses by exploring the environmental / educational environment, solving problems and / or using the information gained in new situations”.

The researcher believes that for a lesson to be interesting and draws learner's attention, it is encouraged/advisable for teachers to apply different styles and approaches to teaching. In olden days the focus was on teacher talk method but in 21st century learner-centeredness is encouraged. The system allows learners to demonstrate their knowledge, understanding and critical thinking through learner-centeredness.

2.7.3 BEST PEDAGOGICAL PRACTICES FOR ACCOUNTING EQUATION

2.7.3.1 Regression model

In accounting view, regression model explain how an accounting equation evolves overtime due to complex behaviours of managers in decision making specifically capital structure decisions. Regression model looks at accounting equation by using trade off theory and positive accounting theory lenses. The accounting equation is viewed as living or dynamic and changes according to human behaviour or managers of company's behaviour. A regression model is used to examine the relationship between two or more variables and educated guess of one variable based on the others (Leech, Barrett & Morgan, 2013).

Other world countries such as Tanzania, they also use the regression model to present accounting equation lesson. Prot (2013) finds a new form of the accounting equation, rates of change of liabilities and owner's equity (capital) in relation to assets. The accounting equation shows equality among assets of the company, liabilities and capital. This study suggests that the accounting equation should have a different form expressed as, $A = f(L, C, \beta_0)$ i.e. $A = \beta_0 + \beta_1 L + \beta_2 C + \epsilon$ as shown in the statistical results. Where β_0 is the constant term, here the constant term may explain so many business activities, for example, type of business, type of assets, loan and capital location and human capital. These make an important part of business and show that even when L is zero (no liability) and C is zero (before obtaining capital or loan) a business man or woman may be having an idea, place to do business, skills and even how to get funds. These variables and more which are unexplained make an important part β_0 which is ignored in traditional accounting equation and professional bodies, β_1 being the rate of change of assets per unit change in liabilities, β_2 is the rate of change of assets per unit change in capital or owner's equity.

In agreement, Strathmore (2009) confirm that, this equation is highly applied in drawing up the balance sheet indicating the financial position of a company which forms the basis of financial accounting as a discipline. This also aims at determining the way accounting equation evolve overtime due to complex behaviours of managers in decision making specifically capital structure decisions Prot (2013). The researcher discovers that, this new approach "regression model" of accounting equation is more informative compared to a traditional format which is stated below.

With reference to traditional basic Accounting equation principle where: Assets = Owner's equity + Liabilities, ($A = O + L$), ($A: 100\% = C: 36\% + L: 64\%$) was less informative in relation to new form of regression model. The researcher agrees with the Tanzanian approach because this will make learners visualise concepts and text in relation to the model and in this manner, this may improve their understanding as well as learner performance in accounting equation.

2.7.3.2 Split-Source Effect and Integrated Pedagogic Design

In Australia, according to Sithole (2015) they make use of instructional design on learning the accounting equation in an introductory accounting course as the best practice to improve learning. Concerning their approach, they compare the split-source effect and integrated instructional design format. Mostyn (2012) findings shows that the split-source effect (separate diagram, and formulas from text) has been found to have a negative effect on learning. Alternatively, integrated instructional design (which integrates text, formulas and diagrams) may enhance learner's learning. This tells us that the best way to impart knowledge is through integrating theory and practice at some point and at the same time. Integration is one such technique where instructional material in the form of worked examples may comprise several sources of mutually referring information. An example could be diagrams and a set of explanatory text below, above or on the side.

Furthermore, with reference to the study conducted in New Zealand by Allen, McCourt and Low (2011) further suggest that playing a monopoly game is a technique for the active learning of accounting principles and practices and the author finds it very fascinating. This has improved learner's performance when it comes to acquiring skills and knowledge which fostered the understanding of aspects of the accounting equation. To encourage meaningful learning experiences requires considerable thought about what is appropriate for the learners and the context. This is essentially the same as designing learning activities more generally, and gamification should be considered during this same design stage Glover (2013).

A sense of practical reality is achieved as they need to continually "balance their books" during game play, while they progress around the board, either receiving or paying out money and even "going to jail". This study explains the teaching approach adopted that makes it fun for learners to actively grasp the effects of transactions; and

this lays the foundations for financial accounting. In addition, Needles (2011) explains that the diverse group of learners in the course *Introductory Principles of Accounting* makes it necessary to present the subject matter in such a way that it will arouse their interest, because motivating them to want to learn accounting is always a major challenge. In this regard, Glover (2013) advocated a play- as-you-learn strategy, or “gamification” as a technique for motivating learners.

Lázaro-Gutiérrez (2017) support that playing games produced better performance. The games proposed in the Didactic Accounting Card (DAC) Project go beyond playful activity – though they are fun, they include the explanation of certain accounting concepts by learners themselves, which in our view boosts their comprehension of what is being taught. Crossword puzzles have been shown to be effective teaching tools of terminology, definitions and spelling, resulting in greater retention of facts (Moore & Detlaff, 2005)

The researcher found that a proper well-instilled accounting knowledge gathered from methodologies by other countries may be applicable to South African schools. However, this requires a better-informed accounting curriculum, teaching and assessment within the accounting discipline. In general, we see that other countries don't pay attention to the use of textbooks only, but go beyond by playing related games to teach the accounting equation, and this is a fun way of learning. With the researcher's point view believes that for the lesson to flow smooth as it is taught, it is advisable to apply various methods, and designing games relevant to the lesson taught may draw learner's interest and improve their understanding of the subject. For instance, creating word puzzle when introducing accounting equation concepts may be interesting and allows learners to participate in their own capacity.

2.7.3.3 Technological Aided Pedagogic Practice

It is often claimed that technology can be used as a tool that can facilitate teaching and learning and contribute to learners' achievement (Umugiraneza, Bansilal & North, 2017). Teachers are urged to develop learners with 'relevant modern skills that match the needs of our changing world' DBE, (2016). Moreover, technological tools can also open up access to a wider variety of problem-solving strategies than those limited to paper and pencil strategies (Bansilal, 2015). Purcell, Heaps, Buchanan and Friedrich (2013) they state that 'the greatest impact of the internet and other digital tools on their

role as teachers has been access to more content and material for use in the classroom and a greater ability to keep up with developments in their field'.

In the context of accounting education, Holt, Boyce, Carnegie, Lourens, and Bigelow in the study conducted by Jebeile and Abeysekera (2010) suggest that the use of computer-assisted learning in accounting education will substantially contribute to the development of technical competencies and, furthermore, will allow greater emphasis to be placed upon accounting concepts, issues, and ideas within the classroom.

Sugahara and Boland in Sithole and Nhete (2016) explain that, computer technology tools that are available to accounting teachers take many forms, including computer-assisted instruction by drill and practice, multimedia simulations and electronic games and financial modelling. Spreadsheet software such as Microsoft Excel can be used to analyse financial information, perform calculations and to create forecasting models. Premuroso (as cited in Sithole and Nhete, 2016) argue that the use of new classroom technologies may create a more interactive and dynamic teaching-learning environment compared to the traditional lecture-style classroom. Therefore the use of spreadsheet in a class can help save time and complete the given task.

Drill-and-practice is an example of a teaching method in which learners' practise skills previously learned and receive corrective feedback. Computer-based drill and practice involves the use of a computer-assisted instruction technique in which a series of structured problems or exercises with immediate feedback to student responses is provided (Bordy, 2010). In accounting drill and practise exercises promote the acquisition and mastery of knowledge and skills through repetitive practice. The use of drill and practice software is not intended to teach new concepts, but instead to reinforce concepts already taught through review and practice. As the study is accounting equation as an introductory course learners will be able to master basic concepts.

With reference to Sithole and Nhete (2016) indicate that, accounting teachers can use spreadsheets such as Microsoft Excel in recording transactions in the books of prime entry. Engaging learners in recording and balancing two column cashbooks, three column cashbooks, petty cashbooks and the sales and purchases daybooks through the use of Microsoft Excel is both interactive and learner-centred.

As the study seek to explore best practices employed by other world countries, computer technology has been found as a useful tool to facilitate teaching and learning of accounting and it makes both the life of the teacher and learner easier.

2.8 CHAPTER SUMMARY

In conclusion, the researcher's literature review emphasized several pedagogical practices that could be effective to address learner challenges for understanding of the accounting equation and improve their performance, by employing best lesson presentation by other world countries. Highlighting the research by different researchers around the globe, including South Africa. King Cetshwayo District is one of the district in KZN province where most Grade 12 learners are incapable to perform at an expected level as it obtained 54% The National Senior Certificate Schools Subject Report (2017) which is far below the targeted 70% by Department of Basic Education The National Senior Certificate Schools Subject Report (2017). The effect of these factors on the academic performance of learners are applicable to all learners; especially those who come from poor socio-economic backgrounds, regardless of whether the country is classified as developed or underdeveloped, such as South Africa. Likewise, this is a global problem that Non English speakers have challenges in their academic performance and this is underlined by international and local literature.

The literature review has tinted many challenges faced by Grade 8 EMS learner's that might cause underperformance in accounting equation section of EMS. A number of authors have tried to find solution and apply different approaches to overcome these challenges. It is unblemished from the above discussion that the problem does not invents from one or single aspect, and therefore stratagems mentioned need to be put in place to in order to enhance performance so that the number of learners registering accounting as a subject in FET phase may increase.

The following chapter talk over the research methodology, and clarifies why qualitative approach was preferred for this study together with the data gathering techniques used.

CHAPTER 3:

RESEARCH DESIGN AND METHODOLOGY

3.1. INTRODUCTION

The study seeks to formulate pedagogic practices that could be used to address the challenges faced by the learners for understanding the accounting equation for Grade 8 Economics and Management Science. In order to attain this aim, this chapter discusses the qualitative research methodology, the research paradigm, research design, selection of participants and sample, data collection instrumentation as well as data analysis. The study adopted a qualitative research approach and research design involving a case study to investigate how pedagogic practices be effective to address learner underperformance in accounting equation for the samples of schools drawn from Umhlathuze Circuit. A case study design is important in this project because the experiences and challenges of teachers and learners are being explored in terms of their real life situations in their teaching and learning environment, as well as their individual subjective experiences (Cohen, Manion & Morrison, 2002). It also discusses how the study was channelled to examine its feasibility and how the researcher became involved in the mission and makes future research suggestions that need to be pursued.

3.2 RESEARCH METHODOLOGY

3.2.1 Qualitative Research as a choice of methodology

This study uses a qualitative research method, for this study as it is appropriate to answer the research questions and objectives of the study. A detailed discussion of each method is pursued in this section. According to Jamshed (2014), research methodology is an all-inclusive strategy that outlines the choice and usage of specific methods and relates them to the anticipated results, but the choice of research methodology is based upon the nature and structures of the research problem. The methodology is concerned with the relationships amongst various parts of the study and the production of findings obtained during the research process. In this study, the researcher will interact with participants in their environment to find out exactly what challenges learners face in the classroom and attempts to incorporate multiple realities

with regard to accounting equation. As the qualitative research is interested in analysing subjective meaning in this topic being researched, it will attempt to determine how the pedagogic practices can be effective to address the learner underperformance. This will help the learners to make sense and meaning of the accounting equation in the classroom and in real-world situations. The important reason for choosing qualitative research for this project is because qualitative research deals with a relatively small number of participants in detail to enhance the quality of the responses.

The researcher selected a small number of participants as the sample to be in line with the requirements of the qualitative research method. During the data collection, the researchers interacted with the participants directly, for example while the data collection was being done through interviews. Consequently, the data collection was subjective and detailed. Thus, qualitative research could contribute to the understanding of the complex features of the study. According to Bogdan and Biklen (as cited in Dos Reis, 2012) the objective of qualitative research is to understand the behaviour and experiences of humans and to grasp a series of happenings by which humans construct meaning and to provide details of what those meanings are. Flick (as cited in Rahman, 2017) claimed that, "Qualitative research is interested in analysing subjective meaning or the social production of issues, events, or practices by collecting non-standardised data and analysing texts and images rather than number and statistics"

For this study, a qualitative research method was chosen because it involves peoples (learners and teachers) with regard to their experiences or challenges and the causes they face when learning about the accounting equation of EMS. Interviews and observations were conducted with both teachers and learners to find the root cause of the problem. This study sought to understand their experiences and construct meaning to the problem in question.

3.3 RESEARCH PARADIGM

In this study, knowledge will be produced from constructivism paradigm point of view. The constructivism paradigm has been chosen for this project, therefore, it will be employed as an educational process that will be used to produce knowledge in this study. Amineh and Asl (2015) describe constructivism as a philosophy of learning

founded on the premise that by reflecting on our experience, we construct our own understanding of the world we live in. Bush (as cited in van Rooyen, 2012) is of the opinion that research attempts to produce new knowledge as a basis for insight into the educational process or to initiate improvements.

With reference to Bada and Olusegun (2015) the constructivism research philosophy recognised that reality is the product of human intelligence interacting with experience in the real world while Merriam and Caffarella (as cited in in Animeh, 2015) agree that “it is how people make sense of their experience”. Therefore as soon as you include human mental activity in the process of knowing reality, you have accepted constructivism. Additionally, Mngomezulu (2018) explains that research paradigms are an ontological dimension; an epistemological dimension, and methodological dimension with approaches for coming up with an understanding of reality.

Schreuder (2014) indicates that with a constructivism paradigm “learners develop meaning. Their prior knowledge interacts with new or different knowledge they have encountered in the classroom as they engage with their teacher, classmates and texts”. Kalpana (2014) agrees that, “in constructivist classrooms, knowledge is constructed from individuals’ prior knowledge and experience or collaboratively by what learners contribute. It is important that teachers understand how learners construct meaning and also teachers are required to create an environment that allows learners to take responsibility for their learning”. Mvududu and Thiel-Burgess (2012) further explain that “constructivism is widely held as an approach to probe for children’s level of understanding and to show that understanding can increase and change to higher-level thinking. Thus, constructivism refers to the “how” of learning and thinking”.

This paradigm suits the researcher’s study as it is qualitative in nature since the researcher focuses on a single concept which is teaching the EMS accounting equation to Grade, 8 learners. According to Kelly, “since the study is about teaching and learning, constructivism is mainly related to a teaching philosophy that is based on the idea that learner’s understanding is formed via reflection on their personal experience - relating to the knowledge that they already possessed” (Kelly, 2012).

On that note, learners will apply knowledge gained during the class lessons and relate it to practical situations to construct meaning; this is what constructivism emphasises

when relating human mental activity to the process of knowing reality. For the purpose of this study, the knowledge of the accounting equation will be constructed when the teacher presents a lesson on the subject matter and relates it to a real-life situation. For instance, the teacher will give a practical example of a family who wants to buy a house which is an asset; and they will buy it using the money they have saved (Owner's capital or money borrowed [Liability]) – this is related to the principle of the accounting equation. Once learners are taught new formats of the accounting equation by teachers using various teaching methods, they will gain knowledge and a better understanding of accounting.

3.4 RESEARCH DESIGN

This study is based on a case study design, involving the three selected schools in the Umhlathuze Circuit. Case studies focus on how particular groups of people confront specific problems by evaluating an overall view of the situation. It then suggests to the reader what to do or what not to do in a similar situation. It can examine a specific instance but illuminate a general problem (van Rooyen, 2011). Case studies are a preferred strategy when “how” or “why” questions are being posed. Since the purpose of this study was to investigate how pedagogical practices will be effective for addressing learner challenges related to the underperforming and the lack of understanding concerning the section on the accounting equation; the researcher will, therefore, use the case study method. Creswell (2008 as cited by McMillan & Schumacher, 2010) refers to a case study as —“an in-depth exploration of a bounded system based on extreme data collection.” By using case studies, researchers seek to understand the larger phenomena through intense scrutiny of a specific case or situation. The main reason for the researcher to use case studies is the specificity of the context and its relevance to the objectives of the study. A case study approach allows for —flexibility, for researchers to study the phenomenon or —case, and the context, as it unfolds over time.

This means that a case study is an in-depth inquiry of a particular case within a real-life situation. In the context of this study, the case for this project is to make sure that the data obtained addresses the initial research question. Wadsworth (2011) points out “that a good research design is flexible but firm enough to ensure a reliable plan of action that will address the research purpose and, has a clear focus on the fundamental research questions, clearly states its purpose and the context that has

generated that purpose, only asks essential, unambiguous questions, involves the right people in the process, and shows devotion to honesty, self-scepticism and accuracy in even the smallest details". Schumacher (as cited in Moodley, 2013) confirms that the goal of a sound research design is to provide findings that are deemed to be credible.

Consequently, the school to be studied are classified into three categories; one of those is regarded as disadvantaged school, poorly resourced, with overcrowded classroom and situated in a remote environment (rural areas of Umhlathuze). The data generated will be obtained mainly from the teachers using interviews and class observation. Also from learners through interviews to test their knowledge on how much they understand of accounting equation section of EMS.

In this study, interviews area preferred strategy for asking questions such as "what", "how" and "why" in order to gain an insight of the subject in question. However, the researcher used interview and observation strategies to find teachers' classroom experiences when teaching Grade 8 first timers in financial literacy class. This is well suited for finding the real meaning from teacher's view on the factors that causes underperformance of learners in this regard.

3.5. STUDY TARGET POPULATION AND SELECTION OF SITE

The fieldwork for this study was conducted in King Cetshwayo District of KwaZulu-Nata Province, Umhlathuze Circuit, as defined by KwaZulu-Natal Province Department of Basic Education. The population for this project refers to all schools offering EMS in Grade 8 at Umhlathuze circuit of which the sample is extracted from it. This is supported by Slavin in Leepo (2015) who describes population as a large group to which the results of a study involving a sub group are meant to apply. While Gabriel in Kela (2016) concurs to a population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications.

The reason for selecting this population group stanches from the researcher's access to the KZN Provincial Department of Basic Education (DBE) Diagnostic Annual Report of accounting matric results. The King Cetshwayo district where Umhlahtuze Circuit falls under has obtained position 13 out of 17 districts in KwaZulu-Natal in accounting.

This is a very low performance having an overall pass-rate of 54% which is far below the targeted 70% given by the Department of Basic Education that is in accordance with The National Senior Certificate Schools Subject Report, (2017). The researcher believes that it is likely that if learners had obtained proper background knowledge especially that of the accounting equation as an introductory course in Grade 8, the pass-rate would have been better.

This study can be categorised as participatory research because the researcher aims to carefully observe the research participants closely in order to get an actual experience. Here the researcher conducts the study by working together or intermingling with participants. It is said qualitative research happens in the partakers' own comfort precinct -to get a rich explanation of the world around them. Moreover, qualitative research deals in detail with a comparatively small number of partakers in order to improve the superiority of replies Letshwene, (2014).

3.5.1 Sampling Technique

Sampling is a research process where participants are selected for the study. It is necessary because the process embraces the population from whom data are extracted. This study employs purposive sampling. Gray (2014) pronounces purposive sampling as a non-probability sampling approach where participants are nominated on the basis that, they are considered to be representative of a wider population. Oliver in Ayoola (2017) concur by defining purposive sampling as a form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may specialist knowledge of the research issue, or capacity and willingness to participate in the research. Niewenhuis in Ngwenya (2012) in agreement that purposive sampling is usually used in qualitative research since participants are selected because of some defining characteristics that make them suitable for the study.

THE BACKGROUND INFORMATION OF SELECTED SCHOOLS

The information below was collected and gathered from the participating schools by means of interviews, observations and field notes.

The table below define the context of participating schools

school category	Area/Region	Language teaching and learning	Main language
Georgetown high	Urban	English and Afrikaans	English, Afrikaans, IsiZulu
Amaphisi School for the Girls	Township	English	IsiZulu
Esikhaleni Secondary	Rural	English	IsiZulu

The 3 schools in the Umhlathuze Circuit will comprise one former model C school, one semi-urban school and one deep rural school. In case there are learners repeating the class they will be removed from the sample and from participating in the study, motive being the focus is on the experiences of learners grappling with the new practices for the first time.

Participant group and number of Participants:

Participant group	Participated
Schools	3
Teachers per school	1/3
Learners per school	3/3
Total	15

In this research study where pedagogic practices that confront EMS teachers and learners is being studied, focused on a small selected group when collecting data from only three schools was not a true reflection of what is happening in Umhlathuze schools. With reference to this study selection of the site and participants will be done in the Umhlathuze School Circuit, to select a diverse group of participants, potential

research participants were identified considering the following criteria: where three (3) schools were selected, one teacher per school, and three (3) learners in Grade 8 class for each participating schools identified as follows: from top-achievers, moderate-achievers as well as under-achievers. The same selection method will apply to each participating school. It was assumed that each of these selected teachers have sufficient background knowledge, experience and relevant information about the subject they offered in this regard it will be three selected schools in the Umhlathuze Circuit where the investigation will be conducted.

My teaching experiences as an economics and management science teacher has influenced the choice of conducting research in one of the schools from rural area. The researcher chose to use this method (participatory research) because it is suitable for the study under investigation, as the researcher will interact with participants (teachers and learners in this case) directly by visiting the schools personally to gather the exact information on what causes learners to underperform, and then find the best effective teaching methods that can be suitably applied to improve learners' performance and understanding of the accounting equation.

3.6 DATA COLLECTION

During data collection phase, researcher use different kinds of instruments to collect data. The data collection process and specific data collection instruments which will be used in this study include interviews and observations. The researcher will conduct a fieldwork data collection process where engagement with participants directly and spending time in their environment - in this case a school's environment – is paramount.

With regard to Roller and Layraksa (2015) state that achieving accuracy in the data collection process is, like all aspects of qualitative research, a nuanced and often difficult mission. It is, however, a mission worth pursuing because, unlike absolute "truth," it is an obtainable and necessary ingredient to deriving outcomes that enable consumers of the research to actually do something meaningful with the findings.

3.6.1 Interviews

This research project will employ semi-structured interviews. Semi-structured interviews is regarded as one-on-one encounter (between the interviewer and interviewee), which is used by the researcher in order to gather the information for the study in respect of data collection. Bryman (cited in Savin-Basen & Major, 2013) claims that semi-structured interviews are often used in qualitative research. A qualitative inquiry provide insight and seeks to gain an understanding of the problem under investigation

The reason why the researcher chose interviews was to understand the respondents' experiences, perceptions and feelings with regard to causes of learner underperformance in accounting equation section of EMS. In this regard interviews will be conducted to both teachers and learners I their comfort zone, a school I this case. Bell in Dos Reis (2012) state that in order for one to prepare an interview, careful consideration should be made regarding the time and place which is suitable for the interviewees even if this does not fit into the researcher's plans. This is supported by Kumar (2014), who avers that the qualitative approach is rooted in the philosophy of empiricism; follows an open, flexible and entrusted approach to enquiry; it aims to explore diversity rather than to quantify

Consequently an interview can be explained as a way of gathering data from one person at a time Curtis and Curtis, (2011) whereas according to Kvale in Alshenqeeti (2014) an interview is "a conversation, whose purpose is to gather descriptions of the [life-world] of the interviewee" with respect to interpretation of the meanings of the 'described phenomena'. A voice-recorder will be used during interview sessions recording the conversation between the interviewer and interviewee. Thereafter a voice recorder will be transcribed. For safety and confidentiality reasons the voice recorder must be kept and locked in a secured and safe place. The researcher will set and prepare Interview questions and sent to both teachers and learners prior the interview date so that they may familiarise themselves with the questions and to be ready for the interview.

Questions should be based on the study that is being investigated and the researcher should consider sensitivities of the participants when posing questions. This means that questions will only be based on the scope and purpose of the research and allow

the participants' right not to answer if he/she is not comfortable. In this regard, the researcher will interview teachers to establish what challenges they face when teaching aspects of the accounting equation. In addition, they will be asked which method of teaching they use and how effective it is for this subject, therefore such questions are related to the study. As for learners a set of questions were set to suit their level of understanding and were also about EMS financial literacy (accounting equation).

The researcher posed questions pertaining to EMS accounting (financial literacy) section to try and find out as to what challenges teachers experience when teaching this section and to find best and effective pedagogic practices to be used as an intervention to address challenges. The questions were set by the researcher and moderated by supervising professor to check its suitability and relevance to the study. During the interviews, this approach allowed the interviewer to ask follow-up questions to generate even more data. These characteristics made the semi-structured interview a suitable research method for this study. Apart from the interviewing, the other technique used to collect data was observation.

3.6.2 Observation

Observation is a process which involves the whole description and construction of meaning Moyles, (2002). Bertram and Christiansen (as cited in Ayoola, 2017) explain observation as involving the researcher going to the site of study – which may be a school, classroom or a staff room – and observing what is actually taking place there. Observation emphasises observing and recording actual behaviour, rather than reported or recalled behaviour. Kawulich, (2005) describe participant observation as the primary method used by anthropologists doing fieldwork.

During observation process, the researcher will observe an accounting equation lesson for grade 8 learners in each of the participating schools which will be conducted by the school subject teacher who is participating in the study in order to gain insight into a typical teaching process within a classroom setting. Teachers were observed when delivering the class lesson on Grade 8 EMS accounting equation section. Teachers were observed on whether they have subject content knowledge and how to go about planning, teaching and which resources are needed during class lesson, also by applying different approach either a learner-centred approach or a teacher-centred.

Both instruments are relevant for this study and both teachers and learners were very active involved that makes research interesting. The aim here is to find best effective teaching methods that may improve learner performance and understanding of the accounting equation.

3.7 DATA ANALYSIS TECHNIQUES

Data collected was analysed using thematic analysis. This study is mainly qualitative in nature and the researcher will analyse data using the thematic analysis process. According to Patton and Cochran (as cited in Motsamai (2017) define thematic analysis as the procedure where researcher looks across all the data to identify common issues that recur, and identify main themes that summarise all the views the researcher has collected while Braun and Clarke, (2006) explain that thematic analysis is commonly used in qualitative research and is suitable for novice researchers; and one important advantage is that it can be used with any theory the researcher chooses. Furthermore, they also emphasize, thematic analysis is a method used for 'identifying, analysing, and reporting patterns (themes) within the data'.

Leedy and Ormrod in Leepo, (2015) further concurs that, data analysis entails collecting data, looking for emerging themes and recurrent events, categorizing them and re-evaluating themes and categories. Creswell (2012) views data analysis as "organizing, accounting for and explaining the data; in short, making sense of the data in terms of participants' definition of the situation, noting patterns, themes, categories and regularities".

The purpose of the data analysis is to look at what information has been collected and then apply a cohesive, systematic interpretation to help answer the research question. It is advisable to be truthful, accurate and concise about what was unearthed. The researcher will also make use of paraphrasing, summarising and transcribing skills when referring to responses from the interview. Contrastingly, with observation the researcher must give a detailed description of what was observed by putting it in writing. This includes description of the event and as well the behaviour of participants. According to Bilken and Bolgan (Cited in Letshwene, 2014), data analysis is an efficient and effective way of critically dissecting information, organising transcripts,

compiling field notes and other informative material that the researcher gathers for processing to present authentic findings.

Data that was gathered by the researcher and categorised under different headings. As this process continues common patterns were identified. Mouton in Letshwene, (2014) support that, data analysis entails breaking up information into discrete manageable themes, patterns, trends and relationships. In qualitative research studies, large bodies of descriptive information were organised into categories through coding to reduce information in a way that would easily facilitate interpretation and elicit findings Lauer, (2006). Voice-recorders was used to record interviews, which was then transcribed. The transcription of the interviews was analysed and similar topics were grouped into categories then coded for analysis. The next step will be to write a report on my findings Letshwene, (2014).

The reason that makes the researcher choose this method it's because thematic approach can yield an insightful analysis that answers research question. The most important consideration the researcher made was identifying themes in the interviews collected from participants. The key ideas about the data is something that captures what counts as a theme in relation to the research questions and which represents some level of patterned answers or meaning within the data set Braun and Clarke, (2006).

Finally, the examination of the results, the findings and conclusion will lead to making recommendations and well-versed decisions.

3.7.1 Appropriateness and Trustworthy

In order to see whether the research instruments are appropriate and the research findings are trustworthy, it is of a vital significance for researchers to assess the appropriateness and trustworthiness of their studies. For this study the research findings reflect exactly what was gathered from participants depicts what is happening in the classrooms.

3.7.1.1 Appropriateness

With reference to Leung (2015) in qualitative research validity means "appropriateness" of the tools, processes, and data. Whether the research question is valid for the desired outcome, the choice of methodology is appropriate for answering the research question, the design is valid for the methodology, the sampling and data

analysis is appropriate, and finally the results and conclusions are valid for the sample and context. Furthermore, Mustafa (2011) considers validity to be a tool for determining whether research measures what it was intended to measure, or how truthful the results are. Neuman (cited in Musili, 2015) concurs that validity is the degree to which a test measures, what it purports to measure or it measured what it was intended to measure.

With regard to this study, the interview and observation tools were therefore designed to measure the extent to which the pedagogic practices aimed at addressing learner underperformance in accounting equation are fulfilling the intended function. Teacher's and learner's responses were addressing the main research question. This provided information expressed by participants in an accurate recorded form. Validity was achieved through seeking to understand information from the perspective of the participants in their contexts. Interpretations were verified through member checks, the information obtained was through the participant's perspective.

3.7.1.2 Trustworthiness

Trustworthiness refers to the researcher's claim to have used appropriate, adequate and replicable methods, and to have correctly reported the findings Hill (2013). Mugenda (cited in Musili, 2015) trustworthiness is a measure of the degree to which a research instrument yields consistent results after repeated trials. In this research project the focus of the interpretation of any social phenomenon, which is in this case the qualitative data from both the observations and the interviews, should be viewed as something that can be used for better understanding of accounting equation. The reliability of information obtained from both interview and observation was estimated by examining the consistency of the responses between the two instruments.

Creswell (2013) stated that trustworthiness in qualitative research revolves around Lincoln and Guba's (1985) idea concerning dependability, conformability, transferability and credibility which states that validity in qualitative research is inherent in the researcher's use of procedures of authenticity.

3.7.1.2.1 Credibility

Credibility of the study, or the confidence in the truth of the study and therefore the findings, is the most important criterion Polit & Beck, (2014). This helped to ensure

that the findings were credible from the perspective of the research participants Loh (2013). In qualitative research term validity is termed “credibility”. To achieve credibility the researcher applied research questions, literature review, data collection techniques and data analysis were made valid arguments and recommendations. The researcher gave the participants the platform to do the talking while paying more attention and listening to their responses. Also have high sensor voice recorder to assists keep audio recordings for accuracy purposes.

3.7.1.2.2 Dependability

This means that the researcher must account for the changes that occur within the context of research (Singh; 2013). Dependability refers to the stability of findings over time. Dependability involves participants evaluating the findings and the interpretation and recommendations of the study to make sure that they are all supported by the data received from the informants of the study Cohen, (2011; Tobin & Begley, (2004).

3.7.1.2.3 Transferability

The nature of transferability, the extent to which findings are useful to persons in other settings, is different from other aspects of research in that readers actually determine how applicable the findings are to their situations (Polit & Beck, 2014). Transferability refers to “the degree to which the results of qualitative research can be transferred to other context or settings” Singh (2013). As for this project findings that can be transferred to household and organisations to apply accounting knowledge and skills in their personal situations. Lincoln and Guba (1985) emphasise that transferability is the applicability of the findings to situations outside the study and is found meaningful.

3.7.1.2.4 Confirmability

Confirmability is the neutrality or the degree findings are consistent and could be repeated (Connelly, 2013). To achieve the confirmability criterion, Shenton (2004) advises that, “Steps must be taken to help ensure that as far as possible that the work’s findings are the result of the experiences and ideas of the informants, rather than characteristics and preferences of the researcher.

3.7.2 ETHICAL PROTOCOLS

Ethical clearance is always required when conducting a study that is according to Hammond and Wellington (2013) this helps the research not infringe on the rights of the target participants. De Vos, Strydom, Fouche and Delport in Leepo,(2015) define ethics as a set of widely accepted moral principles that offer rules for, and moral behavioural expectations of the most correct conduct towards experimental subjects and respondents, employers, other researchers, assistants and students. Munro (2011) concur by stating that ethics is a set of moral principles suggested by an individual or a group which is widely accepted, and which offers rules and behavioural expectations about the most correct conduct towards experimental subjects and respondents, employers, sponsors, other research assistants.

Litchman 9cited in Letshwene, 2014), asserts that “ethics means doing what is right, treating people fairly and not hurting anyone”. Roller (2015) emphasis that ethical considerations are important in every research method involving human subjects but they take on added significance in case-centred research where researchers often work closely with research participants over a period of time and frequently in the face-to-face mode (where researcher-participant relationships play an important role in the research outcomes).

Additionally, it is my responsibility as the researcher to ensure that all relevant persons, committees, and authorities have been consulted and that the principles guiding the work are accepted prior to commencing the research. In the case of this study, the ethics committee at the University of Zululand and title registration committee granted ethical clearance while on the other hand the research office of the Department of Basic Education in the Province of KwaZulu-Natal granted permission to conduct research in the selected participating schools.

All participants must be allowed to influence the work and the wishes of those who do not wish to participate must be respected McDonald in Qhosola (2016). Participation in the study is completely voluntary, and participants may refuse to participate or withdraw from the study without penalty or loss of benefits to which they may otherwise be entitled. Participants may withdraw by informing the experimenter that they no longer wish to participate (no questions will be asked). He or She may skip any question during the interview, but continue to participate in the rest of the study.

3.7.2.1. Informed Consent

Informed consent is a document given to individuals before they participate in a study to inform them of the general nature of the study and to obtain their consent to participate Jackson, 2011. The Belmont Report describes three ethical requirements that all human subjects in research must conform to; namely' informing participants in advance either to give or withhold consent to participate without being forced or threatened, evaluating the potential risks and benefits of research, and lastly, selecting the participants fairly without singling out individuals or groups Springer, (2010). Rose, Aburto, Hagemann and Shahnazarian (2009) state that Informed Consent is a voluntary arrangement to participate in research. It is not simply a form that is signed but is a procedure, in which the subject has an understanding of the research and the risks involved. A consent form will be issued to participating schools concerning the procedure and the description of the entire research process for the sake of transparency. This form must be signed thereby giving consent to participate voluntarily in the study. The participants will be informed more about the purpose of the study and confidentiality processes will be explained.

3.7.2.2 Confidentiality and Anonymity

According to Wiles, Crow, Heath and Charles, (2008) The Concise Oxford Dictionary defines confidentiality as: "spoken or written in confidence; charged with secrets" while anonymity is defined as: 'of unknown name, of unknown authorship'. In the ethics literature, confidentiality is commonly viewed as akin to the principle of privacy Oliver Gregory in Wiles, Crow, Heath and Charles, (2006). Anonymity and confidentiality of participants are central to ethical research practice in social research. Where possible, researchers aim to assure participants that every effort will be made to ensure that the data they provide cannot be traced back to them in reports, presentations and other forms of dissemination. The primary method researchers use to preserve anonymity and confidentiality is the use of pseudonyms for participants and also for the location of the research Crow and Wiles, (2008)

Therefore the researcher will ensure that research findings are kept confidential the participant's names will remain anonymous. The researcher will develop codes x, y, z to protect the participant's identity in the study. Since it is unethical to mention the names of participants and that of participating institution where data is collected, the schools' names will also be coded to keep to anonymity.

3.9 CHAPTER SUMMARY

This chapter began by highlighting the research paradigm, research design and methodology, Importance as well as advantages of using qualitative method in this study, research sample and sampling procedures, data gathering techniques, ethical considerations and issues of validity and reliability. The research design employed a qualitative approach, reason being this method studies things in their natural setting and use a wide range of interconnected methods with a view to get a better understanding of the strategies employed to deal with the causes of academic underperformance of learners in accounting equation section of EMS.

Instruments used for data collection for this study were both Interviews and observation techniques. I visited the research participants in their natural settings, observed one Grade 8 EMS accounting equation lesson from each participating schools. Interview questions were direct and straight to the point asking participating teachers with issues relating to subject content knowledge, accounting curriculum in EMS and availability of resources such as textbook, workbooks, overhead projectors etc. During the process field notes were taken. The observation schedule and observation checklist were designed and sent prior so that the participants will prepare and know what is expected of them, also I wanted to make participants comfortable so that they will supply information that will assist me in answering the main research question that seeks to identify the interventions that could be made to help both Grade 8 EMS teachers and learners.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.1 INTRODUCTION

This chapter presents data generated from interviews and observation of teachers and learners of EMS Grade 8 classes from three different schools participated in the study. The learners were selected according to their performance from top achievers, moderate achievers and underachievers in EMS Grade 8 learners from each of the three secondary schools participating in the study. The conclusion of the study are presented and discussed in this chapter to respond to the main research questions presented in Chapter 1.

The literature reviewed in Chapter 2 outlined the answers of the study for an integrated viewpoint on the strategies that can equip Grade 8 teachers with pedagogic practices to teach accounting equation effectively. The discussion from the findings is organised into sub-sections. The first section describes the causes of underperformance by learners in the Accounting equation section of EMS, the pedagogic practices employed by teachers when teaching the EMS equation, providing an analysis of the strategies and methods of teaching the accounting equation, and how these pedagogic practices will address the performance of Grade 8 accounting learners. Another section describes the forms of assessment used when assessing learners, and also describes what strategies we can implement to empower teachers who are underqualified. The last section describes the observation of Grade 8 EMS accounting equation lessons.

Selected quotations were nominated as representative of testimonials echoed by many of the respondents to ensure the excellence and truthfulness of themes and categories (Lovell & Voccaro, 2010). The direct quotations ensure that the findings of data analysis are presented objectively, as they reflect the personal opinions of participants.

4.2 PROBLEM AREAS THAT CAUSE UNDERPERFORMANCE IN THE ACCOUNTING EQUATION

The following section lists the challenges that were identified by teachers as those that are causing learners to underperform in the accounting equation of EMS. These

problems and challenges were obtained from participants through interviews as well as classroom observations.

4.2.1 Accounting Subject Content Knowledge

Both Teachers and learners indicated the lack of understanding of basic accounting concepts as the main challenge that learners are faced with when it comes to teaching and learning the accounting equation. Hence, when they were asked, what do they think the main challenge was when it comes to accounting equation they responded as follows:

Mr George: *the main reason that they lack basic accounting concepts. The biggest challenge comes from learners they struggle to understand concepts. Learners are unable to apply the concepts to a given scenario like identifying or differentiating expenses, assets liabilities or owners' equity and how those especially (Income and expenses) they affect owners' equity.*

The participant further stated that: "...learners find it very difficult to analyse and interpret how those elements (income and expenses) affect owners' equity". (Mr George).

Mr Phakathi: *is lack understanding in terms of transaction The key thing is to understand concepts.... Also they (learners) lack to classify them into different accounts such as Assets, Owners' Equity and Liabilities as well as Income and Expenses.*

Nosipho: *"...unable to differentiate between transactions that has to be recorded under liabilities or capital that is where the problems lies, sometimes I do mix up when I study at home".*

Bongie:*...It becomes hard for me and I become confused which transaction to record under which account although teacher did explain but I get confused when I do it alone*

Yes I have experience serious challenges when I want to fill up / record transactions it becomes hard for me and I become confused which transaction to record under which account although teacher did explain but I get confused when I do it alone

Zinhle: *.....With regard to recording transactions and was unable to link / associate transactions with the account which they have to be recorded on, I mix yet confused at the same.*

Phindile: *I had a problem on how to record transactions particularly Bank account – I used to mix put wrong transaction in credit side whereas it supposed to be debited.*

Lwazi: *I do experience challenges like I get confuse and mix when recording transactions that belongs to OE and put them under Assets*

Precious: *I experience challenges actually Accounting Equation (AE) is where my weaknesses are*

Fezile: *I do have challenges, but I know the formula or AE Principle, but I don't understand it*

Seemingly learners are faced with difficulties when it comes to identifying, differentiating and understanding of transactions which account they should be recorded into. While teachers are having challenge pertaining to the subject content knowledge, it is supported by Assan (2014) that the implication with regard to EMS content was that only a very limited or small number of teachers have been trained or have received subject content knowledge (SCK) in this discipline. Teachers noted that most learners mix and confuse accounting equation transactions that cause them to dwell and spent a lot of time in this section. Therefore, it is the responsibility of the teacher to make sure that learners acquire knowledge of the subject during lesson presentation, this means that Knowledge is imparted by applying the retention stage of the Social Learning Theory (Lazarevska, 2017).

When dealing with the accounting equation, in most instances learners are expected to learn by memorising the formula or accounting equation principle, of which there might be many concepts that the learners may not have an understanding of what they mean if they are just memorised. As the researcher, what I picked up from the interviews was that accounting often uses a unique vocabulary that makes it a challenge for learners to understand the basic accounting equation concept. It is imperative that key concepts must be taught thoroughly as they form the backbone of the introductory accounting course so that that learners can master and understand the fundamental concepts since concepts are usually learned as an integral part of the process of learning of the subject as a whole.

For a learner to construct knowledge of accounting as a subject, it is imperative for teachers to be knowledgeable about the subject to teach learners effectively. Also, to have an understanding of elementary accounting equation concepts. Ngwenya (2012)

is in agreement with the fact that EMS teachers lacked content knowledge, especially accounting content, this was exacerbated by the fact that content was never specified in the curriculum; therefore these problems seem to emanate from the stagnating EMS curriculum design and content.

Teachers also indicated that one of the challenges is that it is assumed that anyone can teach EMS.

Mr George: *The main problem that I picked up in other schools is that they take any teacher to teach EMS forgetting there is accounting section in EMS and they skip accounting part which is financial literacy they don't teach it all.*

Mr Phakathi:... is this (ppn) post-provisioning norm thing where teachers are redeployed and the school has a shortage of teachers then they will take any teacher to teach EMS for that is to undermine the subject. Officials assume that since the subject is there in GET phase so anyone can teach it.

The most affected schools who are unable to retain qualified teachers, especially accounting teachers due to redeployment program and (ppn) post-provisioning norm are schools from rural areas. This leads to the appointment of under-qualified teachers in schools.

Another challenge is that schools take any teacher, even science teachers, to teach EMS and these teachers skip the accounting part. For me, they undermine the subjects, and that results in poor performance.

Mrs Dlamini: *.schools sometime they put a teacher who majored with consumer studies and this does not help our learners I think they don't value the to*

Teachers are expected to deliver lessons in class providing credible information to the learners through the process of teaching and learning. Therefore, if some of them are not well armed to convey such information and knowledge to the learners, the quality of teaching is compromised. Mostly good teachers are needed in disadvantaged schools, of which these schools hardly have any. It is common to find teachers offering subjects that they are not competent to teach in these schools, resulting in poor academic performance. According to Assan (2014), the implication with regard to EMS content was that only a very limited/small number of teachers have been trained or have received subject content knowledge (SCK) in this discipline. This resulted in a

large number of teachers that have little or no content knowledge but were obliged to teach EMS.

4.2.2 Stagnation of Accounting Curriculum

Cheng (2009) states that there are many challenges in the existing accounting education which lies in the content and the design of the curriculum, although teachers have different views of this matter. In the context of the Curriculum and Assessment Policy Statement (CAPS), the curriculum is still not designed to engage in experiential learning, meaning learning through integrating theory into practice.

***Mr George:** With regard to EMS curriculum there is a big gap between EMS Grade 8 and EMS Grade 9. In Grade 9 there is real accounting while in Grade 8 there is just bits and tots, accounting part is very small.*

***Mr Phakathi:** I think it enough although they do cash transactions only, at least if the department can add credit transactions as well as debtors and creditor ledger towards the end of the year because there is too much work in Grade 9 it is packed and learners do not cope. The gap between Grade 8 and grade 9 curriculum was also considered to be the problem.*

4.2.3 Limited Resources Available to Learners

The segregation of schools poses a challenge for learners as there seems to be an unequal distribution of resources. It seems like learners in some of the schools are not supplied with enough books as they have to share textbooks, and that has a negative impact on their learning and understanding of the accounting equation. However, some of the schools are better resourced than others. The status of resource materials in the selected school differs.

Teaching and learning materials required in EMS indicate that learners should actively participate in the teaching and learning process, they should go through textbooks, use calculators and write in different exercise books.

***Mrs Dlamini:**..You find that most learners poorly perform because they don't even have textbook, actually even in my school here, there is a shortage of learning material and access to photocopier is a challenge too.*

Nosipho: ... Textbooks are there but not enough they borrow us. We use Successful EMS textbook only and sometimes it has only one example so we can practice much....

Phindile: No, we don't have enough textbook, we share one book per desk and this thing of sharing make me lose concentration. Also I think we need other books to practice with because the one we are using sometimes it has one example.....

Zinhle: I cannot say we have textbook because we do not keep them in our possession...

Dudu: Textbooks we have to buy our own books as well as calculators.

Apart from the fact that learners did not have textbooks with them all the time when asked about the usefulness of the given material, they indicated that some of the textbooks are not useful in the sense that they (textbooks) don't have enough activities for them to practice further. Accordingly, Leepo (2015) pointed out that the shortage of learning material such as textbooks, workbooks, calculators and access to computer laboratories has a negative effect on the learning outcomes.

For the teacher and learners from Georgetown high school, with regard resources the case of is different, according to their response the school is well resourced, here's what they say below:

Mr George: I think on that note my school is very fortunate from School Governing Body side as you can see each class has overhead projectors where you display answers. And each child has his/her textbook and workbook if a child does not have them, it means that child has lost it, they also have access to printer ...I can say in terms of resources my school is well equipped it's not like the teacher is the only one with a textbook.

Carol: Our school provide us with all learning material we need and the teacher also give us extra handouts with activities to practice. With regard to calculators we buy our own calculators. We have access to computers to learn basic computer skills in school media centre.

By looking at the participant's responses, it is clear that resources are still unevenly distributed in schools. Moreover, rural schools are still at a disadvantage. However, the National senior certificate diagnostic report (DBE, 2017) is in agreement that the

lack of resources has resulted in a declining pass rate, even among Grade 12 senior certificate accounting learners.

4.3 PEDAGOGIC PRACTICES

4.3.1 Application of Pedagogical Content Knowledge

Teachers' pedagogical content knowledge is valued by the learners as they are of the view that knowledgeable teachers' explanation will make them understand the accounting equation better. Though professional development for teachers is critical for their development, it seems as if the orientation workshops that are usually conducted at the beginning of the year are not effective. Even though research shows that orientation workshops are ineffective they continue to be conducted, this is questionable.

When teachers were asked about what kind of support they would like to get from the Department they responded as follows:

***Mrs Dlamini:** workshops should run more than one day at least try to help teachers with content of the subject*

***Mr Phakathi:** I feel that workshops should be changed to content base because you find that teachers skip this section of accounting in EMS.*

***Mr Phakathi:** in terms of EMS subject I would say if any there is very limited support –usually it's an orientation work shop conducted at the beginning of the year and they run for (2) two days.*

***Mrs Dlamini:** not really..... With department only workshops but I don't think those workshops are effective reason being they don't address challenges we are facing they are only conduct just for one day or two.*

Most teachers only experience traditional, workshop-based professional development (Strauss, 2014). However, the Department of Basic Education conducts workshops to try to close the gap for teachers who lack subject content knowledge. Teachers see these workshop as ineffective because they are not content-based.

4.3.2 Application of the Peer-Mentoring

Most learners indicated that they prefer working with their peers. The learners' ability to work with peers in the form of in groups, both small and big, can also be enhanced

by getting them involved in projects relating to group work so that they can assist each other.

Bongie: But as for myself I prefer working in groups because you learn together with your classmates its easy when I communicate with my peers I ask any question when we discuss we find solution in our problems or in something we did not understand because I end up understanding

***Fezile:** I think I can learner better when we do groups but let the teacher explain the work first step by steps and then gives us an opportunity to do it in groups.*

Learners from the rural schools and those from semi-urban areas preferred group work and those from urban school were of the view that when they were in groups there were too many disturbances.

4.3.3 Learner involvement

Teachers consider the active participation of learners as the most effective pedagogic practice in their classes. Learner-centred pedagogy emerged from constructivist learning theory and represents a countermovement to traditional teacher-centred pedagogical practices (Moate & Cox, 2015). Teachers who use learner-centred pedagogy view knowledge through lenses of social and relational processes and therefore prioritise students' individual processes of constructing personal knowledge and understanding rather than the rote mastery of course content. Furthermore, teachers create a learning environment encouraging learners to actively engage in and take ownership of their learning experiences, an environment inspiring learners to think deeply about how they might apply what they are learning to their future practice. A learner-centred approach to teaching encourages students to embrace a deep approach to learning.

Teachers consider the active participation of learners as the most effective pedagogic practice in their classes.

***Mr Phakathi:** it's a matter of letting learner getting involved but identifying accounts on their own*

***Mrs Dlamini:**... for learners to understand all in all I engaged them in order to increase their understanding is through getting involved*

***Mr George:** I had to do is to make sure my learners understand what assets is, what income, expenses, owners' equity, liabilities are..... . Then I will give an exercise*

now so that I can assess what they really know then put a difference between those concepts, elements of accounting equation.

For teachers to make the lesson flow and interesting, it is suggested or advisable to devise a learning strategy that will engage learners so they become active participants in learning processes.

4.4 BEST PEDAGOGICAL PRACTICES FOR ACCOUNTING EQUATION

4.4.1 Split-Source Effect and Integrated Pedagogic Design

Integrated instructional design (which integrates text, formulas and diagrams) may enhance learners' learning. This tells us that the best way to impart knowledge is through integrating theory and practice at the same time. Integration is one such technique where instructional material in the form of worked examples may comprise several sources of mutually referring information.

***Mr Phakathi:**.....device your own strategy ...mine is called "ADILOC which means Assets are debit to increase Liabilities and Owners Equity are credit to increase therefore if the learner know the account for instance Assets he will know that Assets increases on a debit side, it's a matter of being creative, creating the interesting approaches. Also I created another one for Income and Expenses (Income +Expenses) as "ICED" which means Income are credited to increase while Expenses are debited to increase and the learner will be able to record the transaction. Here it's a matter of letting learner getting involved but identifying accounts on their own.*

Lázaro-Gutiérrez et al. (2017) support that playing games produced better performance. Play as you learn. This is confirmed by the Mr George, a teacher from Georgetown High School when he said:

***Mr George:** Sometimes I allow students to compose their own songs " rap songs " so that they won't forget the equation they then get excited ,because those concept they don't change up to doctoral level.*

Learners seemingly develop an interest in learning when their teachers apply creative learning and bring games or practical situations to learning. A game intends to improve understanding and impart knowledge at the same time; this is supported by Glover (2013) who advocated a play- as-you-learn strategy, or "gamification" as a technique for motivating learners as a way to facilitate learning. Consequently, this may arouse learner's interest in learning.

4.4.2 Technological Aided Pedagogic Practice

With regards to the availability of computer labs, although learners in some schools have access to them, they don't use them for accounting purposes, however, schools have to ensure accessibility to technological equipment for all. Technological tools can also open up access to a wider variety of problem-solving strategies than those limited to paper and pencil strategies (Bansilal, 2015).

Carol: *We have access to computers to learn basic computer skills in school media centre.*

Bongie: *We do have access to computer lab but we go there once a week and we learn basic computer skills not for accounting purposes*

In the context of accounting education, Holt, Boyce, Carnegie, Lourens, and Bigelow (as cited in Jebeile & Abeysekera, 2010), suggest that the use of computer-assisted learning in accounting education will substantially contribute to the development of technical competencies and, furthermore, will allow greater emphasis to be placed upon accounting concepts, issues, and ideas within the classroom.

Also, as far as the computers are concerned, some schools have them others don't, even those that have computers don't use them for accounting purposes.

Phindile: *I don't have a tablet. And no computer. We were told the school has tablets but we scared to borrow them because if it is stolen you have to pay it back.*

Learners 'academic underperformance is impinged by a lack of learning material resources, such as a lack of computers and access to technological equipment. It is often claimed that technology can be used as a tool that can facilitate teaching and learning and contribute to learners' achievement, this is also asserted by Umugiraneza et al. (2017). Teachers are urged to develop learners with "relevant modern skills that match the needs of our changing world" (DBE, 2016).

4.5 OBSERVATION OF GRADE 8 ACCOUNTING LESSONS

My intention as the researcher during this phase was to gather detailed information about what happened in the classroom when teachers taught learners. I used an observation schedule checklist and took field notes during the observation process. I paid attention to teacher-learner interaction since I was a non-participant observer.

For this project, the researcher observed participants according to DeWalt and DeWalt's (as cited in Kawulich, 2005) explanation that, participant observation is the process enabling researchers to learn about the activities of the people under study in the natural setting through observing and participating in those activities.

During this session, as a researcher, I had to search for ways in which teachers made meaning while observing the interaction and taking field notes (Henning, 2004). Subsequently, the observation schedule helped me to focus not only on one specific aspect of the lesson but also on what was happening in the whole class. This will help to provide a deeper insight into how teachers' interpretation of subject content knowledge and lesson delivery plays out in class.

4.5.1 Georgetown High School

The observations conducted by the researcher in the urban school, was of one Grade 8 class, comprising of 34 learners. In this school, the EMS subject teacher was a Head of Department (HOD), teaching six (6) EMS Grade 8 classes, but only one class was observed. The classroom was well arranged, and the classroom setting was conducive for learning purposes. There were charts displayed on the front wall displaying the principle of the formula of accounting equation ($A=OE+L$) as well as terms and concepts applicable to the accounting equation.

4.5.1.1 Lesson delivery

As the lesson began, a teaching and learning atmosphere prevailed. Learners were listening and paying attention while the teacher was introducing the lesson. With reference to the theory of the study, the attention stage of Social Learning Theory (SLT) was applied. Attention processes determine what features of the modelled behaviours the observer will focus on, according to Mngomezulu (2018). The lesson flowed smoothly, without any disruptions. The researcher noted the way learners responded when they were asked questions, almost all the learners knew the answer. Therefore, the lesson presentation was done well..

4.5.1.2 Teacher-Learner Interaction

It is likely that the teacher has laid a foundation before, because the learners seemed relaxed and participated very actively during the lesson and gave correct responses. My observation tells me that it seems like the teacher has taught this topic before. He applied different teaching styles, for example, the teacher talk approach and question and answer method where learners raised their hands before responding to the

questions, and some would be raising their hands to ask clarity seeking question. Astray-Canada, Busbee, and Fanning (2013) concluded by saying that remembrance plays a vital role as the observer may reuse what he/she has witnessed. According to the retention stage, as the teacher continues with teaching, learners will understand the information and will be gathering the knowledge imparted to them, as a result they will remember what they have been taught. As learning process proceed, learners seemed to understand information logically by asking questions and seeking answers to problems as far as clarity is concerned, the reality of the information has been constructed. This is an ontological stance which purports that reality is constructed in the mind of the observer.

4.5.1.3 Teacher's interpretation of the lesson

After 30 minutes, he (the teacher) then issued handouts to all individuals to do a class activity. This means that learners were expected to write and show an understanding of the lesson taught by giving their responses. This also means that self-reflection was expected from the learners' side to demonstrate their level of understanding by writing down the answers of the given task, this is supported by Bandura (1977) grounded on self-reflection as the goal of SLT. Hence, the Reproduction stage of SLT prevails, which is about being able to reproduce what was learnt (Lazarevska, 2017). The teacher knew what he was talking about, and I was impressed as well. Thereafter, the teacher projected his expected answers on the overhead projector. He was very creative when he asked learners to create "rap song" on the accounting equation (AE) principle; that was very fascinating. The lesson was informative but full of fun and laughter at the same time. The researcher's analysis, my observation was that the teacher from this school was teaching what learners have already learnt for me. I did not see the true reflection. Almost all learners participated easily as if the lesson was rehearsed before, irrespective of the fact that the teacher was quite clear about the content as he holds a B.Com Accounting degree.

The school was well resourced, and the teacher was projecting his lesson on the overhead projector. The class had a manageable number of learners, and all of them (the learners) had learning material. This school had sufficient teaching resources and tools (a whiteboard, textbooks, overhead projector and learners had access to computer lab); these resources made learning easier and were suitable for the accounting lesson. This was the experience of the above-mentioned school and

confirmed by Bandura (1977), that the environment in which a person finds themselves impacts the way they learn.

4.5.2 Amaphisi School for the Girls

During the observation phase, one Grade 8 EMS class was observed although there were four Grade 8 classes in the school. The class consisted of 41 learners it was a school for the girls only. The learners were well-disciplined, showing respect for their teacher and myself as the visitor. The teacher introduced me and advised learners not to pay attention to me, but told them to pretend as if I am not there.

4.5.2.1 Lesson delivery

The class was well organised, interestingly the teacher started his lesson by conducting a baseline assessment, asking learners what they had learned previously. Then he introduced the lesson of the day. After that, he gave learners a group activity to identify transactions and associate/link them to the relevant account of AE. The teacher's lesson was very interesting and full of creativity. He taught the learners "magic words" which he created by himself to make learners master and understand the AE principle easier and better. He was well prepared, and the lesson was flowing smoothly.

4.5.2.2 Teacher-Learner Interaction

The learners were very active and participating in giving positive responses. They also asked clarity seeking questions although they seemed to have no clue about the lesson taught. But the teacher was doing his best to explain and tried to engage them to be active participants in class for the lesson. According to Emaliana, (2019) a learner-centred classroom is a domicile which encourages teachers to consider the needs of the learners, either as individuals or as a group, to actively participate in the learning process all the time. The teachers' roles are more those of facilitators than instructors. During the learning process, the teacher's main task is to guide the learners, manage their activities, and direct their learning. As the lesson continues, the teacher was encouraging learners to answer questions, and he further encouraged them to give answers even if they were not sure. According to McLeod (2016) the rewards and punishment that follow a behaviour will be considered by the observer, meaning that as a researcher I took that as part of motivation, of which it is one of the processes of SLT. Individuals or learners can learn in numerous ways, that is the view of Bandura (1977).

4.5.1.3 Teacher's interpretation of the lesson

As much as the learners were not fully engaging or participating thoroughly I was impressed by the way the teacher kept on encouraging and motivating the learners to respond, even if they were not sure of the answer. Learners were sharing textbooks, although each learner had her own workbook.

4.5.3 Esikhaleni School

This school was located in one of the deep rural areas of Umhlathuze municipality, the language of teaching and learning was English, although the teacher used code-switching to accommodate learners. The researcher observed a Grade 8 EMS class with 55 learners of which only 37 textbooks were distributed and some learners were seat in three's per desk, sharing one textbook. Even though the teacher was trying hard to maintain order and instil discipline, due to shortage of desks as well as textbooks the lesson was a bit destructed. Only textbook and chalkboard were used as teaching aids. The class was without a single poster on the wall related to EMS.

4.5.3.1 Lesson delivery

The teacher greeted the class with confidence and immediately started a lesson. She started by writing the formula of accounting equation $A = OE + L$ in bold letters. In my observation, it appeared that the teacher was not prepared nor clear about the topic. The teacher did most of the talking during her lesson presentation. Also she (the teacher) did not involve the learners except by sometimes asking them once "are we together"? And the whole class would say "yes". During an interview, the teachers did mention the application of various teaching methods they commonly use, but in my observation processes, I realised the teachers did not apply different teaching methods.

For me, that was not the right or the best way of asking questions when you teach. The researcher understood because she (the teacher) had mentioned during the interview: "I did not study accounting at College I majored with Business Economics and English although I only did it (accounting) in Standard 10 (Grade 12)." The teacher showed no confidence and sometimes seemed to be not clear nor sure about some of the transactions entries.

4.5.3.2 Teacher-Learner Interaction

In addressing the first two objectives, the researcher realised the challenges that are experienced in the teaching and learning of the accounting equation. Hence, what transpired was that there should have been an application of different methods when teaching Grade 8 EMS. Levenson (as cited in Sekhukhune, 2008) explains that there are various categories of approaches to the teaching of accounting. This may help both teacher and the learners to open communication channels and engage in lesson presentation. Msimanga (2017) points out that the accounting equation needs an active learning strategy instead of inactive learning. By active learning, it means involvement of both learners and teachers. As the teacher from Esikhaleni School did not engage learners, this may result in learners leaving the classroom without being clear about the lesson taught.

4.5.3.3 Teacher's interpretation of the lesson

After analysis, the researcher reached the conclusion that the learning and facilitation of learning of the accounting equation principle and the associated practices at the rural school did not embrace the best effective pedagogic practices for the understanding of the accounting equation in the classroom lesson. This is supported by Rahmi (2018) who stated that pedagogic content knowledge (PCK) is part of teachers' interpretations and transformations of subject-matter knowledge in the context of facilitating learner's learning. Therefore, the teacher is expected to interpret the content in order for learners to understand or improve their understanding. The researcher's observation confirmed the concerns of the teacher because she relied mostly on the textbook as the reference to present the lesson. The following challenges were recognised in the research: there seems to be lack of subject content knowledge from the teacher's side, a lack of nurturing a deep approach to learn the basic accounting principle or accounting formula in the class lesson, limited resources as the teachers only depend on the textbook and chalkboard and a lack of effective principles for good teaching. I presume this is because she has stated in the interview that she did not study accounting at tertiary level.

4.6 CHAPTER SUMMARY

This chapter described the outcomes derived from the one-on-one interviews with three (3) Grade 8 EMS teachers and nine (9) learners of which three (3) learners cam

per school from each of the three participating schools, this included Grade 8 learners from three participating schools who were top achievers, moderate achievers and underachievers. The high sensor voice recorder was used to audio-tape the interviews that were listened to repeatedly and referenced with field notes.

The teachers from urban and township schools agreed that they did not have any challenges in teaching the accounting equation while the teacher from rural school had a lack of accounting exposure of accounting as a subject.

It seems as if there was a challenge with teaching time, generally EMS has two hours/periods per week, of these, according to Department of Education (2011), one hour is used for financial literacy. The teachers complained that they did very little accounting or none at all in the EMS time slot. Moreover, limited resources or a shortage of resources is a serious factor, particularly to those in rural areas, although some of the schools are well resourced. The teachers were of the view that they had to be knowledgeable about the subject to teach learners effectively. They also believed in using different teaching strategies to help learners understand the accounting equation better.

The teachers also indicated that one of the challenges was that it was assumed that anyone could teach EMS. Consequently, it is presumed that the poor performance in Grade 12 accounting was the result of the poor foundation laid in lower grades. It is common to find teachers offering subjects that they are not competent to teach, it is noted that most teachers did not do accounting at college/University level yet they taught EMS. It was noted that another challenge identified was that Economic Management Sciences (EMS) teachers did not teach accounting sections as required by the work schedule.

CHAPTER 5:

SYNTHESIS, FINDINGS, RECOMMENDATIONS FOR FUTURE RESEARCH, LIMITATIONS AND CONCLUSIONS

5.1. INTRODUCTION

This chapter summarises the findings and recommendations of the study, setting them off against the original objectives of the study. The factors that have been identified as obstacles that impede the learning and academic performance of learners are also set out.

The research study has identified several problem areas that contribute to an underperformance by learners concerning the theory around the accounting equation, these include challenges regarding underqualified teachers who lack subject content knowledge as well as schools which lack facilities and learner support materials.

Several recommendations are made based on the findings. An outline of a strategy to create and support a conducive and sustainable environment for accounting students who have to master the theory and applications of the basic accounting equation is also provided. Lastly, the chapter looks at possible limitations of the study and recommended areas for future research.

5.2. Problem Statement-Reaffirmed

The researcher's main focus was to find effective teaching strategies which would help in delivering better lessons related to the accounting equation since it seemed that most learners tended to underperform in this section of Economics and Management Sciences, especially in the Grade 8 introductory courses. Since most learners experience challenges in this regard, the study has explored various strategies to deal with academic underperformance (Leepo, 2015). Consequently, this research effort will lead to an improvement in the understanding of the accounting equation by using various effective teaching methods.

5.2.1 Aim and Objectives of the study- Restated

The main aim of the study is to find effective pedagogic practices that could be used to address the challenges faced by the learners in the understanding of the accounting equation.

5.2.2 Objectives of study

- To identify the problem areas that cause learners to underperform in the accounting equation section of Grade 8 EMS;
- To address the challenges faced by learners using various effective pedagogic practices to improve performance and understanding of the accounting equation; and
- To explore the best teaching practices employed by other countries for presenting lessons concerning the accounting equation.

5.2.3 Main research question

How will pedagogical practices be effective for addressing learner challenges related to the underperforming and the lack of understanding concerning the section on the accounting equation for Grade 8 EMS?

5.3 FINDINGS AND RECOMMENDATIONS

5.3.1 Findings about Accounting Subject Content Knowledge

Findings from an empirical study point out that learners and some teachers have a very limited knowledge of basic accounting equation principles and also lack understanding of basic accounting concepts. Teachers indicated the lack of understanding of basic accounting basic concepts as the main challenge that learners are facing when it comes to the accounting equation. Ngwenya (2012) emphasised that EMS teachers lacked content knowledge, especially accounting specific content, this was exacerbated by the fact that content in the curriculum are not always covered in detail in the school. Furthermore, with reference to the interviews conducted, all learners from the three participating schools i.e. the rural, semi-urban and urban schools, agreed that their main problem was that they were unable to identify and differentiate accounting equation transactions. During the observation, in some instances when they (the learners) were asked questions related to a particular entry or transaction, were capable of providing the correct answer, but were unable to provide reasons as to why a particular procedure was followed in recording the accounting equation transactions, e.g. why an account was debited or credited.

For instance, they do not know WHY assets increase on a debit side and decrease on a credit side. They only know which side to increase and which side to decrease.

Presumably, they think in a box. For learners to improve their level of understanding of accounting, teachers must provide explicit information on the basic principles of accounting. Moreover, they could organise excursions, visit business and organisations to see accounting in practice and to show the learners that learning accounting requires practical applications. According to Assan (2014), the implication with regard to EMS content was that only a very limited or small number of teachers have been trained or have received subject content knowledge (SCK) in this discipline. This resulted in a large number of teachers that have little or no content knowledge but were obliged to teach the subject- EMS.

Learners are unable to apply the concepts to a given scenario like identifying or differentiating expenses, assets liabilities or owners' equity and how those especially (Income and expenses) they affect owners' equity, this is according to Mr George response during interviews.

It is evident that teacher's get frustrated when dealing with how the learners approach the application of entries in the accounting equation. Mr George mentioned that he wanted the learners to not merely accept procedures to be followed in Accounting but he wants them to challenge the teacher by asking or responding to the "why" part and to provide detailed explanations for a particular procedure.

During interviews, empirical study revealed that it was discovered that some teachers did not have relevant qualifications, meaning they did not take EMS as subject specialisation, but they were teaching it. As a result, one of the teachers indicated that she has never been trained in accounting as a subject but she teaches EMS which contains an accounting part in it *"I did not study accounting at College I majored with Business Economics and English although I only did it (accounting) in Standard 10 (Grade 12)."*

5.3.2 Recommendation of Accounting Subject Content Knowledge

It is recommended that all EMS teachers should improve on subject content knowledge through teacher professional development such as workshops etc.. Also, they should be given a chance to teach up to matric level (especially in accounting) so that they could become familiar with the content of financial literacy in EMS. Schmidt in Qholosa (2016) explain that content knowledge (CK) is the "knowledge about the actual subject matter that is to be learned or taught". Teachers were of the view that

they had to be knowledgeable about the subject and have relevant qualifications in teaching the accounting equation to teach learners effectively and. And the fact that they must have a background in accounting as a major subject in their teaching profession. Bett and Mulkeen(as cited in Mumhure, 2017), support the fact that, professional development which is conducted in the form of workshops is largely intended to provide teachers with the latest information on particular aspects of their work as a result, this will have a positive impact on teacher's capacity to improve their subject content knowledge in their respective subjects. (See Section 2.7.1.1)

Based on the findings of this study, it is imperative for teachers to use different teaching strategies to help learners understand the accounting equation better. For instance in their assessment teachers must use different types of assessment strategies, which are deemed as effective in assisting learners to understand content better.

From the above, it is clear that the literature revealed that there are many challenges in the current state of accounting subject content knowledge, especially with the content and delivering of subject lessons. To address the challenges of SCK, several matters deserve attention, e.g. training of teachers to deal with the issues referred to seem essential. Teachers are expected to be knowledgeable and clear about the content they are going to teach and how the knowledge is different for numerous content areas.

5.3.3 Findings about Limited Resources

As mentioned by participants during data presentation, some of the schools participating in the study, such as Amaphisi School for the Girls and Esikhaleni sec schools, did not have enough learning material, there were shortcomings experienced in this regard. Learners did not have textbooks, some shared textbooks. Also, there were no technological aid equipment such as calculators and learners has no access to computer labs, a situation that was not conducive to effective teaching and learning as we are in the fourth industrial revolution when technology is advancing. Teachers complained about the shortage of teaching and learning material, as noted by the researcher during the research.

One of the challenges is that schools, particularly in rural areas, have a shortage of resources. The teacher from the rural school (Esikhaleni Sec School) indicated that

she has been experiencing problems regarding the scarcity of teaching and learning resource materials available to learners. Furthermore, the researcher concurs with the teacher, during the classroom observations he noted that only a few learners had textbooks during the lesson presentation. The researcher observed that it was difficult for the lesson to flow smoothly; consequently learners ended up with a lack of understanding of the lesson. Leepo (2015) pointed out that the shortage of learning material such as textbooks, workbooks, calculators and access to computer laboratories had a negative effect on the learning outcomes.

The study found that one of the Grade 8 classes observed was overcrowded and experienced a shortage of desks and some learners were sitting three to a desk. There were more than 40 learners in a classroom, which could prevent teachers from paying attention to individual learners. The classroom observations confirmed that teachers and learners could not cover the lesson of the day because a lot of time was consumed when learners shared textbooks and it dragged the lesson's progress down. Mangele (2012) asserts that it is noted that most schools have a shortage of human resources, physical resources, and textbooks; and this is exacerbated by overcrowded classrooms and having no facilities such as computer laboratories.

It was also discovered that some teachers were teaching according to the traditional teacher-centred approach, which could be a result of lack of space and being unable to arrange learners to sit in groups. Learners also did not have the opportunity to engage in group or paired activities and share ideas due to the inappropriate seating arrangement (the learners were sitting in rows behind each other). Moreover, during the classroom observations, classes with smaller numbers of learners may allow the opportunity for individual attention and may improve learners' academic outcomes as was identified in the urban school, Georgetown high school. The researcher believes that the shortage of learning material makes it difficult to facilitate teaching and learning that may lead to poor performance in EMS. It seems as if there still a huge gap between rural schools and urban schools when it comes to allocation and distribution of study material, meaning it is unevenly distributed.

5.3.4 Recommendation on Limited Resources

Findings on limited resources revealed that there seemed to be insufficient learning material in some of the schools. Therefore, it is recommended that the Department of

Basic Education should provide and try to distribute learning material to all schools equally, especially to those in rural areas. The researcher recommends that the Department of Basic Education must work hand in hand with other stakeholders, including parents and non-profit organisations, to provide the necessary teaching and learning material. They should also ensure that schools have sufficient teaching and learning materials such as textbooks, calculators and other required material, available at each school before classes commence every year. The government can also liaise with local publishing companies and increase the publishing runs of prescribed as well as recommended textbooks.

It is also recommended that technological equipment can be used as a tool that can facilitate teaching and learning and contribute positively to learners' achievement, particularly in those under-resourced schools. Bansilal (2015) affirms that technological tools can also open up access to a wider variety of problem-solving strategies than those limited to paper and pencil strategies. The researcher recommends that the DBE must provide schools with suitable technology because it has been found that the effective use of computers in accounting lessons make life easier. The DBE can also liaise with private companies to help donate computers and other relevant material to capacitate the education system of the country.

5.3.5 Findings on pedagogical content knowledge

The findings showed that one of the three EMS teachers that participated in the study was a qualified teacher but had not received training in the chosen subject specialisation, in this case, EMS. Hence, the teacher mostly relied on a textbook and workshops, which were found to be ineffective. Teachers' Pedagogical content Knowledge seems to be of vital significance in addressing learner underperformance; therefore it is imperative to improve the quality of the teaching workforce, and consequently improving the learners' outcomes. Guerriero (2014) asserts that pedagogical content knowledge is specialised knowledge of teachers for creating effective teaching and learning environments for all learners. However, the under-qualified teachers cause concern because their lack of subject knowledge, pedagogical content knowledge and teaching skills may contribute to learners' underperformance. Furthermore, Ineffective orientation workshops which run a day or

two, usually at the beginning of the year and do not sharpen teachers' knowledge. During interviews, teachers indicated that these workshops were not effective, it was noted and confirmed that these workshops were not content-based and as a result did not equip teachers with the necessary skills. Hence, these workshops have not been designed to improve the pedagogical content knowledge and teaching skills of teachers, as a result learners' underperformance subsequently increase.

5.3.6 Recommendation on pedagogical content knowledge

It is imperative for the teachers to further their studies as a form of professional development in their area of specialisation to improve their subject content knowledge (sck) as well as their pedagogic content knowledge (pck). The professional development of subject teachers is essential, the researcher suggests that teachers who are under-qualified or have not majored in accounting should be removed from teaching the accounting equation. Moreover, teachers must continually receive further training or attend workshops. The researcher further recommends that the education officers appoint properly trained teachers and that teachers should be appointed in their area of specialisation.

One of the possible shortcomings when delivering the lesson is that learners prefer different ways of learning. The use of various and appropriate teaching approaches may address the variety of the learners' needs that may have a connection with the subject. Teachers are advised to demonstrate a deep understanding of the subject content and use a variety of teaching approaches or methods. Various categories of teaching methods should be applied in teaching the EMS Grade 8 accounting equation section because no one teaching method caters for the needs and learning styles of all learners.

5.4 LIMITATIONS

The study had some shortfalls because it was limited to only three schools, three teachers and nine learners with different dimensions from the Umhlathuze circuit which is estimated to have more than 18 secondary schools. Therefore, there is a high probability that the sample is not a true representation of the entire population.

Other limitations was that of teachers who wanted to participate in one research instrument only, for instance, agreed to be interviewed but were not willing to be

observed, that was a challenge because the researcher has to delay the data collection process by keeping on looking for teachers who will participate in both research tools.

Also, the study applied only to the qualitative research method, if the researcher had applied all methods (qualitative, quantitative or mixed-method) the findings may have yielded different results.

Regardless of the aforementioned limitations, the researcher's determination as well commitment led to him be able to overcome challenges and manage to collect data to the best of his abilities.

5.5 SUGGESTIONS FOR FUTURE STUDIES

With reference to this research study, the school conditions and the differences between the schools I have visited could be attributed to many factors such as the school atmosphere, the organisation of the school and, above all, the personality of the teacher. I wish to recommend that further research should be conducted to find out the effect of different factors and how they affect learners' performance in the accounting equation.

Further research could also examine how factors such as learners' socio-economic background, ability, their interest, and their study habits affect their performance in accounting. More research could be undertaken into inequality of distributing resources between former model C schools and weak schools with a focus on what contributes to success or failure.

5.6 CONCLUDING REMARKS

The objective of this research has been to look critically at the effective pedagogic practices that have been employed in an attempt to improve learner understanding of the accounting equation section of EMS in Grade 8. However, it would be of great importance to first look at the problem areas that cause learner underperformance in this section. It was also essential to address the challenges faced by learners using

various effective pedagogic practices to improve performance and the understanding of the accounting equation consistently. The aim was to broaden the understanding of pedagogic practices aimed at improving learner performance. The research has gathered information and provided solution thereof that have a great potential for turning around the issue of underperformance in the accounting equation that can be managed.

It is the researcher's considered opinion that the findings of the study should be implemented. This will assist in reviewing and reconstructing some of the findings obtained to address the challenges identified that can lead to an improvement in the levels of underperformance. With involvement, especially of teachers and subject advisors in the EMS curriculum, learner understanding and performance in the accounting equation can be improved, since learner performance is a collective effort. The study has provided a concrete basis on what the causes of learner underperformance are, as a result, various effective pedagogic practices have been formulated to address the issue.

The findings of the study revealed that major interloping is needed in teacher professional development through workshops to equip them with extensive subject content knowledge as well as pedagogic content knowledge and so improve learners understanding of the subject in question. Moreover, both the literature review and findings of the study revealed that learners and some of the teachers had challenges with regard to accounting subject knowledge while some schools had limited resources, that consequently, lead to poor performance.

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APPENDICES

**UNIVERSITY OF ZULULAND
RESEARCH ETHICS COMMITTEE**
(Reg No: UZREC 171110-030)



RESEARCH & INNOVATION

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ETHICAL CLEARANCE CERTIFICATE

Certificate Number	UZREC 171110-030 PGM 2018/536				
Project Title	EFFECTIVE PEDAGOGICS PRACTICES FOR UNDERSTANDING THE ACCOUNTING EQUATION FOR GRADE 8 ECONOMICS AND MANAGEMENT SCIENCES IN SELECTED SCHOOLS IN THE UMHLATHUZE CIRCUIT				
Principal Researcher/ Investigator	TJ Ntshingila				
Supervisor and Co-supervisor	Prof MM Nkoane		Dr TP Mngomezulu		
Department	Educational Psychology and Special Education				
Faculty	Education				
Type of Risk	Med Risk- Data collection from people				
Nature of Project	Honours/4 th Year	Master's	x	Doctoral	Departmental

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertakings contained in the above-mentioned project. The Researcher may therefore commence with data collection as from the date of this Certificate, using the certificate number indicated above.

Special conditions:

- (1) This certificate is valid for 1 year from the date of issue.
- (2) Principal researcher must provide an annual report to the UZREC in the prescribed format (due date- 04 October 2019)
- (3) Principal researcher must submit a report at the end of project in respect of ethical compliance.
- (4) The UZREC must be informed immediately of any material change in the conditions or undertakings mentioned in the documents that were presented to the meeting.

The UZREC wishes the researcher well in conducting research.


Professor Gideon De Wet
Chairperson: University Research Ethics Committee
Deputy Vice-Chancellor: Research & Innovation
04 October 2018

