

**Grade 9 EMS teachers' constructs of Accounting and their
pedagogical reasoning**



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**A study submitted to the Faculty of Education, University of the Witwatersrand
in fulfilment of requirements for the award of Master of Education (M.Ed)
Degree in Curriculum Studies.**

Johannesburg, 2020

Declaration

I, Siphesihle Nokuthokoza Dlamini, hereby declare that this research report is my own work. It is being submitted for the degree of Master of Education at the University of the Witwatersrand, Johannesburg. This report has not been submitted for any other degree or examination at any other university.

Siphesihle Nokuthokoza Dlamini

Date

Acknowledgement

I can say that I have grown in the area of research and through the support of my family and friends and their belief in me has made me realise the importance and the value that research has in the field of education. I would also like to thank the following:

- My family, especially my mother and father for your emotional and moral support.
- My friends, Kerry and Faith for always encouraging me and reminding me that nothing is impossible.
- To my late aunt (Thembisile), for teaching me that no one can take away knowledge gained.

Abstract

Financial literacy is taught as part of the Economic Management Sciences (EMS) curriculum from Grade 7 to 9 in all South African government schools. It is grounded in the principles and methods of the discipline of accounting. Research has shown that in order for teachers to be able to teach a subject they need to possess a knowledge base comprised of subject matter knowledge, knowledge of the curriculum, knowledge of learners and pedagogical content knowledge. EMS teachers who teach financial literacy have different teaching qualifications and subject specialisations. Some EMS teachers studied to teach EMS in their Bachelor of Education (B.Ed) degree, others did a Postgraduate Certificate in Education (PGCE). PGCE graduates may or may not have majored in cognate subjects for EMS, and may or may not have experience in the field of finance. This qualitative research study was based on the premise that EMS teachers' constructs of accounting may influence the way that they teach the financial literacy section of the EMS curriculum. The study explored Grade 9 EMS teachers' constructs of accounting and their pedagogical reasoning for teaching financial literacy. It did not include observation of the teachers' practices. Data was gathered through semi-structured interviews with eight Grade 9 financial literacy teachers who teach in the north of Johannesburg, in government schools. The study found that a teacher's construct of the subject influences their understanding of the knowledge structure of the subject they teach, and this impacts on the teacher's reasoning about how to teach financial literacy to their learners.

Key words: Teachers' constructs of accounting; subject matter knowledge; pedagogical content knowledge; EMS; financial literacy.

	Contents	Page
	Declaration	2
	Acknowledgements	3
	Abstract	4
	Chapter 1	
	Conceptualisation and Delimitation of Study	
1.1	Introduction	8
1.2	Background	8
1.3	Rationale and purpose of study	10
1.4	Research questions	11
1.5	Summary of the research report	12
	Chapter 2	
	Literature Review	
2.1	Introduction	13
2.2	Disciplinary Knowledge of Accounting	13
2.3	Teachers' Subject Constructs	21
2.4	Teacher's Subject Knowledge	22
2.5	Pedagogical Reasoning and Pedagogic Choice	27
2.6	Topic Specific Pedagogical Content Knowledge	28
2.7	Conceptual Framework	31
2.8	Conclusion	31
	Chapter 3	
	Research Design	
3.1	Introduction	34
3.2	Qualitative Research	34
3.3	Research Participants	35
3.4	Data Collection	37
3.5	Data Analysis Methods	40
3.6	Research Rigour	41
3.7	Ethical Consideration	42

3.8	Conclusion	42
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Chapter 4

Descriptive Interpretive Analysis

4.1	Introduction	44
4.2	EMS Policy	45
4.3	EMS Policy Document Analysis	45
4.4	Subject Matter knowledge	46
4.4.1	Knowledge Structure of Accounting	47
4.4.2	Teachers Conception of the Subject	50
4.4.3	Knowledge of Curriculum	53
4.4.4	Progression	57
4.4.5	Agency	59
4.5	Pedagogical Content Knowledge	62
4.5.1	Educational Experiences	62
4.5.2	Tteachers' Knowledge of Learners	65
4.5.3	Knowledge of the Curriculum	68
4.5.4	Pedagogical Choices	71
4.5	Summary	

Chapter 5

Conclusion and Recommendations

5.1	Introduction	78
5.2	Questions posed by the study	78
5.3	Summary of Analysis	78
5.3.1	Structure of Accounting	79
5.3.2	Knowledge of the Curriculum	80
5.4	Answering the Questions	81
5.5	Recommendations	82
5.6	Limitations	83
	References	84

Figures

Figure 1- Accounting concepts coverage from Grade 8-10 in CAPS	20
Figure 2- Model of CK, PCK, and OK	24
Figure 3- A model of TSPCK	29
Figure 4- A model of teacher knowledge base	32

Tables

Table 1- Overview Participants	36
Table 2- Analysis of Subject Matter Knowledge	62
Table 3- Analysis of Pedagogical Content Knowledge	76

Appendices

Appendix 1: Interview schedule	88
Appendix 2: Permission letter to the principle	90
Appendix 3: Clearance letter from the university	92
Appendix 4: Transcript of interview	93

CHAPTER 1

Conceptualisation and Delimitation of Study

1.1 Introduction

This research report presents a qualitative study conducted with eight Grade 9 EMS teachers who teach in government schools in Johannesburg North. The study explored the teachers' constructs of accounting and the ways these constructs shape their pedagogical reasoning for teaching financial literacy.

Teaching involves setting up appropriate learning experiences for students. This includes selecting and sequencing activities or interactions that enable students to learn the subject. The study was carried out through face-to-face semi-structured interviews with eight Grade 9 EMS teacher. In an attempt to explore how teachers construe the web of concepts that constitute financial literacy, concept maps were included as a part of the data collection instruments. Unfortunately the concept maps did not yield sufficient detail or depth for analysis of the teachers' constructs of accounting and therefore did not ultimately inform the study.

1.2 Background

The purpose of schooling is to enable new generations of society to acquire knowledge, procedures, and dispositions which are deemed necessary for creating conditions of possibility for both reproducing important functions in society, and enabling innovation and change (Daniels, 2001; Young, 2009). Without schools, each generation would have to rebuild valued knowledge and practices from scratch (Young, 2009). Knowledge that is taught in schools is specialised knowledge which is generally not accessible at home. This body of knowledge has been *selectively* decontextualised, from academic disciplines and re-contextualised to be restructured for inclusion in the curriculum (Bernstein, 2000).

Knowledge disciplines are collective activities which are patterned, governed by historically established conventions, and practiced by specialised communities (Sfard, 2007). Disciplines include routines, symbolic artifacts, and specialised discourse and concepts which facilitate communication about actual states of affairs and projection

of possibilities beyond the here and now. Unlike everyday knowledge which tends to be segmental and tacitly acquired in local contexts of practice (Bernstein, 2000), disciplinary knowledge is systematised knowledge (Vygotsky, 1987) and has a vertical knowledge structure (Bernstein, 2000). In other words, concepts and principles in the discipline are built upon other concepts, and concepts and practices are related to each other.

The official South African curriculum, The National Curriculum Statement Grades R-12 (NCS) includes the Curriculum and Assessment Policy Statement (CAPS) for each school subject. CAPS stipulates what teachers at each grade level need to teach and when. Despite the level of specification teachers still have to re-contextualise the stipulated knowledge for *their* learners in *their contexts* of practice. (Shulman, 1986). In any event, every teacher has to consider who their learners are and the context in which they are teaching in order to organise systematic learning experiences for *their* learners. In other words, every teacher must find a way to pedagogically recontextualise subject knowledge for their learners,.

The pedagogical process of re-contextualising curriculum knowledge entails finding ways to relate disciplinary knowledge inscribed in the curriculum to the context of the individuals who are learning about that discipline. Each individual teacher has to draw on their professional knowledge and expertise to make decisions about how to teach discipline specific principles, concepts, and procedures in a way that will enable their learners to learn that subject (Nesher, 1978).

Accounting is a discipline that is frequently included as a subject in curricula across the world. According to CAPS (2011), accounting is a discipline that has principles that adhere to the logical systems that are set out by the accounting community. However, these principles have been selectively recontextualised from the discipline of accounting for inclusion as a subject in the discipline. In the current SA curriculum policy it is part of Economic Management Science (EMS) from Grade 7 up to Grade 9, and is only taught as a subject in its own right in Grades 10-12. EMS is a composite of three re-contextualised disciplines, namely, accounting, business studies, and economics. When accounting principles were included as a section in the EMS

curriculum, the subject of accounting was further recontextualised and became financial literacy.

Since 1994 the South African curriculum has undergone many changes since the country became a democratic country in 1994 (Hoadley & Muller, 2009). It is notable that these have included a series of changes to the name and content of accounting from 'accounting science', to 'bookkeeping' to 'financial literacy', to 'accounting' (Garg, 2010)

Most EMS teachers have specialized in Business Studies or Economics, not Accounting. There are also many teachers who teach EMS who did not major in any of the three disciplinary strands that comprise EMS. This means that EMS teachers do not necessarily have deep knowledge in accounting, or deep appreciation of the significance and power of the web of accounting concepts that underpin financial literacy. This is not to suggest that they may not have been exposed to concepts in the curriculum, but this is not the same as a deep understanding.

1.3 Rationale and purpose of study

The purpose of the study was to explore how Grade 9 EMS teachers conceptualise accounting concepts, principles and practices. The teacher's role is a complex one that is made up of different dimensions that all work together to carry out the teacher's practice in the classroom. The study intended to explore how the teachers' constructs of accounting and other aspects of their knowledge-base inform their pedagogical choices for teaching financial literacy. The teachers' actual classroom practices were not observed.

One of the biggest challenges to improving our knowledge of teaching and learning accounting and/or financial literacy, is that although there is literature on accounting education in higher education, and literature on the relationship between school accounting and higher education¹, there appears to be very little published literature

¹ See for example, *Journal of Accounting Research*; *Accounting Education*; and *Accounting Education for the 21st century*. There were no studies on *teaching* accounting in schools.

on teaching accounting *in schools* both in SA and internationally². The lack of literature means that there is an absence of established knowledge about accounting education in schools, and about teaching and learning concepts grounded in the discipline of accounting. Given that there are many EMS teachers who have not specialised in accounting, or do not have sufficient subject matter knowledge of accounting, it is important to investigate SA teachers' constructs of the specialised accounting principles, concepts, and procedures that underpin financial literacy, and to understand how and why they approach teaching it in the manner they do.

1.4 Research Questions

The study explored how eight Grade 9 teachers, who teach financial literacy in EMS conceptualise accounting concepts, principles and practices, and how they think about teaching financial literacy. Interviews with the teachers enabled in-depth description and understanding of the relationship between teachers' conception of accounting, their subject matter knowledge, and their pedagogical reasoning.

The main research question is:

- How do teachers' constructs of accounting inform their pedagogical reasoning for teaching financial literacy?

In order to explore this question the study aimed to establish the following:

- What are teachers' constructs of accounting?
- How has their interaction with accounting shaped their constructs of financial literacy?
- What are their orientations to teaching financial literacy?

² There are a few studies on learners' experiences of learning accounting, there are slightly more studies of EMS but the emphasis is more on learners than teachers and teaching.

1.5 Summary of the research report

This chapter introduced the background, purpose and rationale for the study. Chapter Two reviews literature on disciplinary knowledge, the discipline of accounting and accounting as a school subject, with particular emphasis on the financial literacy section of the grade 9 EMS. The second part of the literature review introduces the concept of teachers' constructs and explores the different kinds of knowledge that constitute the knowledge base for teaching, and ground teachers' pedagogical reasoning and choices. The theoretical understandings developed in this chapter provided an understanding of the factors that needed to be explored in order to answer the research questions. Chapter Three presents the research method and instruments adopted in this study. Chapter Four an analysis of the data collected and finally Chapter Five concludes the research with a discussion of findings and recommendation for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In the practice of teaching, the role of the teacher is to organise systematic learning to enable learners to acquire knowledge and meet outcomes specified in the curriculum. The focus of this study is on how grade 9 EMS teachers' think about teaching financial literacy. Financial literacy is a topic in the Grade 9 EMS learning area that is derived from the *school* subject of accounting. The study explored the ways in which EMS constructs of accounting influence their pedagogical reasoning. This chapter reviews a range of literature to introduce concepts that informed this research.

The first part of this chapter introduces aspects of disciplinary knowledge and the discipline of accounting. This is followed by an overview of financial literacy in the EMS curriculum for grades 7-9. Given that the study was trying to establish whether the teachers' constructs of accounting impacted on their pedagogical practices, the second part of this chapter discusses the concept of teachers' subject constructs. This is followed by a discussion of Shulman's categories of teacher knowledge and pedagogical reasoning. The chapter concludes with the conceptual framework for the study.

2.2 Disciplinary Knowledge of Accounting

Bernstein (2000) points out that subject knowledge taught in schools is not the same as the academic discipline or field in which it originates. Knowledge that is taught to learners at school is knowledge that is derived from academic disciplines or fields where the knowledge is produced. In other words, the subject of accounting that is included in the official curriculum intended to be taught and learned at school is a *selection* of knowledge from the discipline of accounting which incorporates the disciplines' professional norms and standards, which regulate practice.

All knowledge, whether local knowledge, which is learned in the course of day-to-day life, or specialised knowledge, is the *product of cultural practices*. The concept of 'culture' is used here to refer to practices which are man-made. These practices are shaped, reproduced, and transformed through the use of signs, language, and/or

discourse, in order to share experiences, meanings, and values (Geertz, 1973; Vygotsky, 1987). In other words, socio-cultural practices are created by means of *symbolic* systems.

Cultural knowledge is the product of a society or community establishing symbols and signs in order to share their beliefs and experiences, and to interpret and shape the world around them as they interact. Meanings, knowledge, and 'know how' are transmitted and acquired through communication in the context of social activities in communities of practice. Cultural artifacts (e.g. texts, technologies, monuments etc.) that are produced in these practices embody knowledge and meanings, but members of a community have to be initiated and socialised into their significance/and /or use (Thompson, 1990).

Disciplinary knowledge is a branch of knowledge that is created and reproduced in specialised academic communities of practice. Local knowledge and practices are usually practiced and communicated in situated, face-to-face practices with material entities (Sfard, 2007; Hasan, 2002), so participants can indicate what they are referring to with gesture. Specialised disciplinary communities develop and work with knowledge that is disengaged from its actuality and used to impose meaning on experiences (Geertz, 1973). Therefore, "disciplinary discourses often involve symbolic artifacts, created especially for the sake of this particular form of communication" (Sfard, 2007, p. 573).

As mentioned in the introduction, a discipline is grounded in collective, patterned activities governed by historically established conventions which develop over time. The discipline is practiced by members of communities of practice globally (Sfard, 2007). It includes routines symbolic artifacts and a specialised discourse which facilitate communication about actual and possible states of affairs. Unlike everyday knowledge which tends to be "segmental and tacitly acquired" in local contexts of practice (Bernstein, 2000), disciplinary knowledge is systematised knowledge (Vygotsky, 1987) which is acquired through formal education.

Local knowledge is contextual and therefore horizontal discourse. Specialised academic knowledge takes the form of vertical discourse. This means that principles

and concepts in the discipline are built upon other concepts to form a structured network of concepts, where concepts are built up from other concepts, and are related to each. Higher order concepts are built on the foundation of other concepts. Access to specialised knowledge is relatively restricted, and generally requires initiation into the discourse and practices (Moore, 2013).

Bernstein (2000) points out three processes that are involved in the development and transmission of knowledge disciplines. These are: knowledge production, re-contextualisation, and reproduction. Disciplines have structured knowledge and the knowledge structure can either be vertical or horizontal. A vertical or hierarchical knowledge structure is a structure that consists of a coherent, explicit, and systematically principled structure (Bernstein, 2000). The structure of knowledge in disciplines that have a vertical structure can be described as a form of a chain, each of the links of a chain is related to and builds on the previous link (Myers, 2016). A horizontal knowledge structure consists of specialised language with special modes of interrogation (Bernstein, 2000). New knowledge in a horizontal structure is like a new language, not understanding one language does not necessarily mean not understanding the other language (Myers, 2016). The knowledge structure of a discipline is important as it has implications for how teachers teach knowledge and how learners learn within a discipline (Myers, 2016).

2.2.1 Accounting as a discipline

The discipline of accounting is a vertical discourse with a vertical knowledge structure. This means that the structure of accounting can be understood as a chain of concepts where each concept or link in the chain is linked to the previous one (Bernstein, 2000). It can be understood holistically through understanding accounting as a cultural practice. The accounting community has created a set of practices, and they communicate and express experiences by using distinct signs and symbols created for their community. Any cultural object or practice embodies and is shaped by meanings. In other words, they are symbolic. Thompson (1990) proposes that all symbolic forms have five characteristics as follows: intentional, conventional, structural, referential, and contextual. These are discussed below together with examples of accounting routines, symbolic artifacts and discourse in order to illuminate their meaning and significance.

The 'intentional' characteristic refers to the fact that the use of signs and symbols are expressions of a subject for a subject (Thompson, 1990). There is an intentionality behind their use, and they are read as intentional by others. However, the reader may impute something different to what the speaker intended. The use of financial accounting for example (also known as bookkeeping) is to record the entity's financial transactions. The purpose of these records is to provide enough information for others to assess the value of the company themselves. It is important to understand that although symbolic forms convey intentions or are read as intentional, a person who interprets a symbolic form might not interpret the intention that is conveyed. If one does not understand the discourse and the means of communication that the accounting community uses, then it becomes difficult to interpret the intention of the records. The intention, for example, of a cash journal, is different to that of a trial balance. The only way to understand the intention of accounting records is by understanding the discourse. Accounting practitioners use their own discourse, in order to engage with the practice of accounting.

The 'conventional' characteristic refers to the fact that the signs and the symbols that are used in a culture or discipline have been agreed upon by the society, and those signs and symbols communicate the same thing to that culture. It is the rules, codes, or style that a culture uses for expression that govern the way that individuals interact in order to express themselves. In order for the rules and codes of convention to be applied, individuals need to be familiar with them, in order for individuals to apply signs and symbols and use them accurately (Thompson, 1990). The intention of drawing up a cash journal is to manage the business's cash transactions. It is customary for a business to keep track of its transactions using journal entries. The trial balance, on the other hand, is the first step in the preparation of financial statements. The conventions of the accounting community follow a structure that has meaning and a historical background. The discourse being conventional, also means that if, for example, a South African draws up a trial balance for their business, then it would be understood by a person in South America. The convention of accounting is the same everywhere in the world.

The 'structural' refers to the hierarchal system behind the use of signs and symbols. It is an indication that the signs and symbols are not just randomly put together, but there is a history and intended meaning for their use. The symbolic forms are constructions which display an articulated structure (Thompson, 1990). The structure of accounting is a system that was created to record, monitor, and maintain the financial transactions of a business. A structure is the arranging of elements that form relations of something complex. The accounting cycle is a great example of a complex structure that consists of elements that are interlinked to form a whole (accounting cycle). The parts all have different roles which all in the end serve the purpose of keeping records of the business's financial transactions. The cycle is ordered, and follows a system that serves the purpose of financial recording and reporting. Concepts in the cycle build on one another and are linked to one another (Myers, 2016).

The 'referential' characteristic refers to a sign or/and symbol that is used for expression with reference or meaning in that particular culture. Symbols are normally a representation of something (Thompson, 1990). Signs and symbols of a culture are derived from a historical background where the signs and symbols that are now in use were developed as a result of socialisation. A modern system of accounting (financial accounting specifically) based on the double entry system owes its origin to Luco Pacioli who first published the principles of the double entry system in 1494 (Garg, 2010). Accounting has been in practice for many years and the practice continues to be developed.

'Contextual' refers to the fact that signs and symbols that are used by a culture are embedded in social-historical contexts, and they are processes of society and a product of society (Thompson, 1990). Everything that is done in accounting is based on structured social context. Signs and symbols of accounting suit the setting of the accounting community or society.

The nature of accounting knowledge structure is vertical and can be understood as both conceptual and procedural. Conceptual knowledge is characterised as knowledge that is rich on relationships, and is connected through a web of knowledge, usually a network of linking relationships (Rittle-Johnson & Schneider, 2015). It is the

knowing '*that*' of knowledge. The knowledge can be described as theoretical or context-independent; it is a connected web of knowledge that provides generalisations and has universal claims (Young, 2009). The matching principle for example, which is a concept that is required for transactions to be recorded when they occur, is one of the basic underlying guidelines for accounting that guides transactions, and every transaction in the practice of accounting is guided by this principle. Conceptual knowledge is introduced to a learner as logical relationships between concepts and only later once the knowledge is understood can it be applied to experiences (Davydov, 1967).

Procedural knowledge, on the other hand, is the knowing '*how*'. This refers to steps or actions done to accomplish a goal (Rittle-Johnson & Schneider, 2015). An example of procedural knowledge is the seven steps of asset disposal. The steps are sequences that if the learner follows, lead to the learner disposing the asset correctly. The nature of procedural knowledge is context-dependent, as it tells the learner how to do a specific thing (Young, 2009). If, for example, a learner tried to apply the seven steps of disposing an asset to the process of procuring an asset, this would not work, as the steps are specifically for disposing of assets.

2.2.2 Accounting as a School Subject

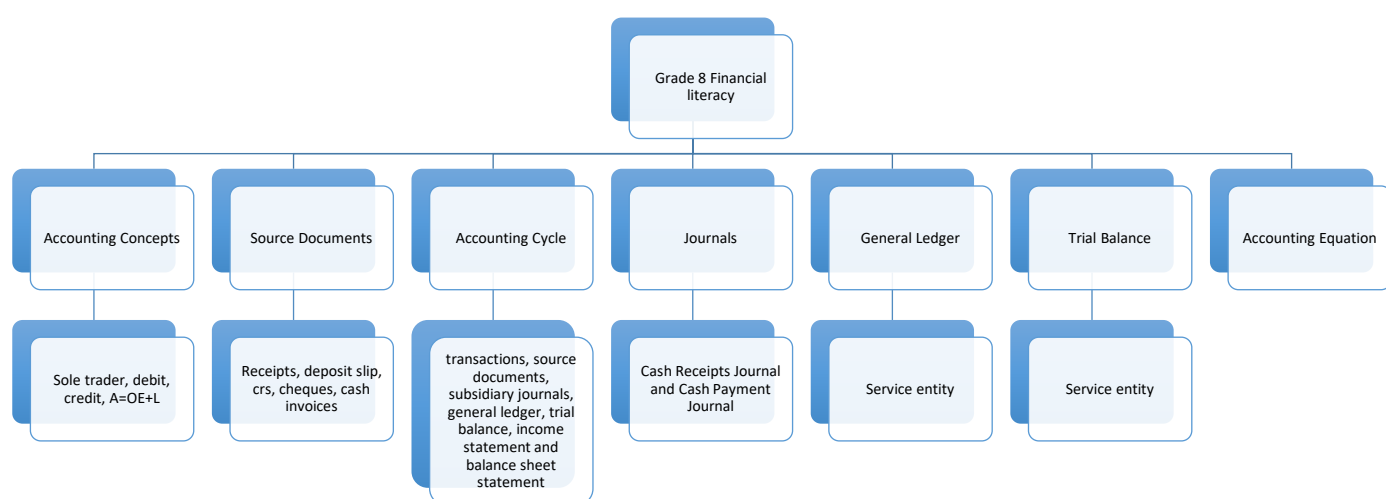
School accounting as we know it today, has not always been the way that it is now. Before the adaptation of the constitution in 1996, accounting was taught in two levels, higher grade and standard grade (Schreuder, 2014). This allowed learners to choose a higher or lower level of engagement with the subject. In the current curriculum, learners do not have that choice. Accounting is now a subject that is offered in the FET phase (Grade 10-12) in South African public school education and all learners are offered the same level of engagement with the knowledge. It is derived from the discipline of accounting, and it has a vertical knowledge structure (Myers, 2016).

The curriculum (CAPS) has selected concepts or knowledge based on the discipline of accounting to be taught in schools. It is first introduced in the intermediate phase (Grade 7-9) where basic accounting principles are taught as part of the EMS curriculum. The concepts are in a sequence and best learnt under the guidance of a

teacher who should be an expert with the necessary knowledge to teach the discipline (Hoadley & Muller, 2009).

EMS, according to the CAPS document (2011, p.7) “is a practical subject that equips learners with real-life skills for personal development and the development of the community”. The subject, accounting, is said to encompass accounting knowledge, skills, and values, that focus on financial accounting, managerial accounting, and auditing fields.

School accounting in the South African curriculum has consisted of different knowledge bases according to which curriculum was being used at that point in time. In the past, the subject has also been given different terms, according to the learning outcomes expected to be achieved. Accounting has been called bookkeeping, accountancy, and now it is called accounting. Bookkeeping, which can also be referred to as financial accounting, is a part of accounting which is concerned with recording of transactions (Garg, 2010). This knowledge is routine and clerical in nature. Accountancy, on the other hand, is an umbrella term for the profession of accountants, and accounting is the systematic recording of all business transactions, and then arranging these into financial statements for reporting (Garg, 2010). The knowledge that has been selected from the discipline of accounting for the purpose of transmitting it in the intermediate phase is what is termed financial literacy in the curriculum document.



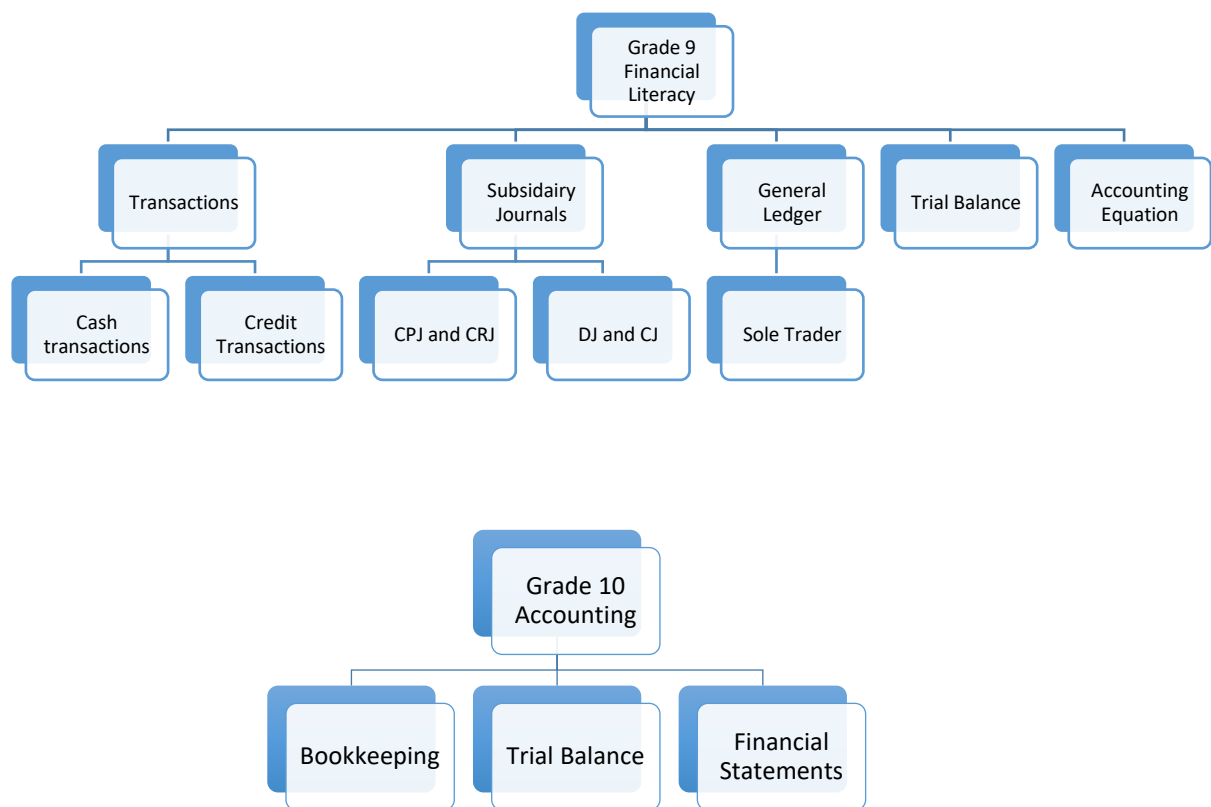


Figure 1- Accounting concepts coverage from Grade 8-10 in CAPS

Financial literacy is essentially the ability to use knowledge and skills to manage one's financial resources effectively. The knowledge and skills which are selected from the discipline to transmit the knowledge of financial literacy are: savings; budget; income and expenditure; accounting concepts; accounting cycle; source documents; and financial management and keeping of records. The skills that are learnt here are intended to equip the learner with real-life skills for personal development, and the development of the community (CAPS, 2011). In all of this, the subject itself must be understood as derived from the discipline, which is why the nature of the subject is conceptual and procedural. It is conceptual in that learners need a theoretical understanding of the concept and knowledge that encompass the subject. In addition, learners need the procedural knowledge because accounting is practiced and learners must acquire the skills of the practice.

The diagram in figure 1 is an illustration of the concepts taught from Grade 8 financial literacy, which build up in Grade 9 and lead to the first term of Grade 10 accounting. Not only do the concepts build up in the grade in which they are taught, but they also are a build-up for knowledge that is to be taught in the next grade. In Grade 8 and 9, financial literacy, and accounting concepts of bookkeeping, are taught as a base for concepts that are to come later on, such as the financial statement.

2.3 Teachers' Subject Constructs

The background and underlying beliefs held by teachers about the subject and teaching practices influence their teaching identity. What teachers think affects what they do (Ball, 1988). This section looks at what influences the teachers' construct of the subject, which ultimately leads to the teachers' pedagogical reasoning and practice. The study is interested in how teachers' construct of the subject influences their pedagogical practices. The study has recognised the teachers' subject construct to be the beliefs that they hold about the purpose of the subject, and what they think their role is as a teacher is. These beliefs are based on the teachers' past experiences of having being taught the subject, and what they think the purpose of the subject is (Morrow, 2007). There are numerous studies that focus on how a teacher's identity is formed in the work place (Nixon, Hill, & Luft, 2017). However, there is little written on how teachers develop their construct of the subject that they teach before they become teachers, and how this has an effect on their teaching practices.

The teacher's past experiences with the subject refers to the teacher's previous interactions with the subject, when the teacher was a learner being taught by a teacher, what the teacher studied in higher education, and the interaction that the teacher has had as a teacher teaching the subject.

This is important to know, as a learner's interaction with the subject impacts the learner's social and academic learning of the subject (Preto, 2018). Understanding a teacher's previous interactions with the subject gives one an understanding of the reasoning behind their pedagogical reasoning and practice. Learners generally have either a positive or a negative experience with a subject, which is mostly directly associated with the teacher who teaches the learner the subject. A learner's positive

or negative experience of the subject influences how they view or believe the subject to be.

The teacher's comprehension of a subject, the teacher's knowledge and understanding of the purpose of the subject and the subject's knowledge structure, affects how the teacher functions within and outside the discipline (Shulman & Shulman, 2007). Teachers' subject constructs play a critical role not only in teachers' choices when it comes to pedagogical reasoning and actions but also what teachers believe their role is in the process of teaching and learning.

Beliefs that a teacher establishes early on in life are often hard to change even when faced with contradictory evidence (Borg, 2003). The personal interactions that one has with a subject form part of the beliefs that one holds about the subject. Teachers learn a lot about teaching through their experiences as learners. What a person studies to teach, forms part of their knowledge base, which can be referred to as professional development. Professional development leads to an organisation of personal theories on the subject into distinct ideas (Borg, 2003). Most of what teachers know or believe about a subject, is established while the teachers were themselves learners.

2.4 Teacher Knowledge Base

The teacher's role is essentially, but is not limited to, organizing systematic learning to transmit knowledge to learners. According to Shulman (1986), a teacher's knowledge base is made up of four aspects, these are: a teacher's subject matter knowledge; pedagogical content knowledge; curriculum knowledge and knowledge of learners. Subject matter knowledge, for instance, is considered to be the heart of teaching, as it is the content knowledge that a teacher has from the discipline in which the subject is selected (Rollnick & Mavhunga, 2016). The teachers' PCK is the teachers' choices of representing ideas, the choice of analogies, examples and explanations which are selected for transmitting knowledge in a way that will be comprehensible to learners (Shulman, 1987). Curriculum knowledge is the teacher's ability to relate the content of the given topic to the learners (Shulman, 1986).

Teachers who teach accounting to learners need the knowledge of how the discipline of accounting works in terms of how the discipline constructs and presents knowledge.

With respect to subject matter knowledge there are three aspects of accounting that a teacher needs to come to realise: the knowledge of accounting is both conceptual and procedural; the discipline of accounting is re-contextualised into financial literacy; and that teachers have to engage learners in understanding the nature of accounting; and practically doing accounting. A teacher's knowledge base is significant as it informs one about the teacher's construct of the subject (Morrow, 2007). It furthermore influences the teacher's reasoning for knowledge transmission.

The process of transmitting knowledge is made up of a network of dimensions which work together in order for the teacher to transmit knowledge effectively. The main components of teacher knowledge are: subject matter knowledge; pedagogical knowledge and curriculum knowledge.

The transmission of accounting at school level is a process called pedagogic re-contextualisation or pedagogy. The concept of recontextualization "refers to the rules or procedures via which knowledge intellectual, practical, expressive, official or local knowledge is converted into pedagogic communication" (Singh, 2002, p. 573). It is a process of transmitting the context of a culture from its discipline, to the context of the individuals, who are learning about the culture. The nature of culture or discipline knowledge is very complex, making epistemological access restricted and hard to comprehend for those who are not in the culture (Moore, 2013). There are social, cultural, historical, and institutional factors that impact on the process of teaching and learning (Daniels, 2001).

In the schooling perspective, re-contextualisation is the process of teachers' transmission of cultural knowledge in the form of teaching. The teacher is understood to be the expert, who applies expertise in order to impart to the learner the given subject matter, by using different pedagogical techniques (Nesher, 1978). The teacher knows something that the learners do not know, and the teacher must transmit what is known to the learner (Shulman, 1986). Pedagogy is the teacher's knowledge base for transmitting knowledge to learners. It is a whole with three parts: subject matter knowledge; pedagogical knowledge; and curriculum knowledge (Shulman, 1987).

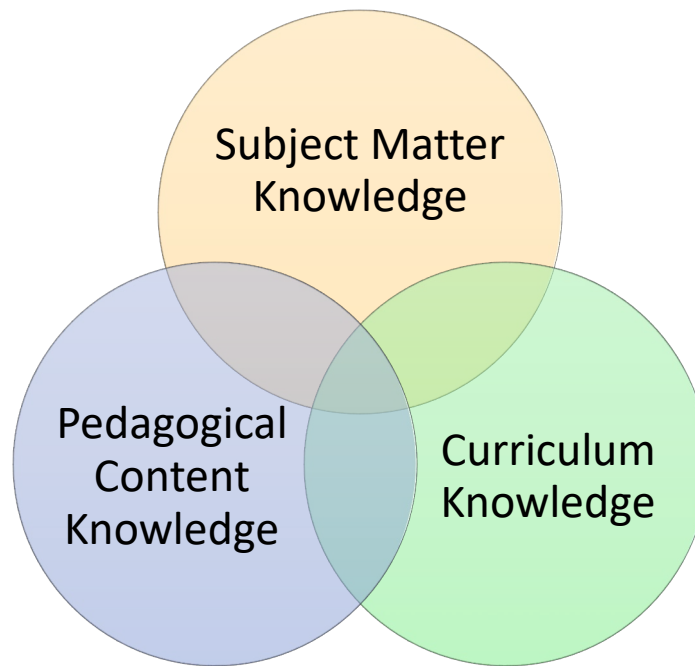


Figure 2- Model of CK, PCK and PK

C. Fernández 2014

2.4.1 Subject Matter Knowledge

Subject matter knowledge (SMK) is the general specific factual knowledge that a teacher possesses on a certain topic (Gess-Newsom, et al., 2017). SMK can also be referred to as content knowledge (CK) which refers to the amount of organised knowledge in the mind of a teacher (Shulman, 1986). It can be described as the teacher's understanding of the culture of the discipline of the subject s/he is teaching. It refers to the process and understanding of the facts, concepts, and principles in ways that are connected and organised. Subject matter knowledge can also be described as a body of knowledge that is derived from a discipline. "The teacher must not only understand *that* something is so, the teacher must further understand *why* it is so" (Shulman, 1986, p. 9). This means that the teacher must have a deep understanding of the knowledge that they teach to learners.

Teachers demonstrate SMK in the activities or the examples that they give (Prestage & Perks, 1999). The examples and the activities that teachers give to their learners points to their knowledge on the subject's structure, concepts, skills, facts, and definitions. It is essential that teachers possess SMK in order for them to be able to

teach learners; teachers cannot help children learn things they themselves do not understand (Ball, 1988).

2.4.2 Pedagogical Content Knowledge

At its core, pedagogical content knowledge refers to ways of representing the subject knowledge in a way that will be comprehensible to others (Shulman, 1987). Pedagogical content knowledge is specific to the subject matter that is taught. It depends enormously on the teacher's content knowledge. It refers to the ways of representing the subject in a way that is comprehensible to others (Rowland & Turner, 2008). One can imagine it is hard to explain something that one does not fully understand. It does also include the teacher's knowledge of the organisation of the content according to the curriculum (Olfos, Goldrine, & Estrella, 2014). A teacher without pedagogical content knowledge is restricted not only by the curriculum but also by the teacher's ability to transmit the knowledge. A teacher is tasked with choosing the most useful way to represent the knowledge to learners. A teacher can only choose useful representations if s/he has a good knowledge base of what needs to be represented.

2.4.3 Curriculum Knowledge

In order to improve schooling, there are materials and structures for teaching and learning that are put in place, this include a curricula with its scope and sequences (Shulman, 1987). There have been four curriculum policy cycles that have shaped curriculum reform within the democratic South African post-1994, the final being CAPS which was finalized in 2010. Unlike earlier post-Apartheid curricula which were outcomes-based, CAPS is no longer framed in terms of learning outcomes and assessment standards.

CAPS is a content-driven curriculum. It is very specific with regard to what content must be covered each day and for how long (duration) (Moodley, 2013 & Wahlström, 2017). To make it more accessible to teachers, the curriculum has been repackaged with every subject in each grade having a single, comprehensive, concise CAPS document that provides details on what teachers ought to teach and assess as well as how to teach and assess the content as stipulated in (DoE, 2011). In this way,

outcomes have been absorbed into more accessible aims, and content has been specified in subject topics and the assessments to be covered per term.

In CAPS teachers need to enable learners to socially construct meanings in the classroom through interaction. Donald (2008) argues that in education the idea of learning as a constructive process is widely accepted: learners do not passively receive information, but instead actively construct knowledge as they strive to make sense of their world. Another central concept in constructivist thinking is that knowledge is not fixed. Knowledge is shaped, constructed and reconstructed in different social contexts and at different times (Donald, 2008).

Teachers have to use their experiences to expose learners to activities that allow them to attach different meanings to social reality. Ornstein (2006) reflects that most constructivists favour an activity-centred curriculum in which learners interact with knowledge and each other to construct meaning and new knowledge for themselves. For example, learners may be given a practical task in which they are required to read and follow instructions, make observations and conclusions. In this way learners develop confidence and attain problem solving skills.

Learners bring their own experiences into a classroom to be shared and this idea needs to be kept in mind by teachers during their planning of classroom tasks for CAPS. The teacher must take on an active role and understand the individuality of each learner through closer examination of the child's work. The teacher must provide the means for pupils to apply already existing skills to acquire new knowledge. The way the teacher talks, sets up the classroom, moves, and sets work, all need to be carefully considered to allow peer tutoring and co-operative working between pupils.

Elliot (2007) points out that the way that people become more knowledgeable is through increased actions and interactions with the environment. Classrooms need to be places where teachers create environments in which the learners feel encouraged and able to express and explore their thoughts, feelings and emotions.

2.5 Pedagogical Reasoning and Pedagogic Choice

Pedagogical reasoning is the process whereby teachers take their understanding of the subject and their learners and turn it into instruction (Shulman, 1987). Pedagogical reasoning uses the interaction of several knowledge bases (subject matter, learner, and curriculum) in order to make decisions about what to teach (Iserbyt, Ward, & Weidong, 2017). Pedagogical reasoning and decision-making underlie teaching skills and techniques. A teacher's pedagogical reasoning is informed by what the teacher believe about teaching, and the thoughts that the teacher holds when it comes to the discipline of the subject, and what it means to teach. Beliefs influence practices and shape how individuals organise tasks and problems (Nespor, 1987). Teachers make decisions that are appropriate to their subject according to the knowledge and beliefs that they hold about the subject. The examples, analogies, and activities that a teacher chooses is influenced by what they believe should be transmitted to learners in a particular topic.

Pedagogical reasoning is influenced by the teachers' beliefs about what the purpose of the subject is, and what they think their role is, when it comes to teaching the subject. What shapes these beliefs is usually their own past experiences of having been taught the subject, and the purpose of the subject (Morrow, 2007). This is also referred to as subject construct.

In terms of knowledge of subject matter, it is suggested that teachers need to understand their subject matter deeply and flexibly. Before they can teach others, teachers need to understand how ideas connect across their subject and to everyday life. In terms of knowledge of how to teach, teachers need to help students create useful examples, analogies, and representations to relate one idea to another and to address misconceptions.

This implies that teacher actions are guided by reason and reflection. A teacher with a thorough understanding of the subject is easily able to identify the purpose of a particular lesson. Sound comprehension enables the identification of key concepts or main ideas as well as secondary or supporting ideas and interesting facts. Based on their comprehension, teachers are able to think about transforming the knowledge to make it accessible for learners. This involves thinking carefully about how to connect

the structured, ordered “school knowledge” to the unstructured “everyday knowledge” that learners may have of the topic. This requires some combination or ordering of preparation, representation of the key ideas or concepts, instructional selections of teaching methods and strategies, and adaptation of materials and activities for the group of learners as well as for individual learners. Thereafter learners are provided with opportunities to work with the knowledge and have their learning evaluated. Finally the teacher reflects on what worked and what did not, what the learners understood and what they misunderstood, and how the teaching could be improved in the future.

Thus according to Van Manen (2008) pedagogy can then be seen as having a relational aspect given that there is always an exchange between teacher and learner. Pedagogy in this sense is not a prescriptive formula or set of techniques to follow for effective teaching. Rather, pedagogy is about creating conditions for positive teaching and learning exchanges between the teacher and the learner. In order to establish positive pedagogical relationships, teachers require tact and sensitivity, the ability to improvise, thoughtfulness, and the ability to exercise judgement. The aforementioned concepts will influence decision making and pedagogical choices in the classroom.

The various pedagogical choices teachers make provide for more, or less, culturally responsive teaching. Pedagogical choices are also typically informed by underlying belief systems related to beliefs about teaching and learning; dispositions and the knowledge and skills developed as teachers (Yero, 2002). The decision to practice culturally responsive teaching is a pedagogical choice that can facilitate working with knowledge, making knowledge accessible to others from different cultures, and working with the knowledge of others.

2.6 Topic Specific Pedagogical Content Knowledge

Disciplinary knowledge varies from discipline to discipline, and the manner in which the knowledge is re-contextualised also differs. There is no one way to teach knowledge, as subjects differ and the knowledge within those subjects also differ. Topic specific pedagogical content knowledge (TSPCK) is the ability to reason about teaching topic specific content through five components which are regarded as

important for re-contextualisation of content knowledge (Rollnick & Mavhunga, 2014). It is the basis on which knowledge of the subject matter of a particular topic is conveyed to learners. The five components include: learners prior knowledge; curricular saliency; what makes a topic easy or difficult to teach; representations; and teaching strategies (O'Brien, 2017). Teaching is not simply about content knowledge but it is also about the ability to reason about teaching. Shulman (1987), argues that sound reasoning about teaching is the process of thinking about actions as well as adequate understanding of content, principles, and experiences to draw on.

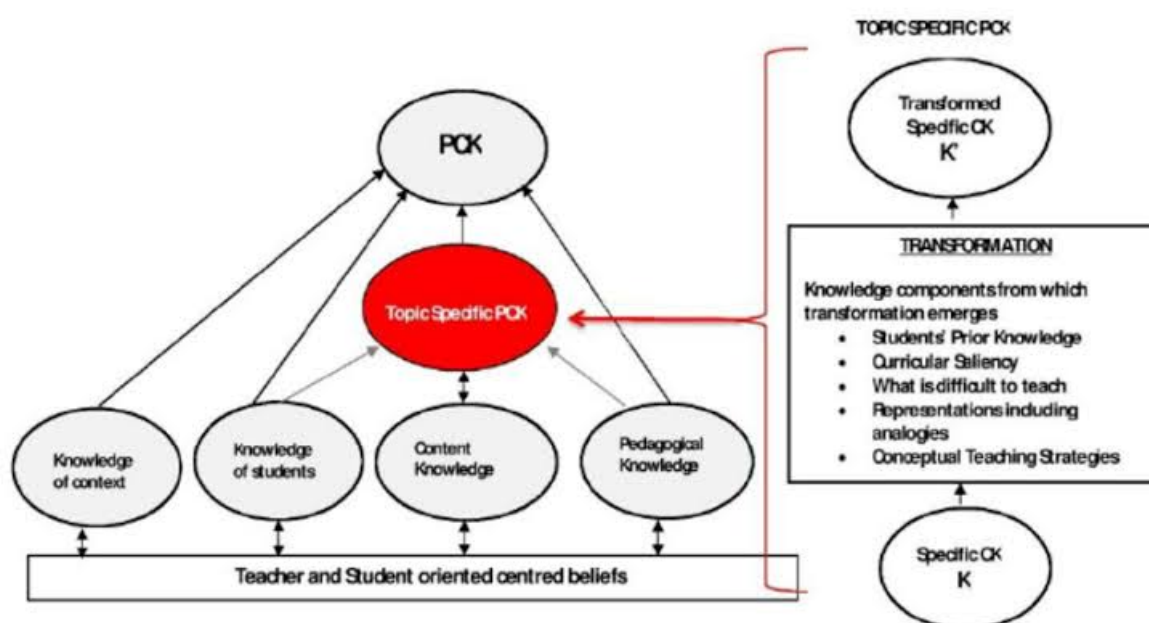


Figure 3- A model of TSPCK.

Reprinted from: Mavhunga, E. (2014) Improving Ck and PCK in preservice chemistry teachers In H. Venkat, M. Rollnick, J. & M. Askew. (Eds.) Exploring Mathematics and Science Teachers' Knowledge: Windows into teacher thinking. London; Routledge. p.34.

Shulman (1986:5) argues that anyone who plans to teach a subject to children must first demonstrate adequate knowledge of that specific subject as a precondition to teaching. In his research, he differentiates between the different knowledge areas of a teacher, viz. what teachers know and what only teachers can do. Unlike the generic PCK model that focuses on the ability to transform subject matter knowledge for teaching, Mavhunga (2012) TSPCK focuses on transformation of teachers' comprehension of content that translates into 'how' a teacher teaches a particular topic.

Teachers' knowledge of subject matter influences three of the five components of TSPCK: namely knowledge of subject representations; teaching strategies; and issues that make the topic difficult/easy to understand (Mdolo & Mundalamo, 2015). The knowledge of subject representation refers to the teacher's ability to draw learners to engage with the subject in a way that is epistemologically sound, and allows learners to participate in the discipline practices of the subject, and engage learners in epistemological soundness (Tytler, Prain, Hubber, & Waldrup, 2013). Teaching strategies refer to the methods and techniques that a teacher uses during the process of conveying knowledge, and the strategies that are put in place in order to assist learners in learning. If a topic is difficult/easy to understand, this is the content that is referred to as gatekeeping content, as it determines whether learners will find it difficult or easy to grasp content that is being transmitted to them. Aspects that can make learning difficult for learners is either learners' prior knowledge, or the way in which the curricula has sequenced the knowledge to be learnt.

A serious problem in education in South Africa is that teachers and schools seem unable to help the country's youth develop the necessary mindset and intellectual skills to build a modern state (Spaull, 2013). Many years ago, Morrow (2007) pointed to the deterioration in the quality of schooling since 1994 and Taylor (2006) found that 80% of schools in South Africa were essentially dysfunctional. Little has changed in the past decade, with unsuccessful curriculum reforms leaving the majority of South African schools unable to provide effective schooling, which has direct implications for the right to basic education (Letseka, 2014, p.4865).

Economic and Management Sciences (EMS) is a hybrid subject made up of Financial Accounting, Business Management and Economics tasked with skilling learners at the end of their compulsory education with knowledge as to how individuals, businesses, governments and other organisations within our society choose to use scarce resources to satisfy their numerous needs and wants in a manner that is efficient, equitable and sustainable (CAPS, 2011, p.9). It also has a role to play in equitable society. Poverty, unemployment, unequal distribution of income and poor Economic growth still prevail in the majority of developing countries in the world, including South Africa.

2.7 Conceptual Framework

What is largely missing from current literature is research into the specific knowledge needed for teaching specific topics and how this knowledge is drawn upon during teaching. In other words, TS-PCK for teaching EMS specific topics is not well documented. In order to understand the knowledge needed for teaching specific EMS topics, it is important to examine how these teachers' knowledge base has been transformed to topic specific knowledge for teaching specific topics, and how that knowledge informs their teaching. Gaining more insight into the actual use of TS-PCK for effective economic instruction may provide a more complete understanding of teaching specific economics topics.

The conceptual framework is the lens that is used to analyse the underlying concepts that can help us in understanding teacher knowledge constructs and pedagogical reasoning. The focus of the study was on how teachers' constructs of a subject shape their approach to their pedagogical practices.

Drawing on Thompson (1990) theory on discipline knowledge as a cultural practice, and Bernstein's (2000) notion of knowledge structure, and in order to analyse and to understand these notions, it was necessary to analyse the nature of accounting knowledge (Thompson, 1990). The study also looked into Shulman,s (1987) theory on teacher knowledge. This is reflected in the following model:

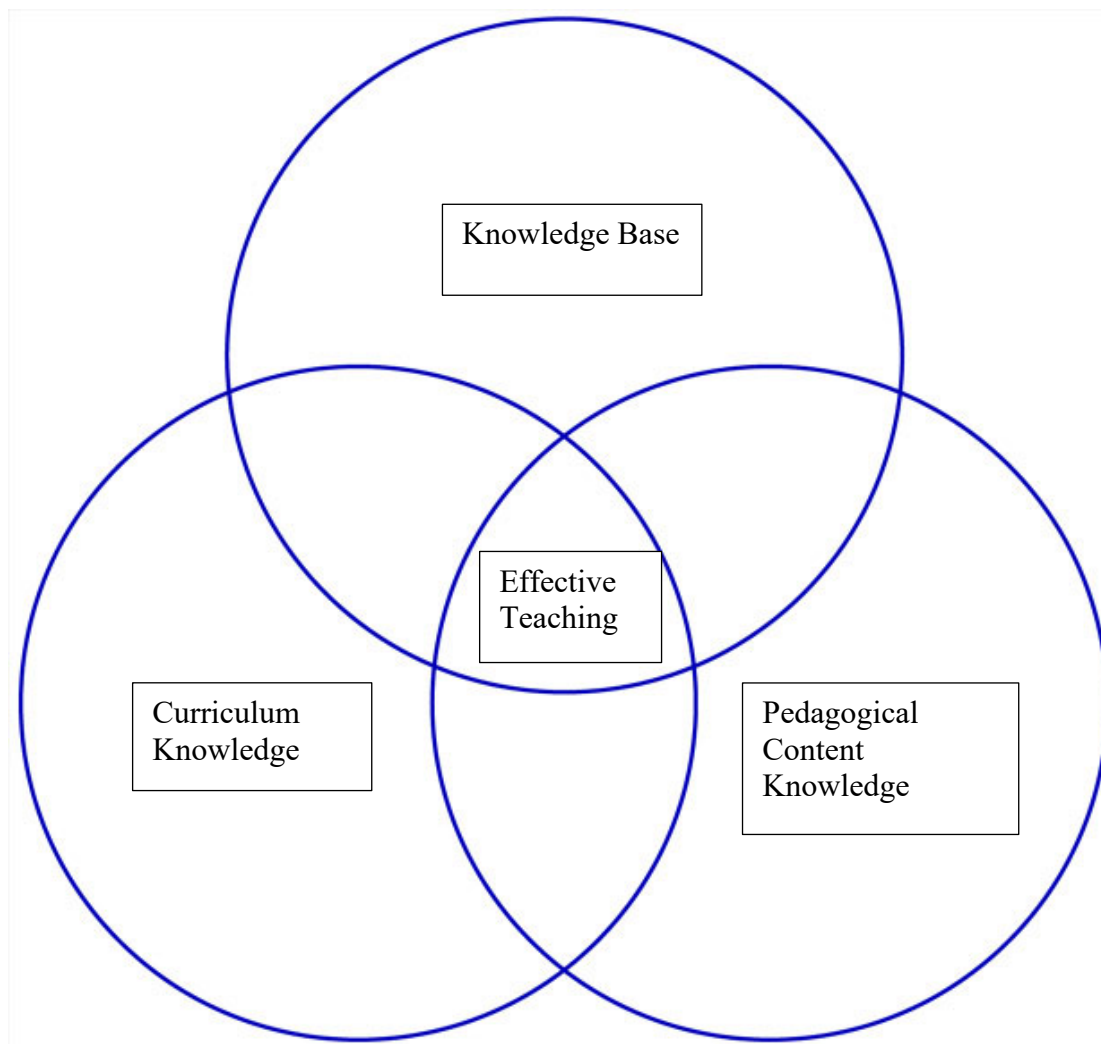


Figure 4- A model on teacher knowledge base

There is an old saying that one never really learns something until one has to teach it. When teaching subject matter, teachers' actions will be determined to a large extent by the depth of their pedagogical content knowledge, making this an essential component of their ongoing learning (Shulman, 1987). Pedagogical content knowledge research links knowledge on teaching with knowledge about learning, a powerful knowledge base on which to build teaching expertise. Through teaching a concept or idea, one has to struggle to find out what the concept really means and how to deal with the questions and complications that are likely to arise. Teachers need to transform subject content knowledge in a way that makes it interesting and comprehensible to their learners and in a sense this is the core essence of teaching.

2.8 Conclusion

The purpose of this chapter was to provide an understanding of what teachers' constructs of the subject are and whether or not their constructs influence their pedagogical reasoning and their approach to teaching. The study used literature that is available in the field of education in order to understand this, and drew on research on these topics by other scholars. Bernstein's (2000) account of the structure of disciplinary knowledge was used in order to understand the structure of disciplinary knowledge; as well as Thompson's (1990) characteristics of discipline knowledge. Shulman's (1986) theory of the kinds of knowledge teachers need to teach, was used in order to understand the knowledge base that makes up teacher knowledge that is necessary to transmit knowledge. All of this literature has helped in understanding that the major influence on how teachers transmit knowledge is based on the teachers' construct of the subject. Teachers' construct of the subject or what they believe the subject is, plays a major role in how they transmit knowledge for that subject. The research was guided by these concepts

Chapter three focuses on research design, methodology and related aspects.

CHAPTER 3

Research Design

3.1 Introduction

The need to improve the quality of education and educational practices has made educational research an important and valuable source for information. Knowledge that is a result of research has a direct impact to the educational practices of educators. Research can be seen as a “systematic process of collecting and logically analysing data” (McMillan & Schumacher, 2010, p.396).

A study’s research design can be described as the plan or the blue print of how the researcher intends to conduct their research (Babbie & Mouton, 2001). The research design should effectively communicate the strategies that are used by the researcher to answer the research questions that were posed by the study (Cohen, Manion, & Morrison, 2007). This section outlines the overall plan in terms of the methodology and methods used in order to answer the research questions, the instruments that were used to gather the data, and how the data analysis was carried out.

The focus of this study was on how EMS teachers’ constructs of accounting inform their pedagogical reasoning in planning to teach the section on financial literacy set out in the curriculum. The aim of the study was to describe, interpret and explain, how teachers construe concepts and principles of accounting and how this impacts on their pedagogic decision making (Dey, 2005). The study was therefore an interpretive qualitative study because I was interested in teachers’ understandings, meanings and reasoning behind their pedagogical choices.

The conceptual framework of this study was used as a lens to analyse the data that was collected for the purpose of answering the research questions.

3.2 Qualitative Research

Qualitative research generally produces findings which are not derived by means of statistical or quantification procedures (Basit, 2010). The study was primarily exploratory research, that looked for meaning in the data that was collected.

During the data collection phase of this research, information was gathered from the participants about their personal experiences and opinions regarding teaching EMS. I used an interview schedule in order to gather relevant information that could enable me to answer the overall research question. The interview questions were mainly focused on finding out what the teachers' constructs of accounting are, what informed the teachers' constructs of the subject and how these constructs informed their pedagogical reasoning and practice. Towards these ends, I tried to gain an understanding of their history of engagement with accounting in the course of their education and also to gather information regarding their experiences and practices as teachers in the workplace.

3.3 Research Participants

A researcher must make theoretically informed decisions about who to include in their study (Scott & Morrison, 2006). A researcher chooses a sampling technique according to the type of study that they are conducting. In qualitative studies participants are usually chosen intentionally on the basis that they are knowledgeable and can be informative about the phenomena being studied (McMillan & Schumacher, 2010).

I wanted to explore grade 9 EMS teachers' constructs of accounting and how they make decisions about how to teach financial literacy. It was not possible to study the entire population of Grade 9 EMS teachers who teach financial literacy. That sample would have been too broad to gather information that is useful for this study (Basit, 2010). It would also be impossible to produce that information in a form of a qualitative study. I therefore interviewed eight Grade 9 financial literacy teachers who teach EMS in government schools and use the CAPS document as their curriculum document.

I used convenience sampling to identify the schools where I would approach teachers to participate in the research. For ease of access, I opted to interview teachers teaching in government schools in Johannesburg North. Half of the schools I chose have predominantly lower middle class learners, and the other half have predominantly upper middle class learners.

The reason for choosing government schools was that my aim was to get insight on how teachers using the same policy document use it to inform their pedagogical practices. All government schools in SA use the CAPs document as a curriculum guide. The different schools gave a perspective of different contexts of working with the CAPS documents, as well as different experiences from teachers who teach in different schools, using the same policy document as a guide for knowledge transmission

I used purposive sampling to select participants in the study. I wanted to include both novice and veteran teachers who had either studied to teach accounting or had a background in the field of finance. Three of the teachers had studied to teach accounting in their undergraduate degrees, four of the teachers had studied for B.com degrees in finance, and one of the teachers had neither an undergraduate degree in education nor in finance.

Table 1. below presents an overview of the participants

Teacher	Number of years teaching	Qualification	Type of school	Grades
Nyasha	18months	BCom Finance PGCE	Lower middle class	8-11
Britney	2 years	BEd	Upper middle class	8-10
Beverly	19 years	BEd	Lower middle class	8-12
Zack	5 years	BCom Entrepreneurship Management PGCE	Upper middle class	8-10
Isaac	2 years	Logistics PGCE	Lower middle class	8-11
Nomvula	3 years	BEd	Lower middle class	8-10

Brenda	24 years	BCom Industrial Psychology Certificate in Education	Upper middle class	8-12
Courtney	2 years	BEd	Upper middle class	8-12

Table 1- Overview of Participants

The selection of novice and expert teachers has also been made purposefully as studies have shown that new teachers have incomplete or superficial levels of pedagogical content knowledge (Shulman, 1987). A novice teacher tends to rely on unmodified subject matter knowledge (directly extracted from the curriculum) and may not have a coherent framework or perspective from which to present the information. The novice also tends to make broad pedagogical decisions without assessing students' prior knowledge, ability levels, or learning strategies. Whereas more experienced teachers have a better "overarching" view of the content field and on which to base teaching decisions, were more sensitive to subtle themes presented in textbooks, and could and did modify the text material based on their teaching experiences. Moreover, they were more likely to discover and act on student misconceptions.

3.4 Data Collection

The study was originally designed to include two sources of data: semi-structured interviews and concept maps. I will discuss the rationale for interviews and concept maps, but I will explain later why the study ultimately did not work with the concept maps.

3.4.1 Data Collection Instruments

The purpose of interviews is to collect information from the individuals who have special knowledge or perceptions that would not be otherwise available to the researcher (Gall & Borg). An individual interview is basically a two-person conversation initiated by the interviewer in order to gather relevant information from

the interviewee (Cohen & Manion, 1994). Interviews generally provide rich data that lets the interviewer in on the feelings, views, and experiences of the participants.

An interview schedule was developed in order to ensure that information gathered for the study would enable me to address the research questions. The schedule enabled both a focus for the interview and also flexibility to probe on questions that the interviewee did not expand on in their response.

During interviews there should be enough trust between the interviewee and the interviewer that the interviewee feels comfortable to speak freely and answer questions truthfully (Friesen, 2010). The interviews were conducted on the premise that the interviewee trusted the interviewer to answer questions honestly.

a) Semi-structured Interviews

The study was particularly interested in teachers' constructs of accounting and their pedagogical reasoning with respect to teaching financial literacy. The only way to get such information was through conversing with these teachers.

The interview worked with semi-structured interview questions. Semi-structured interviews allow room for questions to be explained or re-phrased so that the interviewee could be clear on what they were being asked. They also create space for the interviewer to ask probing questions in order to get clarity from the interviewee on points not elaborated on.

The researcher prepares questions to ask during the interview, and also prepares supplementary questions (Basit, 2010). An interview schedule was developed in order to ensure that information gathered for the study would enable me to address the research questions. (See Appendix 1) The schedule enabled both a focus for the interview and also flexibility to probe on questions that the interviewee did not expand on in their response. The schedule helps in ensuring that time will not be wasted for both the interviewee and interviewer.

The interviews began with a brief introduction explaining the purpose of the interview. Questions in the first part of the interview focused on the teachers' educational backgrounds and work experiences. The aim of this section of the interview was get an understanding of the teachers' educational background as well as prior interaction with accounting before teaching. These questions were intended to enable understanding of what informs the teachers' constructs of the subject.

Questions in the second part of the interview were asked in order to explore the teachers' subject matter knowledge as well as their pedagogical reasoning. The teachers were required to reflect on how they taught the subject and their pedagogical reasoning and action.

Questions in the third part of the interview were asked in order to gather information on the teachers' knowledge of the curriculum. This was because the curriculum outlines what the teacher must teach, and an understanding of the curriculum would display an interaction with the policy document, which would therefore become part of the knowledge that would influence teachers' reasoning when it came to transmitting knowledge in the classroom.

b) Concept Maps

In an attempt to understand how teachers construe the web of concepts in financial literacy, the proposed study intended study to include concept maps as part of its data collection instruments. The rationale for this was that in order to draw up a concept map individuals have to focus on determining the relationships between concepts, by depicting hierarchy among the concepts (Daley, 2010). During the interviews teachers were asked to draw a concept map of the General Ledger. The intention was that teachers would represent what they thought comprised the structure of knowledge or concepts for the General Ledger and their approach to teaching it.

Unfortunately, I was not able to get teachers to develop concepts maps that went beyond a few key words. None contained sufficient detail or depth. This may well have have been because of my own inexperience and/or shortcomings as a

researcher. The concept maps therefore could not serve the purpose for which they were intended and therefore were not included in the data analysis. The lack of data sources beyond the information that was elicited in the interviews is arguably a shortcoming of this research.

The use of concept maps added in revealing the conceptual understanding of teachers (Edwards & Fraser, 1983). Teachers expressed their comprehension of concepts and concept-inter-relationship. This led me to understanding teachers' classroom practice but also raised doubts as to the nature of understanding of teachers concept mapping skills. The assessment of this plurality of knowledges requires the mapping of semantic density and semantic gravity (Kinchin, Mollitis and Rieska, 2019). Beyond just assessing the 'correctness' of propositions within a map, the application of Legitimation Code Theory to concept mapping allows for the assessment of the ways in which the mapper is able to link theoretical knowledge with practical knowledge. This however served to detract from the purpose of the research and was thus abandoned in favor of triangulation using policy documentation, teacher interviews and an analysis of learner final assessments as published by the Department of Basic Education.

3.5 Data Analysis Methods

Data analysis is essentially the process of making sense of information gathered and establishing what message it conveys with respect to the phenomena under study. The first step in analysing information is to develop a thorough description of the phenomenon in the study. For this study, it was done through descriptive interpretive analysis (Dey, 2005).

First the interviews were transcribed then I read and re-read each interview to familiarise myself with their contents. I used a combination of two methods to analyse the data – coding and thematic analysis. The approach of analysis that was chosen orders data into categories in order for it to be analysed in themes that captured the research questions and produced responses to the questions posed.

Coding is looking for distinct concepts and categorising these into basic units of analysis. There were two key foci of investigation in study and therefore two

overarching categories: subject matter knowledge, and pedagogical content knowledge.

Thematic analysis involves identifying, describing, and analysing themes found within the data (Braun & Clark, 2006). Themes capture important data in relation to the research questions and represent responses and meaning in a pattern within the data (Braun & Clark, 2006). There were various themes that categorised the teachers' responses that helped with analysing the data.

3.6 Research Rigour

Rigour in research refers to the representation of data that is collected during the research process adhering to the philosophical principles that guide qualitative research. Rigorous research applies appropriate research tools to meet the objective of the study, ensuring that the study is trustworthy, reliable, and creditable (Braun & Clark, 2006). Thus it is the aim of this reach to ensure that the data gathered is confirmable, in that the conclusions have been extracted from the submissions of the participants and not the preconceived notions of the researcher. That the data is dependable in terms of having been applied in the same way to all eight participants ensuring a level of consistency. Finally that the data can be transferred in terms of how conclusions of findings can be applied to the EMS classroom. It is in my best interest and the interest of this study to represent data according the principles of qualitative data. Not only will it be ethical, it can also be useful for when/if I decide to take this research further.

a) Validity

Validity determines whether the research measured what it intended to measure. It measures the quality of the data and results. Validity can be seen as a goal rather than a product of the study (Maxwell, 2005). It is seen as the true value of a research study, and is therefore a central concern for all researchers (Ridenour & Newman, 2008). Validity cannot be proven or taken for granted, it is, however, relative, as it has to be assessed in relation to the purpose of the research (Maxwell, 2005). For this study validity was ensured by developing a strong theoretical framework based on what the

study intended to investigate, which also helped to guide the phenomena that was investigated during the data collection process. The study was focused on concepts of financial literacy in Grade 9. Financial literacy was analysed so that it could be understood from its context, that is, the accounting discipline from which it is selected. Also analysed, was the knowledge structure of the discipline, as well as how the nature of the structure impacted on imparting knowledge. This was done in order to ensure that the research for the study was guided by the research questions.

b) Trustworthiness

The research methods that are used need to be consistent with the philosophical underpinning of the research question (Ridenour & Newman, 2008). Trustworthiness in a study is dependent on the communication and interpretation of the evidence collected in order to support arguments that are based on literature. The reader should have trust in the reliability and validity of the entire study.

3.7 Ethical Consideration

When a researcher is conducting research that involves interacting with human participants as part of the data collection process, then there has to be ethical considerations. When involving human participants the researcher needs to be clear about the nature of the study and the participants must be well informed about the study and do it out of their free will. Informed consent assumes that the participant is capable of making an informed decision about participating or not participating, the decision is made voluntarily under no duress (Basit, 2010). The identity of the willing person should stay hidden and not be revealed. The information that the participant also gives should not reveal their identity (Cohen & Manion, 1994).

3.8 Conclusion

The research design defines the means by which the research was carried out. It maps out and serves as the blueprint of the entire study. It specifies the plan for generating evidence that is used to answer the research questions (McMillan & Schumacher, 2010).

The decision to work with qualitative data was based on the intention of the study, which was to gain an understanding of how teachers' constructs of the subject influenced their pedagogical practices in Grade 9 Financial Literacy. During the data collection process, teachers were given the choice of when and where the interview was to take place; this was done in the hopes of gaining the trust and comfort of teachers being interviewed. An interview schedule was used for the interview and the teachers were probed on responses where the interviewer felt the teachers needed to elaborate more on their responses. The study did not want to create generalisations, on the contrary, it aimed to highlight through the exploration of participants' history and experiences, what their constructs were and how these constructs played a role in their pedagogical choices and reasoning.

In chapter four I will engage with the findings of the study.

CHAPTER 4

Descriptive Interpretive Analysis

4.1 Introduction

The process of data analysis is the process of obtaining raw data and converting it into information useful for answering the questions posed by the study. The purpose of this chapter is to describe and develop a descriptive interpretation of the data that was collected for this study. This was done by coding the data that was collected from the teachers and analysing the major themes that emerged from the interviews.

The intention of this study was to analyse how teachers' constructs of accounting influence the way that they teach financial literacy to Grade 9 learners. The following questions were posed as research questions for the study in order to understand the relationship between subject constructs and pedagogical practices:

How do the Grade 9 EMS teachers' constructs of accounting inform their orientations to teaching financial literacy?

- What are teachers' constructs of accounting?
- How has their interaction with accounting shaped their constructs of financial literacy?
- How do their constructs of accounting inform their pedagogical reasoning in teaching accounting?

The research questions were used as a guide to formulate the interview schedule in order to engage with participants about their experiences. There was not one correspondence between the questions and the analysis that was developed here. The reason for this is that some responses from the participants contained information that illuminated more than one theme or sub-theme. This does also mean that some quotes are repeated in the analysis. Although the aim was to look at themes analytically, the reality is that the themes were interrelated.

In the literature review (see Chapter 2), a teacher's subject construct was described as the background and underlying beliefs that the teacher holds about the subject. The beliefs and understanding that a teacher holds comes from the teachers' interaction with the subject, their understanding of the curriculum and their interactions with the subject (Morrow, 2007). The study was particularly interested in the teachers' constructs of the subject, as the beliefs and understandings that the teacher holds influences the teacher's pedagogical reasoning and understanding. As stated earlier, pedagogical reasoning is how the teacher thinks about teaching and learning the subject that they teach. It is the knowledge base for teaching which is the intersection of content and pedagogy (Shulman, 1987, p.15). The two predominant themes that emerged from the data were the teachers' subject matter knowledge, and the teachers' pedagogical knowledge.

4.2 EMS

EMS as a school based subject is one of the eight compulsory learning areas in the GET band is a learning area that is useful, practical and relevant to the needs of learners, the economy and the country. This learning area enables learners to achieve important economic and financial skills. All teachers were unanimous in their support for the learning area and its benefits to learners. They were also unanimous in that they all confirmed that given the choice they would teach EMS in future. There was a general plea for clear guidelines from curriculum officials or learning area specialists and for a restructuring of the learning area where the two dominant disciplines should be split in order for each of these disciplines, accounting and business studies, to receive the attention and time that it deserves.

With the introduction of the Curriculum and Assessment Policy Statement (CAPS) in January 2012, the percentage dedicated to Accounting in grade 9 EMS was increased from 25% to 40%. The four LO's of the C2005 curriculum were reduced to three areas called "topics". The three topics for EMS, according to the CAPS, are Accounting (40%), Entrepreneurship (30%), and The Economy (30%) (Department of Education: 2012).

4.3 EMS policy document analysis

The CAPS curriculum clearly defines what the teacher needs to transmit and by when. However, it is up to the teacher to draw on their professional knowledge and expertise to make principled decisions about how to transmit these principles, concepts and procedures in a way that will be accessible to learners. EMS is a composite of three recontextualised disciplines, many EMS teachers have specialized in one or more of the *other* disciplines that comprise EMS. This means that EMS teachers do not necessarily have deep knowledge in accounting or deep appreciation of the significance and power of the web of accounting concepts that underpin financial literacy. This is not to suggest that they may not have been exposed to concepts in the curriculum, but this is not the same as a deep understanding.

According to the Curriculum and Policy Statement for Economic & Management Sciences (EMS) this is a subject that deals with the efficient and effective use of different types of private, public or collective resources to satisfy people's needs and wants. It reflects critically on the impact of resource exploitation on the environment and on people. It also deals with the effective management of scarce resources in order to maximise profits.

As a subject, Economic & Management Sciences enables a learner to:

- Develop the basic skills and knowledge needed to manage one's life and the environment effectively.
- Understand the basics of our country's economy.
- Develop basic skills for running one's own business, managing and recording finances and planning properly so that one can operate effectively and successfully within the wider economy.

4.4 Subject Matter Knowledge

In the analysis of the data, the theme of "subject matter knowledge" appeared as a recurring theme in the interviews throughout all the teachers, in different ways. This led to the theme being further analysed into sub-themes that were prominent in all eight interviews. In the case of teachers' Content Knowledge the data showed that the teachers have the ability to make curriculum connection and integrate their economic

content knowledge with learners' prior knowledge of concepts learnt in previous grades. Teachers' expressions of subject matter knowledge was taken as the teachers' mention of the subject structure, concepts, facts, and skills that are learnt in the subject. The question that was asked is, how do teachers view the structure of accounting?

4.4.1 Structure of Accounting

How teachers understand the structure of accounting was significant as it provided an understanding of their perspective on their conceptualisation of financial literacy, which essentially gave an understanding of how they thought about accounting in general. The structure of accounting in this study is described as vertical or hierarchical, which means that concepts and procedures of accounting build on each other (Myers, 2016). Accounting is also classified as a discipline, which means it adheres to the five characteristics of a discipline explored by Thompson (1990).

The following quotes are from the interviews held with teachers who were participants in the study. Teachers were asked questions about their understanding of the structure of accounting; these responses were categorised according to how they viewed the structure of accounting. Although teachers did not directly say how they saw the structure, the words used gave an understanding of how they viewed the knowledge. There were two main views that were prevalent with the participants. The one view, which is contained in the first set of quotes, was that the knowledge structure of accounting is a structured process with interlinked concepts. The second set of quotes shows teachers who had an instrumental view of the concepts and skills of accounting.

Nyasha:

I tell my children everyday that accounting is cumulative, it is absolutely cumulative. Everything that you learn, even when you see how committed I am to the accounting cycle like they know that there is nothing done in isolation.

Nyasha's understanding showed that she views the knowledge structure of accounting as methodical, meaning that in her expression she sees the conventional and the structural elements of the knowledge of accounting.

Britney:

It is rigorous, very logical

Britney's explanation of the knowledge structure of accounting can be characterized as structural. A structural view of accounting recognises that the signs and symbols that encompass the concepts and principles of accounting are not randomly put together but are put together intentionally and there is an intended meaning (Thompson, 1990). Later we will see if this has any impact on her pedagogical practices.

Zack:

It's definitely not a process of calculating the profitability of a business. I think it for me rests on the accounting equation when you trying to make sure that your company stays afloat and it is viable.

By viewing the knowledge as based on the 'accounting equation', points to an understanding of the knowledge of accounting concepts and skills as being based on a structure. The structure then guides the practice of accounting, making it contextual, which he explains by saying '*when you trying*' inferring to the fact that the knowledge structure is there to guide practice. Zack points to the central concept of accounting as being the accounting equation.

Isaac:

For example uhm cover, the CRJ and CPJ. You can't talk about the CRJ without mentioning the CPJ, isn't we follow the accounting cycle, so it's a step by step thing.

Isaac's understanding of the knowledge of accounting as being 'step by step' shows an understanding of the knowledge as being structural and the arranging of the elements as sequential. Isaac shows an understanding of the accounting cycle which a conventional understanding of the knowledge of accounting. This is that the elements of the knowledge of accounting govern interaction in the community of practice. His explanation of the knowledge structure also shows that having a conceptual understanding of the knowledge guides the procedural aspect of accounting.

The above-mentioned teachers' understanding of accounting knowledge is as a structured process. Although the teachers described the knowledge of accounting using different words, however, it is evident that all these teachers view the knowledge of accounting as structural and hierarchal. The teachers also indicated different elements of Thompson's characteristics of disciplinary knowledge.

The following teachers viewed the knowledge of accounting as instrumental, this is that the knowledge of accounting is applied knowledge. The teachers used different words to express this, and though they did not directly say that this is their view on the structure their views were implied from what they expressed as their understanding of accounting.

Beverly:

It is learning how to keep financial records and keep track of money I mean what's coming in and coming out of your business, how to run your business and how to make sure that it is.

In Beverly's response she describes the knowledge of accounting as contextual because she refers to the knowledge as "learning how to keep financial records", which is a procedure done in accounting and not accounting in its entirety. This means that her understanding of the knowledge of accounting is procedural as she makes no reference to the conceptual aspect of the subject.

Brenda:

Give them a format and say fine learn it

Brenda's view on the knowledge of accounting does not tell us about her understanding of the knowledge of accounting. However, she does describe it as the following of equations, which points to her understanding as conventional, following rules and learning the skill. Here she does not make mention of understanding the concepts and understanding the intention behind the procedure of accounting practices.

The second group of teachers in their explanation of the knowledge structure of accounting did not describe accounting as a process but rather as a series of calculations and concepts that can be done in isolation. Their descriptions of accounting was instrumental. The first group of teachers' understanding of accounting was structural and the procedures of accounting practice were seen to be governed by the concepts of accounting.

Not all the teachers that were interviewed made mention of the structure of accounting. Six of the eight teachers made mention of the structure of accounting. In their description of accounting, the teachers made mention of characteristics that are the same as Thompson's (1990) characteristics of a discipline. Four of the six teachers identified the conventional aspect of accounting, three of the six made mention of the contextual aspect and three described the structural aspect. Although the teachers did not describe the structure directly using the words 'conventional, contextual and structural', the words used to describe the structure can nevertheless be associated with the characteristics. It was also interesting to note that according to the way that teachers saw the structure of accounting influenced their practices in the classroom. This is explored in the next section.

4.4.2 Teachers' Conception of the Subject

The teachers' conceptions of the subject was the teachers' understanding of what the subject of financial literacy is about. This lead an understanding of how the teachers thought about the learning of accounting. Essentially, this becomes part of the frame of how teachers think of teaching knowledge. There are two main groups that are salient here as well. The first group of teachers conceptualised the subject as being learnt through practising the skills in practice; the other group thought that you come to understand or learn accounting by first learning the concepts and then practising the skills with an understanding of the concepts behind the practice.

Nyasha:

In math you can learn a new technique or new algebraic equation or trig you can learn it by practising 10 sums in 20 minutes, 2 minutes a sum. In accounting one new concept takes 15-20 minutes because you have to go through the

entire activity to go through one new concept. So, if you were practising the concept well enough for you to learn to recognise it when they put it in another question, you do 4-5 questions. We're talking about 4-5 hours, because you're making mistakes before you get to a point where you say okay I feel like I'm comfortable with this I can move on to something else. As a subject for children I think it constantly has something new that is hard for them to understand as a subject for the children, its abstract...

Nyasha draws a distinction between the subject of mathematics and accounting, she advocates for the similarities in that both the subjects, according to her, are learned through practice. This is the understanding that the nature of the subject of accounting is procedural. The subject is learnt through practising the skills. She also points out that mistakes are an important aspect of learning the subject, she does not, however, elaborate as to why she thinks that they are.

Beverly:

It's unfortunate 'cause this accounting in general it's an application. So, it's not something that you can go and study and then come and do it. You need to apply knowledge that you, it takes practice, practice.

Beverly's understanding of learning accounting is that procedures should be practised. She refers to it as application and not as a learned subject. This means that she does not think that the concepts can be learnt and then applied, but rather that learning accounting is the process of practising the procedures of the knowledge.

Nyasha and Beverly understand the process of learning accounting as an act of practising and applying knowledge that has been learnt. For these teachers, learners can only come to an understanding of the concept through the practising of the skills through activities and exercises.

Isaac

With financial literacy you can't move on to the next concept without covering the previous one you see.

Isaac shows an understanding of structure and hierarchy. Isaac talked about covering concepts, this is an indication of his understanding of hierarchy. He also mentioned understanding the concepts which also links to his understanding of the structure of accounting.

Nomvula:

I feel like apart from, I don't know like for me once you get those 5 you know assets, owner's equity...

Nomvula believed that learners need to first understand or learn the concepts. Though here she does not specifically mention practising or applying concepts, it is evident that she emphasises the importance of learning concepts.

Courtney:

Taking financial issues that happen in everyday life, so let's say someone who owns a business, financial transactions in their daily life, so they need to put it in books and from there they will need to do the relevant checks which carries on to the trial balance and from there when they draw up their statements they will be able to see how much money they make from it, so profit and loss. If they do it into a bigger business, they will need to attract investors and be able to do their financial statements, then obviously if it's a public company then they must show those to the public.

Courtney understands the subject as something that can be linked to everyday life. Her approach for teaching then uses everyday experiences that learners can relate to.

Brenda:

It is literally a learnt thing. You learn the basics, that this is an asset and this is a liability and this is what it looks like and that's where it goes. It is literally that easy, you put it in there, you put it in there. It's like a shoebox neh. You do not put the pink shoe with the left shoe, it's stupid neh. If you put both pink shoes in the box you know where to get it neh otherwise you screwed aren't you? So this what I try to tell them it's a process but they keep wanting to put the black

and the pink shoe together and they thinking it's gonna be okay but when you in a rush you gonna put both shoes on and you gonna go to church and you gonna look down and you looking funny neh. So this is what they don't get that it's a process and it's not maths.

These teachers saw the process of learning accounting as learning abstract concepts and having an understanding of these abstract concepts. Learning accounting for these teachers is understanding the concept and the meaning behind these concepts before actually practising. It was important to note that the teachers did not make meaning of the concepts in the same way.

Not all the teachers expressed their understanding of how accounting is learnt. Six of the eight teachers responded. Out of the six that responded, two of the teachers thought that in order for learners to learn or have an understanding of the subject they needed to practise the skill, to practise by doing activities before understanding the concepts. Three of the six teachers thought that learners should have a conceptual understanding of the knowledge base of accounting, that they needed to understand what goes on in the practice before being able to practise the skills of the subject. One of the six teachers expressed the view that learners understand or learn accounting by relating it to practical experiences that learners know and are familiar with; in other words, learners gain understanding by drawing from their prior knowledge.

4.4.3 Knowledge of the Curriculum

The curriculum was defined in the literature review as being the range of programs designed for teaching the subject. The teachers' knowledge of the curriculum demonstrates how the teachers think about relaying the knowledge of the subject in relation to the curriculum given. These teachers expressed their knowledge of the curriculum by indicating the amount of time they spend with the content that should be covered, and stating whether the given curriculum provides enough preparation for what is to come in the next Grade.

Nyasha:

It really doesn't. in my opinion, it only helps because I'm not teaching them from debit and credit okay. So, it's a foundation but if a child is not sitting on 80 something percent in EMS financial literacy, Grade 10 accounting is going to be an absolute struggle. Someone in the 50's or 60's will drop right down to 30's or 40's uhm because it goes from us expecting you to just put something on the debit and credit side to us actually expecting you to do an entire paragraph of story sums in one go.

Nyasha's "it really doesn't" was in response to whether or not she thought that the knowledge covered in Grade 9 was enough for the next Grade. She indicated that learners struggle in the next grade due to the fact that the content covered in Grade 9 is not sufficient for Grade 10.

Isaac:

I focus on financial literacy and then from there entrepreneurship. Isn't the CAPS policy mixes them. I don't follow that order, I deal with financial literacy and then later entrepreneurship, that's how I do it.

Isaac does not follow the sequence of the CAPS document as he feels as if it is confusing for learners.

Nomvula:

Yes it sucks [it is very bad] cause they expect you in a week, one lesson is accounting, one lesson is theory, one lesson is accounting and one lesson is theory. I did that in 2016 and within two terms I figured that it wasn't working because if I do general ledger one day and the next day I'm doing uhm business sectors, the kids have forgotten you know.

Nomvula like Isaac finds the move from one learning area to the next without finishing one as unnecessary and does not follow that sequence.

Courtney:

I think time given is too short, I think it's too short in order for the kids to actually grasp everything that they are required to do. Grade 8 and 9 are doing so many

subjects and we only see them four times in a two-week cycle, so four hours every two weeks to cover something like the grade 9 syllabus is difficult sometimes.

Courtney pointed out that the time allocated was not sufficient and she expressed that there is simply too much content to cover in the time allocated.

Beverly:

Grade 9! I can't say that there is anything important because there is certain things I mean, yes before we didn't have to teach certain things like the debtors allowance journal, creditors allowance journal and it gave them more time to learn everything else. Like we don't teach them the income statement cause we don't have time, we don't have time to teach the financial statements or the financial aspect of it so that's why when they get to Grade 10 they are overwhelmed by it. So, I actually think that we should try and see how to actually get to that point where we are doing financial statements.

Beverly does not see the importance of the knowledge taught in Grade 9. She feels as though the time given should be used to teach 'important' concepts.

Zack:

It needs to be broadened up I think. You find that at different schools they try to get away from the rigidity of CAPS because it's so rigid and it's so... and it literally tells you everything and it doesn't give out a better scope.

Zack found the curriculum to be rigid and that the scope that it gives does not allow for flexibility.

Britney:

We only offer accounting in Grade 10 so I don't see why I should spend 50% of my time on something they won't use in the future cause they don't need it here. Also, if they don't have as many problems in other areas, I'd rather spend a lot

of time developing that skill which they have a lot of problems in so I'd rather spend more time in it.

Britney found it pointless to cover some of the accounting knowledge that is not relevant for the learners for the next grade. Her school does not offer business studies and economics and therefore she found it pointless to spend a lot of time on it.

Brenda

Okay... first of all I know they want to bring in history as a core subject. Why? What the hell? Why? Okay that's all I'm gonna say. If we have a 26% unemployment rate in South Africa what in the name of everything that is good and pure is that will that help? We need to bring in skills for our kids. So, make EMS a core subject. Literally make that your core subject or think that make something that is skills based a core subject so that when a child walks out of here they can actually work a computer, good grief.

Brenda found that the content that is specified in the curriculum to be irrelevant. She thought that the curriculum should teach knowledge that is practical and of use for learners later in life.

The above mentioned teachers alluded to how the knowledge covered in the curriculum is not sufficient for Grade 9 learners. Later on it will be explored, how the teachers' views on the knowledge covered influenced their agency with regard to following the curriculum.

All the teachers communicated their thoughts and opinions on the current curriculum document that is prescribed by the department of basic education to use for teaching and learning in all government schools. The teachers expressed their knowledge of the curriculum in various ways. Two of the teachers found the curriculum to be lacking in the content that should be taught in Grade 9 financial literacy. Three of the eight teachers expressed the view that some content is irrelevant for the Grade 9s to learn, either in their school or for all Grade 9s in South Africa. Three other teachers expressed their dislike for the sequence of the knowledge in the curriculum and stated that they did not follow it as given by the government. Their knowledge of the

curriculum also indicated the reasoning behind the teachers' agency which will be explored later.

4.4.4 Progression

Knowledge progression is another theme that surfaced in the data, knowledge progression here refers to the teachers' mentioning of the pace that the knowledge moves from one grade to the other according to the curriculum. The teachers that were interviewed all expressed that the move from one grade to the other was a 'jump', meaning that it is not gradual but rather when learners go to the next grade there are knowledge gaps.

Nyasha:

In EMS we give you all these little short sentences with concise information and don't draw any connections between one sentence and the other and then in Grade 10 all of a sudden we giving you a case study of someone's business and what stock he has and what should be happening and we asking the questions in what looks like a different format. There is no journals being put in front of your face it's just the story, there is no source documents that you can just pick information from. But we still assessing you on that information because of the accumulative content it still will pop in any question at any point in time. In terms of preparation all it does is save us on introducing accounting concepts but it really is only foundation, it doesn't challenge the children much in EMS in terms of comparison to Grade 10. The leap is just too big.

Nyasha found that the progression between grades is "too big" when it comes to the way that information is relayed to learners and what learners have to do. Nyasha identifies the gap at the way that knowledge is taught in Grade 9. She describes the way that knowledge is taught as horizontal. Whereas in Grade 10 learners are expected to understand the knowledge structure as vertical and apply this to the work given.

Nomvula:

The fact that you don't have liabilities in Grade 9 for me is concerning, the fact that you get to Grade 10 okay there are, the foundation should have been laid

already, but the ini? Abo mortgage loans and all these are fixed assets that you find in Grade 10 are not even mentioned in Grade 8 and 9.

Nomvula questioned the content that is taught in Grade 9 and thought that certain knowledge that should have been covered in the grade is not.

Courtney:

So, it takes a lot of rules up, uhm they don't really work with journals too much longer, well not the full journal. So we work with a lot of full journals in Grade 8 and Grade 9 but when you get to Grade 10, we do adapt it so if they are able to do the end of Grade 9 accounting, and they taking Grade 10 accounting it does help them because they should already know how to work out cost price, selling price and we just bringing in discount. So, the only thing that comes to the journals is discount but we do go away from journals completely and go into general journal. So it does fall away but if they understand the process going forward, it does help them. Grade 10 is a big jump after term 1 because the syllabus changes basically.

The 'jump' that Courtney refers to is difference in the content knowledge covered between Grade 9 and Grade 10. In Grade 9 content covered extensively are Cash Journals, in Grade 10 Cash and Credit Journals are also covered in the first term (Department of Basic Education, 2011). The concepts and rules that are taken up in Grade 10 that Courney refers to are not mentioned in Grade 9 and so learners have no prior knowledge of the content.

Beverly:

No! not at all! It's a big jump, cause I taught grade, currently I teach Grade 8 and 9's but I've taught Grade 8; 9; 10; 11 and the jump between from the Grade 9 syllabus to Grade 10 it's a whole different ball game. It's one of the reasons why you get quite, a few learners that will choose accounting as a subject and then when they get to Grade 10 and they experience all this and the overload and then they change the subject. Because they not, we really don't equip them for Grade 10 in Grade 9 and it's a big jump.

Beverly noted that the jump in content taught between grades is extensive and the workload is a lot more than what learners are used to. In her opinion learners are not equipped for the next grade, the knowledge covered in Grade 9 is not sufficient background knowledge that learners need to have in order to be able to cope with the content knowledge covered in Grade 10.

The teachers made mention of their thoughts about the progression of the knowledge taught in Grade 9 to Grade 10. Only four of the eight teachers gave insight about their thoughts to progression and these teachers' stance on progression is surprisingly uniform. All the teachers that gave their view to progression expressed that what is covered in Grade 9 is not enough for the next grade. The teachers expressed that the 'gap'/jump in the content taught between Grade 9 and Grade 10 was big. There were however, differences in what about the content was considered to be a 'jump'. One teacher expressed that the gap is between the way that knowledge is structured from one grade to the other, while the other three teachers saw the gap between the content that is taught and learned in the two grades. This also gave insight to the teachers' knowledge of the curriculum in light of what is to come in the next grade.

4.4.5 Agency

A person who has agency is a person who is able to exercise autonomy, meaning that s/he is able to make decisions and act on those decisions. For this study, teachers' agency was understood as being the teachers' decision making with regard to whether they would follow the curriculum or not. The teachers mentioned whether they either followed or did not follow the CAPS document and gave their reasons for this.

Nyasha:

We will teach the children whatever we have had to come to consensus to as a department, the children have to be assessed. So in my instance if they disagree with me and I'm wrong I have to assume that because there is two of them and they come to the same regards with the same thinking okay, if I'm right and they disagree with me I just pray it doesn't count with the children's assessment.

Nyasha's agency is compromised by working in a department and having to cover content knowledge the same way as her colleagues. If her colleagues do not in agree with her she has no choice but to also do what they are doing.

Beverly:

I follow it, everything. We have to follow it according to what the GDE prescribes we follow everything.

Beverly does not mention why she follows the curriculum document but she points out the she follows it exactly as it is.

Courtney:

So what's happening on a daily basis and then obviously we do take a guideline of the department to cover everything, sometimes you feel like you won't spend as much time on business, which we can do quicker... we are going to do a difficult accounting section. So, we will use an extra lesson on accounting in order for the kids to be able to actually practice it, cause we have a very [limited] time with the kids.

Courtney uses agency when it comes to the time spent on covering knowledge. The department of basic education allocates time in which the knowledge should be covered, Courtney uses her discretion as to how much time she will need to cover content and sometimes will take time from another learning area in order to spend more time on the other.

Brenda:

To the letter! We have to cause we like to use the district papers to test our children and obviously you can't disadvantage your children, so if there is something on the paper that is being asked and your children have not been prepared for it then the onus is on you as a teacher.

Brenda follows the curriculum, as she is aware that her learners write government papers and so to prepare them she covers the curriculum as stipulated by the government.

These teachers follow the CAPS according to what is stated in the curriculum. However, what is interesting is their reasoning for following CAPS. Nyasha and Brenda, for example, follow CAPS because they are aware that their learners are going to write papers (tests and exams) that are set by the government and so they do not want to disadvantage their learners by doing something different. What is interesting though, is that some teachers do give alternatives for their learners, even though they follow CAPS. Nyasha, for example, makes her own worksheet and Courtney uses her own agency when it comes to time allocation.

Britney:

I think I study textbooks, I try to stick closely to those methods cause I'm thinking these methods are tried and tested methods. Then yah every year it changes and every year I improve on how I teach the general ledger because the first time you do it, you realise it doesn't work and then the next time you will get better at it.

Britney uses agency when it comes to her pedagogical practices. She uses resources available to her in order to make decisions of how to teach content knowledge and often reflects and makes decisions on how to improve her pedagogical practices.

Zack:

So we come together as a department and each person has quarterly plans but then you will have someone who is in charge of like a grade so then they will have to make sure that everything not necessarily set up everything but they will be the person sort of accountable for like everything.

Zack stated that what he teaches is what they (his school) have decided as a department. They decide on the approach they are going to take and they all follow that approach in teaching content.

All the teachers had an opinion as to the knowledge covered in the curriculum, however, some teachers used their agency to remedy their concerns with the content knowledge and some teachers had restrictions when it came to exercising their agency. For example, two of the five teachers that said that they follow the curriculum,

do more than what is given; the one teacher supplements teaching time with having extra lessons, while the other creates her own activities in order for her learners to practise doing the activities. Those who did not fully exercise their agency had different reasons for not doing, one of the reasons was that teachers were restricted by their school.

Table 2- Analysis of teachers Subject Matter Knowledge

	Subject Matter Knowledge							
Teachers	Novice Teachers					Veteran Teachers		
Theme	Nyasha	Britney	Isaac	Nomvula	Cortney	Beverly	Zack	Brenda
Structure of Accounting	conventional, structured	contextual, conventions	Structural, conventional, methodic			Contextual, procedural	Structural, contextual,	Conventional,
Conception of subject	Practice subject, skills		Understanding concepts	Learn concepts then apply knowledge	Linked to everyday life	Practice subject, application not learning		Learn basics (conventions) for application
Knowledge of Curriculum	Not enough preparation for the next grade, more content needs to be covered	Skips content that is irrelevant	Does not follow sequence, sequence confusing for learners	Sequence is bad	Time allocation for content is short	Does not see important of knowledge taught in Grade 9	Structure is rigid, wants separation of discipline	Certain content is irrelevant
Progression	Leap too big between grades in the structure of knowledge			Certain concepts should be covered in Grade are not.	There is more content that is covered and the layout of content is different. The jump in content learners have to learn is big.	The jump between content that learners need to know is big and there is a big increase in the workload		
Agency	Covers all content according to CAPS but uses own activities and worksheets	Does not follow curriculum, spends more time on content she feels is important	Does not follow sequence of the curriculum, isolates disciplines and teaches separately	Does not follow sequence of the curriculum, isolates disciplines and teaches separately	Follows curriculum exactly the way it is but supplements teaching with extra lessons	Follows the curriculum exactly the way it is given	Follows plan according to what the school has decided	Follows curriculum as learners write department assessments

4.5 Pedagogical Content knowledge

At its core, pedagogical content knowledge refers to ways of representing the subject knowledge in a way that will be comprehensible to others (Shulman, 1986). There are a number of factors that may influence a teacher's pedagogical reasoning. Reasoning is directly linked to the teacher's decisions about teaching which is pedagogical knowledge. The teachers mentioning of their practices in the classroom as well as how they think transferring knowledge to their learners in the data collected, is understood as a reflection of the teachers' pedagogical content knowledge in this study. The teachers mentioned pedagogical content knowledge in various ways and it was further categorised into sub-themes.

4.5.1 Educational Experience

The teachers' interaction with the subject when they learnt the subject is part of their experience with the subject. The teachers interaction with the subject also gave insight into where the teachers' subject constructs stemmed from. The teachers either had negative or positive experiences in the way that they were taught when they were at school.

Nyasha:

The way I was taught was, I think I only got through to it cause the teacher I got was mean. He used to look at me like I was the slowest person in the room, so it was one of those you had to carry yourself and get it.

Nyasha had a negative experience, she did not like the atmosphere that the teacher created and described her teacher as "mean". Although this did not describe the teachers' teaching abilities, but it did give an idea of the type of environment that was created in that classroom. Nyasha later on describes how she tries her best to make the atmosphere in her classroom to be one where learners are comfortable to ask questions and to share thoughts.

Nomvula:

I think I went through two teachers, the first one was my Grade 10 and 11 teacher. It was a very... he had conversations with the chalk board basically, I don't... interaction between you know us and him was very limited, it was always a matter of, he would read a transaction and he would just fill it out on the board. He did not get into ama-basics and understanding what the account is, increase decrease, ini nani nani... it was just always on the board jah. Then in Grade 12 the lady who taught us was a CAT major so it was one of those things nje ukuthi she was always in a panic. We never knew what was going on and it just never worked out.

Nomvula also had bad experiences, and although her experiences were with two different teachers, the experiences were both bad for different reasons. One being the teachers not interacting with them during the teaching and learning process and the

other being the teacher was under distressed as she felt as though she could not teach the knowledge.

Both negative experiences had to do with the atmosphere created by the teacher through their interactions with the class. These teachers expressed that their experiences of learning accounting were negative due to the atmosphere created by their teachers in the classroom.

Courtney:

It's like the one year I really enjoyed it and the other year I found it to be a lot more difficult. Depending on how they teach it.

Although Courtney did not give a detailed description of her experience, she expressed that her experience of the subject was directly linked to the way in which the teacher was teaching.

Britney:

It was good, I felt prepared.

Britney's good experience came from the feeling that she was being taught well by the teacher.

Zack:

I remember I use to have a very very hot Grade 9 accounting teacher, oh my word you know Olivia Wild... she looks just like her oh my God! I used to... I don't remember business studies though, I know I didn't take it past Grade 9.

Zack linked his experience to the fact that he liked the teacher, but showed no connection to the way that the teacher taught him. Zacks association with the subject is linked to the teacher, when he is asked about how he was taught he made no connection with the subject but rather he remembers his teacher.

These teachers had a positive learning experience and all of them linked this to their teachers. What was interesting is that their experiences were based on different

things. Britney, for example, said that she felt prepared and so her experience was related to how her teacher got her prepared for the next grade. Similarly, Courtney linked her positive experience to how the teacher taught her, and she also mentioned her negative experience which was also directly linked to the teacher that taught her at that time.

What all the teachers had in common was that the way the teachers were taught influences their current teaching practices. What was interesting was that when teachers were asked about their experience of learning accounting, all of the teachers that responded to this question gave responses relating to the way that they were taught by their teachers and the environment that their teachers created in the classroom.

4.5.2 Teachers knowledge of learners

The teachers' knowledge of learners plays a role on how the teacher thinks of teaching her students. This is the teachers' knowledge of the learners that sit in their classroom. This can provide an understanding of how learners learn, or what learners need in order for them to learn concepts that are being taught. From the data, under the code of 'teachers' knowledge of learners' there were two prominent themes that emerged. The one was teachers' understanding of what learners struggle to learn, or to understand, and the other was what teachers thought they needed to do, in order to help learners to learn accounting.

Nyasha:

Yeah the children generally get bored when listening to a lot of talking even when you try to get them to read and get interested, the children who will enjoy it are the ones that are weak in numbers and not the rest. The rest of the students will rather work stuff out. The actual literacy is much more interesting than the theoretical.

Nyasha suggested that in order for learners to learn, the teacher needs to keep them interested in what they are doing in class. She pointed out that in order to keep learners

interested, they need to be active participants of learning through practising the procedures of the practice of accounting.

Nomvula:

In my head I'm like okay these kids have a negative attitude towards numbers altogether. So, we need to sort of make it fun in a way and I feel like what's important for me is laying some kind of foundation, so even before getting to the transactions and all these funny things.

Nomvula described her learners as having a negative attitude towards numbers (accounting), which means that learners have preconceived ideas about the subject before they have actually done it in the classroom. In order to combat that, Nomvula tries to make the subject interesting to her learners, which she does by teaching the concept in a “fun” way.

Britney:

Yeah now, we try to balance out that this is theory lemme show you why and lemme give you notes on this but it's not easy teaching accounting using theory to 15-year olds. They just want to do it. Show them how to do it and that's what they want to do. But I'm trying to incorporate theory into it, and it's very difficult it's like 20% is theory and 80% is doing it. Which I know it's not supposed to be like that but everyone is different and these ones they want the practice they don't want to hear the theory. They want the easiest way to get to this.

Britney explained that there needs to be a balance between giving the learners notes (teaching concepts) and letting the learners ‘do it’ (procedural). Britney captures the learners interested by teaching accounting through procedures and making the subject skills-based.

These teachers’ knowledge of the learners was shared with regard to what they thought they needed to do in order for the learners to gain access to and an understanding of the knowledge of accounting. Their attempts stemmed from what they knew about the learners.

Isaac:

Receipts, source documents. They are easy but they still struggle. Isn't you have to continue from the previous document, but you find them using their own source documents.

Isaac explained that the structure of accounting is cumulative and the learners struggle to see that. The learners do not have an understanding of the knowledge being cumulative and so they struggle with the procedural aspect of the subject.

Courtney:

So a lot of them struggle with the posting from journals to ledgers especially if it's your difficult accounts, like your trading stock account because there are a lot of things coming in from different places or they don't know the rules or they won't go learn the rules. Makes it difficult for them, also sometimes some of them they don't think like that. So, if you don't understand why something goes that side or why it should go to the other side. Also, something they struggle with is the accounting equation also because they don't know their rules, so they not sure which account they should debit and which account they should credit or if its increasing or decreasing.

Courtney explained that her learners struggle from posting from journals to ledgers. This means that the learners do not see the link between the two concepts (ledgers and journals) and therefore struggle to carry out the skill.

Beverly:

We will go through it and I'll walk around and check and then eventually when we marking then they will say, cause then when we mark, ma'am this is easy all the time, then you know this child has got it. Then there is still some people, but then you know what some kids are just not built to do this.

Beverly described the learners who struggle to do the procedure of accounting concepts as "not built to do this" she did not, however, show measures as to what she does to help learners to understand the concepts that they struggle with.

Zack:

Uhm they will first struggle with the basic accounting equation. They still have to learn a lot about what happens.

Zack described his learners as struggling with the basic concepts. Zack described the basic concepts as the understanding of what “goes on”. He stated that learners still have to learn “what happens” but he did not specify how learners will learn this.

Brenda:

For my Grade 9s, and please note they are precious, I think they find thinking very challenging. They're good with the journals, they do the journals quite well, they hated the general ledger, I make them do little tests. What they didn't click is how the accounting equation, general ledger. They take the trial balance lekker, the journals lekker.

Brenda described her learners as being good with one concept and not good with the other. What is interesting here is that these two concepts are interlinked. She does put in measures to try to help her learners understand.

These teachers noticed what learners struggle with when it came to understanding concepts in accounting. What was interesting is that even though both groups of teachers were aware of learners and their learning needs they focused on different aspects.

The teachers' knowledge of the learners provided insight into the teachers' approaches to teaching as well as offering a frame for pedagogical reasoning. What teachers noted about their learners gave them direction as to how to teach their learners the subject.

4.5.3 Knowledge of the curriculum

The knowledge of the curriculum here is in reference to what teachers are expected to teach according to CAPS. This is in light of the sequence and the time frame that the curriculum stipulates. The following teachers expressed their preference based on

their knowledge of what was to come in the next grade. The teachers' preferences focused on the issues of time and sequence.

Zack:

I think I would rather lessen a little bit in Grade 8 and move general ledger and some of the ledgers down and then introduce statements and actually test them on just the basics of statements.

Zack was referring to the sequence of the curriculum, and what he thought the syllabus should cover in Grade 8 and 9. Zack thought that learners should be taught more content in light of the fact that this content was going to be present in the next grade. The content that Zack felt should be covered would give learners a better understanding of what was to follow as well as giving them a sense of 'the bigger picture' compared with the content that is currently covered.

Nomvula:

The fact that you don't have liabilities in Grade 9 for me is concerning.

Nomvula felt that the Grade 9 syllabus could cover more content. She did not state why it was concerning to her that certain knowledge was covered in the grade but expressed a view that it should be. This could be due to the fact that this knowledge is covered in depth in the next grade and maybe covering it in Grade 9 could give learners a foundation for the next grade.

Brenda:

Most of these schools actually teach the economics section, the business studies section and then they teach the accounting section, they teach it in blocks. Because it messes up the kids as well, the kids battle to put the concepts together. I know they set it up like that, it is messy, it's not... mmm it doesn't help them.

Brenda did not agree with the sequence in which the knowledge is provided, as currently the EMS CAPS curriculum covers knowledge from business studies, economics and accounting. According to the way that CAPS has arranged it, knowledge is taught in sections moving from one subject to the next.

The following teachers expressed the view that they either did not follow the sequence that is given in the curriculum, or that they would prefer not to. These views were based on what knowledge needed to be covered for learners, that is not covered in Grade 9.

Isaac:

Isn't they also state how long the lesson must be... it's not enough, it's not enough! Especially if you are dealing with financial literacy we need more than 45 minutes to teach. So, we are only limited to that, it is also makes it difficult to finish the syllabus.

Isaac complained that he did not agree with the time allocated to covering the content. He found it difficult to cover all the knowledge that he was set to cover, according to the annual teaching plan.

Beverly:

So we don't pay enough attention to accounting so the kids, that's why they find it too difficult cause there isn't enough time given to that specific subject as such, so to me I feel they needed to give us enough time cause I mean the other subjects have got the notion time more than two hours, we only get two hours. So, it's not enough, it's really not enough.

According to Beverly, the way that CAPS has allocated time to accounting does not allow learners enough time to learn the concepts. Beverly also pointed out the lower value that is put on the subject, in that the time allocated for teaching and learning is not in the same ratio as other subjects in the curriculum.

Britney:

So, I've changed, in Grade 8 I've changed the sequence and with Grade 8 I've also changed the pace. I mean with both, in Grade 9 I've changed mostly the sequence and we've paced the accounting slower and I've paced the entrepreneurship and economy part faster. So, we have rearranged it and every

year just compare and think about what worked and what didn't work comparing from one year to another. Then I structure the changes.

Britney does not follow the sequence given by the curriculum and has paced her teaching differently. This shows that she does not agree with the time allocation and sequence stated in the document.

These teachers stated that the time allocated to teach and learn content is not sufficient. In order for the teachers to do justice (teach content efficiently and give learners time to understand concepts) they needed more teaching time. Furthermore, learners also needed more time to go over concepts and practise the work.

4.5.4 Pedagogical Reasoning and Choice

Teachers' pedagogical choice refers to the teachers' choices with regard to the decisions that are made to impart knowledge to learners. Because I did not watch the teachers teaching, my understanding about the teachers' practices are instead drawn from the teachers' reflections on their pedagogical reasoning. These provided reflections on how the teachers thought about the decisions they made for teaching. The data collected indicated two divides in the manner that teachers approached the teaching of accounting concepts. In their practice, the first group of teachers approached teaching accounting concepts by first teaching the concepts behind the procedures, and once learners had gained an understanding of the concepts, teachers then moved on to the practical skills.

Nyasha:

I always start by letting the children know of what is going to happen. What is expected and what we covering, what are we going to get out of the content that we are going to cover today. What portion of the content is going to be class work and what portion is going to be expected for you to go home and read up on it so that's how I tackle it. So, I'll introduce if today we are doing credit sales I will use an acronym and I will say something like, credit sales remember the acronym is drag sexy and cape town. Then I'll say to the children now what does that mean? In drag remember that the d-stands for debtors control the s-stands for sales and then cost of sales and trading stock. Now

what do you know? Drag and sexy is debit and cape town is credit that kind of thing and then I use those techniques. Unfortunately, it is a banking system but with any new concept you just have to fill them with banking system techniques. Once they have memorised it they can start to understand it, because without them committing it to memory the rote learning way then they won't be able to practise. Once they have practised then they start to understand that this is why I have been doing this with accounting. It's not something where, initially when I first started teaching it I would try and explain the why and then go into the technique, now I've learned that teach them the methodology and then go back to them and say now you understand why we did it and then explain why you did it and then they will understand why we did it. And understand what's happening. And then when they start practising the examples now, I also believe in letting them be and let them make mistakes. So, I do only a few examples and then let them do.

Nyasha explained that she first teaches the learners the concepts before moving on to the practice. Although she describes it as a banking system where learners learn the rules and once they have 'memorised' the concepts, she then teaches the learners the practical skill of the concept.

Brenda:

Well uhm for the Grade 9's specifically, it would be as we explain they do an example as we uhm revision, just practise you know they have to do it they have to practise. So what we do is we give them examples say two or three examples, the one they do in class and what I actually like to do is, I don't know if other people like doing it, but I do this, but I give them an example in class they start the example in class but they have to finish it, but then the other example at least one or two other examples I give them the memo. Cause here the thing you can go home and do it, and get it all wrong, what did you learn?

Brenda first explains the concept and then does the procedure. She moves from concept to procedure; even though she does this immediately, her approach is to first explain the concept. Though she did not mention whether she moves on to the

procedure after learners have understood, it is evident that this has an impact on whether she thinks her learners struggle with concepts or not.

Nomvula:

So, we need to sort of make it fun in a way and I feel like what's important for me is laying some kind of foundation, so even before getting to the transactions and all these funny things. How to enter maybe first with a skeleton of iCRJ or iCPJ look at the columns analyse the columns, okay this is doc column what is doc, this is a day column why, what are the details that you put nani nani? Do that then obviously with transactions before you even nje... jah

Nomvula stated that the most important thing in her practice of teaching accounting concepts is in “laying some kind of foundation”, which to her, is getting the learners to understand the concepts before doing the procedure. This linked to her understanding of the structure of accounting. In the next chapter, what this meant for Nomvula's construct of the subject and how it linked to her practice will be examined.

Courtney:

So they first need to understand the basic accounting concepts, cause if they don't understand the basic accounting concepts of let's say how you classify an asset, then they will not understand the logic or sequence of how you take it from journals to ledgers and why it goes to a certain statement or anything like that. So, I say it all starts in Grade 8 and it needs to build, it's like maths, if you lose a part then you have lost it.

Courtney asserted that learners need to have a basic concept of accounting before they can practise it. She starts by explaining concepts, for example, assets, as this has implications of how learners will understand the skill of the procedure when doing activities.

Zack:

I always go the T uhm get them to understand what the T is about. I use the story of the teacher that we were like talking about, that used to teach me accounting in Grade 10 about debit and credit. How debit is on the left side and

credit is on the right-hand side. How it plays so you break it down to all those. So, the biggest struggle is those accounts, so you will get them assets; owners' equity; liabilities; income and expenses as the big five.

Zack draws on the analogy that he was taught in school, in order to teach accounting to his learners. This analogy gives an explanation of what the concepts are and how these concepts work in the procedural aspect of accounting. He moves from conceptual to procedural.

Beverly:

I say to my Grade 8's, the first thing from the beginning, the first thing I did with them was I gave them the classifications of accounts and I said you need to learn this I said this I can't teach you, this you need to learn. Then okay some of them learn and some of them didn't and as time went on and time went on, now they're realising why they had to learn the classifications of accounts. So even when I'm doing the accounting equation, when I do the account debit and the account credit like for instance if we going to do say, capital, I always give them capital. So, it's going to be bank debit and credit capital. Then they need to say, bank is an asset and they need to put an A there so that they can memorise. Next to capital they will put owners' equity so an O. Cause then I show them that it actually helps with the actual accounting equation the A, $A = OE + L$.

Beverly uses the banking system for learners to learn the concepts that underpin the procedures of accounting. Even though she did not specifically refer to teaching the learners meaning and the relevance of the concepts, she does give it to them to learn before doing the procedure.

These teachers start with teaching the concept and then move on to the procedure. They believe that learners need to know what the concepts are in order to carry out the skill successfully.

Britney:

Yeah, we do a lot of practice I'd say 80% of the time I'm teaching accounting I'd teach ledgers you know, and there isn't a lot of materials there for Grade 9

ledgers. And if you go to department workshops there are people who train for CAPS teaching it's like most of it is not useful information. I'm not teaching it that way 'cause it doesn't work, I know why I don't teach certain things 'cause they don't work and kids are specific, every class is different. Some class you show them once and they get it forever, some classes I have to do it with them every single lesson and your methods of how you teach changes. If you're teaching four Grade 9 classes they all have different personalities they all have different problems in areas in the class. So how I teach in a class changes, some classes they need me to uhm, I say this is what it says in the textbook, they know instantly what they need to do, some classes need me to write it on the white board and go through every single thing, some the white board is just too much information at the same time, so I have to do it on the white board step by step every transaction by transaction. It depends on the class and what kind of kids they are in that class, so every single lesson is different.

Britney expressed that not all learners are the same and so the approach to teaching should never be the same. She pointed out though, that she sometimes needs to do things step by step for her learners ("transaction by transaction"), which indicates that the teacher is doing the procedure and teaching the concepts through doing the procedure.

Isaac:

First thing I do is I project the accounting cycle, to show them where they are. Then from there open all the accounts as introduced when we were doing the T accounts, 'cause remember before you do the general ledger you need to do the T accounts. So, I carry on from the T accounts and these are the books that I use. So, they simply draw the T accounts and transfer the information to the actual double ledger.

Isaac teaches the concepts of accounting by showing the learners where they are, this is to show the learners the sequence of the structure that they are following in order to cover the procedure of accounting. Isaac teaches accounting knowledge by doing the procedures and through that also teaching what the procedure means and this covers the conceptual part of accounting.

These teachers' process, or order of teaching accounting, moves from procedural to conceptual, which means that they teach the skill of the practice and later move onto what the skill or process means. Learners learn how to do the practice (procedural) and later learn what it means (conceptual).

What teachers had in common here was that their teaching choices were based on their experiences and on what they thought learners should learn. The knowledge of accounting is both procedural and conceptual, teachers' approaches to teaching differed in terms of what they thought they needed learners to know or understand first. Two of the eight teachers expressed that they taught the procedure in order to get the learners to understand the concepts. Six of the eight teachers stated that they teach the concept and then let learners do the procedure when they have a basic understanding of what the procedure is.

Table 3- Analysis of teachers' Pedagogical Content Knowledge

	Pedagogical Content Knowledge							
Teacher	Novice Teachers					Veteran Teachers		
Theme	Nyasha	Britney	Isaac	Nomvula	Courtney	Beverly	Zack	Brenda
Education Experience	Negative experience, due to atmosphere created by teacher	Positive experience, teacher made her feel prepared		Negative experience, due to teachers teaching			Positive experience, liked the teacher	
Knowledge of learners	Keep learners interested	Keep learners interested	Learners struggle	Keep learners interested	Learners struggle	Learners struggle	Learners struggle	Learners struggle
Knowledge of curriculum		She does not follow sequence	Can't cover all the specified content due to time allocated	There is room to teach more		Time allocated to content is not enough	More content should be covered to give learners understanding	
Pedagogical Choice	Conceptual-procedural	Procedural-conceptual	Procedural-conceptual	Conceptual-procedural	Conceptual-procedural	Conceptual-procedural	Conceptual-procedural	Conceptual-procedural

Teachers were unanimous in their positive views of the learning area and its benefits for learners. They had opinions about how the learning area should be structured differently in order for learners to gain optimal benefit from it. When asked about how learners experienced the learning area and which aspects they enjoyed, most of the

teachers were of the opinion that learners enjoyed the accounting aspects within the learning area more than the other focus areas. What also came through during the interviews were that learners enjoyed the sections of work that teachers were confident in and what the teachers enjoyed teaching. Although all teachers had serious challenges in delivering EMS effectively, they were hopeful that should it be structured differently they would be able to teach it more effectively.

Chapter 5

Discussion of Findings

5.1 Introduction

The following chapter is a discussion of the findings of the study. The study explored how teachers' construct of the subject of accounting influenced their pedagogical reasoning. An analysis was conducted on the teachers' construct of the subject as well as their conception of the subject, and also looked at their practices. The analysis was conducted in order to answer the questions that the study posed.

5.2 Questions posed by the study

The main research question was:

How do teachers' constructs of accounting inform their pedagogical reasoning when teaching financial literacy?

- What are teachers' constructs of accounting?
- How has their interaction with accounting shaped their construct of financial literacy?
- What are their orientations of teaching financial literacy?

5.3 Summary of Analysis

The summary of the analysis is based on the themes that were prominent in the study. In the analysis it was evident that the teachers' subject matter knowledge has an influence in the teachers' pedagogical content knowledge. The findings showed that all the teachers showed adequate content knowledge, pedagogical content knowledge and varying degrees of topic specific pedagogical content knowledge. The assumption in this research is that these teachers have developed an understanding of the school content their learners need, hence understanding the use of topic specific pedagogical knowledge base cannot form the focus of their instruction. Based on this finding it is important that teachers, both novice and veteran, should model the use of TS-PCK in teaching to support their learners understanding.

5.3.1 Structure of Accounting

Earlier in the study it was pointed out that the structure of financial knowledge is vertical and that accounting knowledge is both conceptual and procedural (Garg, 2010). The vertical knowledge structure of accounting means that the procedures of the practice of accounting are linked to other procedures hierarchically. The procedural and conceptual knowledge means that there are procedures that are followed in the process of practising accounting, and the conceptual knowledge means that there is an understanding about concepts in order to solve problems.

Teachers gave responses on how they viewed the structure of accounting. The manner in which teachers viewed the structure of accounting gave a frame of reference to the manner in which they approached teaching, and the way that they think about transmitting knowledge to learners. In the analysis it was noted that three of the teachers who viewed the structure of accounting as being conventional, teach accounting concepts through practice. The conventional understanding of a discipline is the understanding of the rules, codes, or style that a discipline uses for expression and which govern the way that particular interactions function in order to express themselves. In order for a person to apply the rules and codes of convention, the person needs to be familiar with them (Thompson, 1990). These teachers believed that in order for learners to have an understanding of the discipline, they needed to practise using the signs and symbols that govern the discipline.

Two of the three teachers viewed accounting structurally; that is to say that they viewed accounting as a discipline with signs that have an intended meaning. In other words, that everything that is done is done systematically and with intent. The two teachers' approaches to teaching were by first teaching the learners the concepts, which form the knowledge base of the practices that are carried out in the procedure of accounting. The teachers believed that learners needed to have a basic understanding of what they are doing in order for them carry out the procedures successfully.

5.3.2 Conception of subject

The teachers' conception of the subject is the teachers' understanding of financial literacy, which is taught under the umbrella of EMS. This is an important factor for this study as what teachers think of the subject affects their pedagogical practice (Ball, 1988). There are a number of factors that indicated the teachers' conception of the subject. One of these was the teachers' experiences with the interaction with the subject, which also gave insight into teachers' knowledge of the learners.

The way that teachers were taught gave an understanding of their first encounter with the discipline of accounting, and how their knowledge base for the subject was first formed (Morrow, 2007). It was interesting to note that the five teachers that gave an encounter of their educational experiences of accounting, in all five cases, they indicated that their encounters were directly linked to their teachers. Two of the five teachers stated that they had had negative experiences with their interaction with accounting in high school due to their teachers. What was interesting is that these teachers' knowledge of learners is similar. Both the teachers believed that it was up to them to keep their learners interested in the subject, and to ensure that learners are interested in what they are doing, by presenting accounting knowledge in a way that is engaging for the learners that sit in their classrooms.

The other three teachers described a positive experience of learning accounting, which was also due to the atmosphere that was created by their teachers. Two of the three teachers expressed their understanding of learners by responding to the instances where learners would struggle. The teachers were aware of the learners' struggles and pitched their teaching so that learners could come to an understanding of these difficult concepts. With all of the teachers who expressed their knowledge of the learners, their knowledge of their learners was related to how they could best help the learner come to an understanding of the content that is taught in their subject.

5.3.3 Knowledge of the curriculum

Curriculum knowledge refers to the teachers' awareness of instructional materials, teaching procedures, and learning objectives (Moodley, 2013). In government schools in South Africa, the curriculum policy statement (CAPS) stipulates what instructional materials, teaching procedures, and learning objectives teachers should adhere to in the process of teaching and learning. The teachers' knowledge of accounting here, therefore, is the teachers understanding of the stipulations that the policy document sets out, and their interaction with the policy document in order to carry out teaching.

The teachers communicated their understanding about the progression of knowledge from Grade 9 to Grade 10 as being a "big jump". This was because teachers had an understanding of what the learners were going to encounter in the coming grade. Three of the teachers stated that they did not follow the sequence of the CAPS document because of the way that the document moves from one topic to the next.

5.4 Answering the Questions

The analysis was used to answer the questions that were posed by the study. One of the questions that was posed by the study is a sub-question from the big question of the study and this is: what are the teachers' constructs of the subject? This question was answered through a combination of the literature review and the findings from the interviews that emerged in the data analysis

From the literature, it is clear that teacher' constructs of the subject is what the teachers' understanding and beliefs about the subject are. The data analysis showed that there were various factors that contributed to the beliefs that are held by teachers about the subject they teach. Teachers' beliefs about the subject are influenced mainly by the teachers' educational experiences, and the teachers' knowledge of the curriculum also plays a role in their beliefs and the value they place in the subject. This provided an understanding of what teachers thought about the subject of accounting. Teachers placed value on what they thought should or should not be covered in the grades that they teach, according to what they thought was the structure of the discipline.

Teachers make decisions on how and what to teach based on their conception of the subject. Teachers also use their pedagogical knowledge in order to make decisions on what to add or take away from the curriculum, based on what they deem valuable for the learners. Teachers' knowledge of the learners is coupled with what learners need in order to help them learn the knowledge and the content being covered, as well as an anticipation of what is going to come next.

Teachers base their methods of teaching financial literacy according to their conception of the subject. There was a link between the teachers' understanding of the subject and the way that they teach or make decisions on how to teach the subject. Decisions that teachers make for teaching or transmitting knowledge is, as noted earlier in the literature review, made up of a cocktail of teachers' knowledge of the learners, knowledge of the curriculum, and the teachers' subject matter knowledge. What was interesting is that what can be added to this cocktail, is the teachers' construct of the subject.

5.5 Recommendations

The recommendations for the study is a call to those who research accounting education to consider studying classroom practices that concern teaching and learning. There is a great need to explore what is happening in the classroom environment in order for policy developers as well as teachers to make informed decisions on the knowledge that is taught to learners, and how that knowledge is taught by the teachers. At present, there are major concerns about the status of accounting education in the country. These concerns can only be addressed and investigated properly, once this topic is the subject of further academic research.

The findings of this study indicate that teachers' constructs have an impact on teachers' pedagogical reasoning and practice. In addition, the findings reveal the teachers' dissatisfaction with the planning of the policy document with regard to accounting. The teachers' dissatisfaction can be addressed firstly, by either offering teachers training on subject matter knowledge of accounting, to ensure that all government teachers have interacted with the knowledge of accounting in the same or similar manner. Secondly, it can be addressed by offering teacher training for the implementation of

the current CAPS document. If the policy document is to stay the same, then all teachers need to have a common understanding of the purpose and the objectives set by the policy document. There are teachers who currently do not adhere to the policy's structure when it comes to the sequence and content coverage, which could pose a problem for learners who may move from one school to another. The recommendation put forward by this research report is that there needs to be a greater emphasis on the development of teachers' understanding and knowledge bases for the subject that they teach, as well as the development of strategies to navigate the policy document in such a way that all the teachers would see its relevance and importance.

5.6 Limitations

The study certainly has limitations. It is limited in that one of the instruments that were intended to be used to collect data, namely the concept maps, were not in fact used. Had this not been the case, these instruments might have provided more depth in terms of the evidence used to justify the claims of the teachers made in the study. The data collection process also did not make use of lesson observations. The possibility of gathering data through observing teachers' pedagogical practices would have given the study more richness in terms of actually being able to observe that which is done in the classroom and that which is said to be done in the classroom, which could have helped to broaden the scope of the study. Nevertheless, the current analysis of the data that was found, does justify the main findings of the study as the eight interviews provided rich data for the study.

The results of this research point to the need for teacher education program in South Africa to integrate the use of TS-PCK as one of the instructional practices to improve. Teachers need to be given challenging topics, to help them interrogate their understanding of the core financial and economic concepts they teach and to understand how their topic specific knowledge informs their teaching.

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Appendix 1: Interview Schedule

1. How long have you been teaching for? Probe- what grades have you taught and teach currently?
2. How long have you been teaching EMS for?
3. Did you study to teach EMS? Probe-What was your major?
4. Do you have any experience outside teaching? Probe- in which field do you have experience in?
5. Did you do EMS at school or accounting in high school? Probe- how would you describe the way accounting was taught to you? Probe- did you like or enjoy the way that you were taught?
6. Does your school use the CAPs document? Probe-how closely do they follow it?
7. Do you set your own year or term plan? Probe- how closely do you follow the CAPs document when you set or make your term or year plan?
8. Do you understand the structure of CAPS and does it make sense to you? Probe- do you agree on the topic sequence, pace and content?
9. In a few words could you please describe your understanding of Financial Literacy. Probe- do you enjoy teaching Financial literacy? Probe- which topic in particular do you enjoy/ not enjoy?
10. Which section of the EMS curriculum in general do you enjoy the most? Probe- why do you particularly enjoy that topic?
11. What do you find to be challenging in teaching Financial Literacy to the Grade 9's? Probe- how do you go about in getting around this/these challenges?
12. What do you think are the most important concepts in Grade 9 Financial Literacy? Probe- why do you think those are important concept for Grade 9's to learn?
13. How in your opinion does Financial Literacy prepare learners for Grade 10? Probe- do you think that learners are well prepared for the next Grade with the knowledge they get in Grade 9 Financial Literacy?
14. How do you go about in introducing the General Ledger to the Grade 9's? Probe- do you use lesson plans?
15. Could you please draw me a diagram of the knowledge needed for the General Ledger and the knowledge that comes after. Probe- What prior knowledge do learners need in order to be able to learn, what comes after the general ledger?
16. What informs the way you teach the General Ledger?
17. What have you found that learners struggle with in this section? Probes- what do you think is the main thing that's causes learners to struggle with this section?
18. How do you deal with learners misconceptions and misunderstanding in the classroom?
19. What do you recognize as learner understanding in the section of the General Ledger? Probe- how do you know that learners now understand the general ledger?
20. Do you think it is important for learners to be learning accounting in high school?

Probe- either than career purposes, is it beneficial for learners to do accounting?
21. What skills do learners gain from doing Financial Literacy? Probe- do you think these skills useful in everyday life outside the school environment?
22. Have the multiple curriculum reforms influenced the content that is in EMS/Accounting curriculum today? Probe-how?

Appendix 2: Permission letter to the principle

LETTER TO THE PRINCIPAL

DATE: 22 November 2018

Dear Sir/Ma'am

Permission to interview a Grade 9 EMS teacher in your school

My name is Siphesihle Dlamini. I am a Master's student at the School of Education at the University of the Witwatersrand.

My research focuses on the Financial Literacy section of the Grade 9 EMS curriculum. Given that EMS is a learning area comprised of several disciplines, I am interested in exploring how a small sample of Grade 9 EMS teachers work with the conceptual systems of accounting concepts and practices that underpin financial literacy. I would like to explore the ideas, values and thinking that come into play when teachers make choices about how they teach financial literacy to their learners, and why they intend to approach it in this manner. In other words, I am interested in the teachers' pedagogical reasoning behind their planning for teaching financial literacy in the Grade 9 EMS curriculum.

The reason why I have chosen your school is because of the excellent reputation of your school and teachers. In addition, your school currently produces good results in Accounting and this suggests that interviewing a Grade 9 EMS teacher at your school will provide insight into pedagogical reasoning that leads to good practice. This will help in generating data that is in accordance with my study.

I would therefore like permission to interview a teacher in your school who teaches Grade 9 EMS, in order to better understand their pedagogical reasoning for teaching financial literacy in Grade 9.

The research participant will not be advantaged or disadvantaged in any way. The participant will be reassured that he/she can withdraw his/her participation at any time during this project, without any penalty. There are no foreseeable risks in participating in this study. The participants will not be paid for this study.

The name of the research participant and identity of the school will be kept confidential at all times and in all academic writing about the study. The school and participant's individual privacy will be maintained in all published and written data resulting from the study.

Research data will be kept in a secure location on the campus of Wits School of Education. All research data will be destroyed between 3-5 years after completion of the project.

If you agree to participate, an interview will be arranged with the teacher at the teacher's convenience. The interview will be conducted in a private area where the teacher can feel assured of confidentiality. The interview will take about 45 minutes. The teacher will be asked for consent for the interview to be audiotaped. The audiotape will be used to capture trustworthy and accurate transcriptions and will not be used for any other purposes.

Please contact me if you require any further information. I look forward to your response as soon as is convenient.

Yours sincerely
Siphesihle Dlamini
101 Preller Drive Roosevelt Park Randburg
spshesihledlamini4@gmail.com
078 226 6321

Appendix 3: Clearance letter from the university

Wits School of Education



27 St Andrews Road, Parktown, Johannesburg, 2193 Private Bag 3, Wits 2050, South Africa. Tel: +27 11 717-3064 Fax: +27 11 717-3100 E-mail: enquiries@educ.wits.ac.za Website: www.wits.ac.za

07 May 2018

Student number: 602024

Dear Siphesihle Dlamini

Application for ethics clearance: Master of Education

Thank you very much for your ethics application. The Ethics Committee in Education of the Faculty of Humanities, acting on behalf of the Senate, has considered your application for ethics clearance for your proposal entitled:

Teachers' content knowledge in accounting: a study of Grade 9 teachers' pedagogical reasoning

The committee recently met and the reviewers would like you to address the points outlined below before clearance can be granted. When you resubmit this application, you need to make sure that the reviewer can easily see how you have addressed the concerns and comments. You can do this by highlighting the changes, or using track changes, or recording your edits in a table form.

You need a protocol number and clearance in order to proceed with your research project, so please resubmit the entire application to me as soon as possible.

The following comments were made:

- You state that the research will be carried out in both state and private schools but in the objectives of your research you indicate teachers "who teach at government schools". This is repeated later in your proposal where you indicate that your research sample will be "grade 9 teachers who teach EMS ... in government schools". Are you going to be using private schools as well?
- You also appear to be unclear about the number of participants for your research. First, as indicated above you say that there will be 9 participants but later when you talk about confidentiality you state "There are four participants . . ." What is the exact number of participants you intend to select for your research?
- The GDE form attached has not been completed.

Please note that correct applications are a collaborative effort between you and your supervisor, but if the comments below are not clear, please visit (with your supervisor) the Chair of the Ethics Committee, Dr Paul Goldschagg. If need be, please e-mail him: Paul.Goldschagg@wits.ac.za to set up an appointment.

Appendix 4: Transcript on interview

Zack

How long have you been teaching for?
This is my fifth year
Which Grades have you been teaching?
8, 9 and 10
How long have you been teaching EMS for?
The same period...
Five years?
Yah!
And what do you teach the Grade 10's?
Grade 10's... Business
Did you study to teach EMS?
Yah so I did Bcom and then I did a PGCE and then I did Economics and Business Management.
Bcom?
Entrepreneurial Management, then I did PGCE with uhm accounting, sorry not accounting, economics and business management
Do you have any experience outside teaching?
Corporate? No! I only have coaching experience.
Only coaching?
Yeah
So what do you coach?
Rawing, I've been in MIC for two clubs which is like person in charge of the sport uhm and the rest is just coaching yeah
Did you do EMS or accounting in high school?
Christ that was such a long time ago...
How long ago?
Two weeks ago was my tenth year reunion... laughs. I remember I use to have a very very hot Grade 9 accounting teacher, oh my word you know Olivier Wild... she looks just like her oh my God! I use to... I don't remember business studies though, I know I didn't take it past Grade 9. I only did accounting I didn't do business in high school.
So you took accounting from Grade 10 up until Matric?
Yah I took accounting but I still wanna go back and figure out why did I take science and biology
Cause you don't use it now?
Yeah I wanted to be a doctor but then obviously I saw flames...
Did you like the way you were taught accounting?
Of course I did!
Was it the hot teacher?
Yeah (laughs) but then my Grade 10 teacher was this other gentleman who came from Grahamstown and he was an old man. And jah his analogies and stories were quite cool so jah I did enjoy it. But then it got real in Grade 12 jah I saw

flames. Income Statement, Cash Flow statement man sorry! The Cash Flow Statement! Mother of all things!!!
Was it the same person who taught you?
No it wasn't but I can't even remember!
Does the school that you teach in right now use CAPS?
Yeah
How closely do you think you guys follow it?
To the T. yah
So everything the time line?
Everything yes like the requirements for the assessments we all do according to that across the board. Which I think is...
Okay so you don't like it very much?
No!
Do you do your own term plan or year plan?
So we come together as a department and each person has quarterly plans but then you will have someone who is in charge of like a grade so then they will have to make sure that everything not necessarily set up everything but they will be the person sort of accountable for like everything.
So you guys team teach?
What you mean team teach?
So like having more than one person teaching a particular grade.
Oh jah, jah
So are there any other resources besides the CAPS that you use in your teaching?
We do have like random worksheets flying around and we have started to like create a data base of of... its more now for the Grade 11's and 12's, creating a data base of past papers and extra materials from other schools but at the moment for Grade 8 and 9 we just literally using the book.
So you have told me what you think about CAPS I think...
Jah okay... its uhm... jah it is what it is.
Okay...
It needs to be broaden up I think. You find that at different schools they try to get away from the rigidity of CAPS because its so rigid and its so... and it literally tells you everything and it doesn't give out a better scope. So when kids get to, especially Grade 9, the gap between Grade 9 and 10 in both accounting and business is so huge, you know what I mean and CAPS doesn't allow for that gap to be bridged and other schools have separated accounting and business studies you know just to make sure that they grow the subject before the kids make a choice. So that the kids know that this is accounting and this is business studies so that when they see that when they see that mark EMS and they decide okay I'm going to accounting or taking business studies and all of that falls under that umbrella that's when you see that oooh that this is matata's.
So when you were in school, 10 years ago... okay lets say 14 cause that's when you were in Grade 9.
Do we really have to go there?
No I'm trying to make you look back. So when you were in Grade 9, EMS as subject, was the accounting component called financial literacy?
No it was still called accounting because I matriculated in 2008 and it was during that transition of, from OBE and the old system... and it was the introduction. So

we were sort of the guinea pigs of the OBE systems which later turned into CAPS so I don't think as far as I can remember that we had EMS as an umbrella and the financial literacy as an umbrella cause...
Do you think you did it separately?
Yeah
Which section in EMS do you enjoy the most?
I like entrepreneurship... are we talking Grade 8 or 9?
Both
Okay. Yesi Grade 8 is struggle hey it's a big jump there, big gap
From Grade 8 to 9?
No from Grade 7 to 8 they struggle a lot. So for them I enjoy teaching I think it is Markets, no introductory to forms of ownership. Yes that's quite nice cause then you get the attention when you bring in the different companies and you make it more tangible. Then the general ledger, they struggle with it but I enjoy teaching it. In Grade 9 it will be the business plan and entrepreneurship. The qualities of an entrepreneur and it would be the debtors ledger, the creditors ledger, debtors and creditors allowance...
Those you like?
Yes those I like, its nice when you teach them about how they return staff and when they buy on credit etc.
In Grade 9 which section do you think they struggle with the most?
What is this again now... economic systems
Is it?
Yah cause its just such a lot of work and its such a lot of study they really really struggle.
How would you in a nutshell describe what accounting is?
What accounting is? Jeeez I never thought of it! Its definitely not a process of calculating the profitability of a business. I think it for me rests on the accounting equation when you trying to make sure that your company stays afloat and it is viable.
What do you think are the most important concepts in Grade 9? So what do you think is the most thing that the Grade 9's have to learn in order to help them with Grade 10, in financial literacy?
The whole thing is, I haven't taught financial literacy in Grade 10 but I've been exposed and I try to look at what happens in Grade 10. I think they need to spend a lot of time with the financial statements, we don't give a lot of time. We go a lot into the ledgers but we don't give a lot of time to or introductory time to the statements and when they get into the statements in Grade 10 it is a big big shock and remember that the statements have their notes as well and it's a really big thing. I think I would rather lessen a little bit in Grade 8 and move general ledger and some of the ledgers down and then introduce statements and actually test them on just the basics of statements.
Is financial literacy prepare learners for Grade 10?
At the moment just looking at CAPS Oxford of Successful, Oxford whatever, no
You think we could do more?
Jah we could do more, yes they would get more lessons in terms of the ratios that are broken up and in terms of the work that is asked within final paper, cause its kind of like 55 or 60/ 40 and yesi it gives them more weight in terms of content its jah..

Your Grade 9's, how do you go about introducing the general ledger?
I always go the T uhm get them to understand what the T is about. I use the story of the teacher that we were like talking about, that use to teach me accounting in Grade 10 about debit and credit. How debit is on the left side and credit is on the right hand side. How it plays so you break it down to all those. So the biggest struggle is those accounts, so you will get them assets; owners equity; liabilities; income and expenses as the big five. I call them the big five, you need to hammer into them that these are the big five and then the next thing you will hammer is which one falls into that family of the big five. You know once you get those big five and you show them how they behave, you know so assets will increase on the debit side and decrease on the credit side, so now every other asset will do the same thing. That's the big thing, to get them to understand those big five and get them to learn and understand the T account and then you introduce accounts. Once you introduce accounts they have to, they take a long time to find reference and identify them as easily as possible, then the next step would be to get them to understand and to identify those accounts so you give them a table where to just put all the random accounts and get them to name them. Do you know what I mean? You put bank and what stationery and what is material cost etc. I think that's where you first now, the biggest war that you win and then the next thing that is quit challenging is the contra accounts.
What have you found that learners struggle with?
Uhm they will first struggle with the basic accounting equation. They still have to learn a lot about what happens. Once you get the basic accounting equation whacks and once they understand the effects and reasons and first of all why everything needs to balance then the next ones are relatively easy here. Cause all they doing is taking information from there and then the most crucial is how you debit and credit and you have already sorted the contra account so
So after teaching the general ledger, what comes next?
Then you will go into the other ledgers. The debtors ledger, debtors allowance, creditors ledger, creditors allowances and then you will start to move into the statements. Then obviously the first one will be income statements which is relatively easy, you just take whatever is in the general ledger and you consolidate it with that.
How do you know that this learner has got it or has understood? How do you recognized learners understanding?
The only way that you recognize that they learning or understand properly is when you test, how I go about it is that I go through the class you know what I mean. So each person will say something, cause there is so much content here so I'll go through each person okay I'll read the transaction and so I have my steps. I call them my three handy andy steps. First thing which account is involved, second what type of account is it and third thing is it increasing or decreasing? Each kid will say these are the two accounts involved, these are the type of accounts and then its increase or decrease and then you will break each one of these to each kid and you will relatively quicker because of this.