The development of self-regulated learning by selected secondary school teachers in KwaZulu-Natal

V.RAGVAN



orcid.org/0000-0003-3833-8114

Dissertation accepted in fulfillment of the requirements for the degree *Masters of Education* in *Curriculum Studies* at the North-West University

Supervisor: Prof B Geduld

Co-supervisor: Dr B Bunt

Graduation ceremony: May 2022

Student Number: 28499212

NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
UNIBESITI YA BOKONE-BOPHIRIMA

DECLARATION

I Vanishree Ragvan (28499212), the undersigned, do hereby declare that the content of this dissertation is my original work and has not been previously submitted or attempted to be submitted to any institution for assessment purposes.

Further, I have acknowledged all sources used and have cited these in the reference section.



SIGNED BY: VANISHREE RAGVAN DATE: 29 NOVEMBER 2021

ACKNOWLEDGEMENTS

This research emanates from my passion to expand my knowledge. As a teacher, I have always been determined to learn, which has led me to further my studies in Education. This journey has certainly been a test of endurance and resilience. I express my gratitude and appreciation to the people who have played a crucial part in teaching, guiding, and supporting me throughout this endeavour.

I am grateful to my parents and my sister Desiree, who have always been supportive and ensured that I have all I need throughout my studies. To my daughter, Novika, you are my pillar of strength. This journey was a challenge, but you have been my motivation each day. To my nephew, Dhruv, and nieces Amelia and Ariska, remember to always stay optimistic and work towards achieving your goals.

I would like to thank my supervisor, Professor Bernadette Geduld, for her guidance and encouragement. I also wish to convey my appreciation to Dr. Byron Bunt for all his assistance throughout this journey. I am thankful to North West University for providing me with the opportunity to further my studies. I convey my gratitude to my language editor Dr. J. Sibanda for his assistance. I would like to thank the participants of my study for all their assistance. I will be forever grateful.

ABSTRACT

The province of KwaZulu- Natal (KZN) South Africa exhibits a myriad of cultural and contextual factors that impact the learning abilities and academic performance of learners in KZN schools. The National Senior Certificate (NSC) examination results indicate that KZN is among the underperforming provinces in South Africa. The study explored how quintile 4 and 5 secondary school teachers' self-directed learning (SDL) influenced the development of self-regulated learning (SRL) in their learners. The purpose was to gain an understanding of the factors that contribute to the poor performance of some schools in the KZN province.

The study was underpinned by the Social Cognitive Theory as the theoretical framework that explained the influence of behavioural, personal, and environmental determinants on learners' self-regulated learning development. The study applied two theoretical frameworks in order to conceptualise how secondary school teachers developed self-regulated learning, (or not), by modelling their self-directed learning.

The worldview underpinning the study was the interpretivist paradigm, deemed suitable for gaining an understanding of how teachers make meaning of self-regulated learning and self-directed learning situations. The qualitative approach was used. The design used was the explorative case study, consistent with the explorative nature of this study, seeking to learn from the pedagogical experiences and expertise of the study's participants. Data collection was through paper-based open-ended questionnaires and two telephonic interviews. The two sampling methods used in the study were purposive and convenience sampling. Secondary school teachers were purposively selected on account of having knowledge about themselves, their perceptions, beliefs, and experiences, pertaining to their self-directed learning, and how their self-directed learning enabled them to develop self-regulated learning skills in their learners. Convenience sampling was used to select the participants in close proximity for easy access. Research sites were four secondary schools in the iLembe district of the KZN province (three quintile 4 schools and one quintile 5 school).

A key finding was that when teachers are aware of the roles they play in the development of self-regulated learning skills among their learners, they become more confident in developing the same among their learners. However, some teachers' lacked the confidence in developing self-regulated learning skills among their learners. Another finding was that several teachers used effective methods in keeping their learners motivated and interested in tasks, by providing various task strategies, ideas of planning and setting goals, and models of metacognitive monitoring. However, teachers experienced several contextual factors that hampered the development of self-regulated learning skills among their learners. These included language barriers, lack of

resources in schools, high enrolment of learners, socio-economic issues, and lack of parental support.

Some key recommendations included more involvement by Higher Education Institutions (HEI) in offering informative modules or courses pertaining to self-regulated learning, active involvement by the Department of Education (DoE) in offering workshops to train teachers on developing self-regulated learning skills, and parental involvement in guiding children through the self-regulated learning processes.

KEY WORDS:

Contextual Influences, Self-directed learning (SDL), Self-regulated learning (SRL), Personal determinants, Environmental determinants, Behavioural determinants, Self-efficacy, Metacognitive monitoring, Learner variables

LIST OF ABBREVIATIONS

ATP	Annual Teaching Plan
CAPS	Curriculum and Assessment Policy Statement
DBE	Department of Basic Education
DoE	Department of Education
EHL	English Home Language
FAL	First Additional Language
HEI	Higher Education Institution
KZN	KwaZulu-Natal
NSC	National Senior Certificate
PGCE	Post Graduate Certificate in Education
PoA	Programme of Assessment
PPC	Person-Process-Context
SDL	Self-Directed Learning
SRL	Self-Regulated Learning

TABLE OF CONTENTS

ACKNOWLEDGEMENTS……...II

ABSTRACT……..……IIII

LIST OF ABBREVIATIONS……..……..V

CHAPTER 1: ORIENTATION……1

1.1 Clarification of Concepts…….....1

1.2 Background to the study……2

1.3 Motivation for study……5

1.4 Literature review……6

1.5 Theoretical Perspective……7

1.6 Aims for study……8

1.7 Research questions……8

1.8 Research design and methodology……9

1.9 Methods of data generation……10

1.10 Method of data analysis……...11

1.11 Trustworthiness……12

1.12 Ethical Considerations……12

1.13 Contribution of this study……13

CHAPTER 2: LITERATURE REVIEW ON SELF-REGULATED LEARNING AND SELF-DIRECTED LEARNING……15

2. Introduction……15

2.1 Self-directed learning…….....16

2.1.1 Self-regulated learning……17

2.1.1.1 Similarities and differences between self-directed learning and self-regulated learning……..18

2.1.1.2 Characteristics of self-regulated learners……..19

2.1.1.3 Theoretical and conceptual framework…….20

2.1.1.4 Social Cognitive Theory……...21

2.1.1.5 A triadic analysis of self-regulated functioning (Zimmerman,1989:330)….21

2.1.1.6 Zimmerman and Moylan's (2009) SRL Model…….....23

2.1.1.6.1 Forethought Phase……..24

2.1.1.6.2 Performance Phase…….27

2.1.1.6.3 Self-reflection Phase…… 33

2.1.1.7 My own example to illustrate a learner's SRL in the three phases of SRL.36

2.1.1.8 Hiemstra and Brockett (2012) SDL Model……38

2.1.1.8.1 Linking Zimmerman and Moylan's SRL Model and Hiemstra and Brockett's SDL Model…….……41

2.1.1.8.2 Person, process and contextual influences on teacher's abilities to develop and enhance SRL skills……..43

2.1.1.8.3 'Person' determinants that influence teacher's development and enhancement of SRL skills…….44

2.1.1.8.4. 'Process' determinants that influence teacher's development and enhancement of SRL skills……..46

2.1.1.8.5 'Context' determinants that influence teacher's development and enhancement of SRL skills…….....51

2.1.1.8.6 Teacher's challenges in developing SRL skills……52

2.1.1.8.7 'Person' challenges that affect teacher's development and

enhancement of SRL skills……52

2.1.1.8.8 'Process' challenges that affect teacher's development and enhancement of SRL skills……53

2.1.1.8.9 'Context' challenges that affect teacher's development and enhancement of SRL skills……54

2.1.1.8.10 Summary of Chapter……55

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY……56

3.1 Research Paradigm……57

3.1.1 Research design and methodology……58

3.1.1.1 Qualitative research……58

3.1.1.1.1 Strategy of Inquiry……60

3.1.1.1.2 Population and sampling……61

3.1.1.1.3 Data Collection…… 64

3.1.1.1.4 Data analysis……69

3.1.1.1.5 Trustworthiness, validation and reliability……70

3.1.1.1.6 Credibility……70

3.1.1.1.7 Transferability……71

3.1.1.1.8 Dependability……71

3.1.1.1.9 Conformability……71

3.1.1.1.10 Ethical consideration……74

3.1.1.1.11 Summary of chapter……75

CHAPTER 4: DATA ANALYSIS AND INTERPRETATION……76

4.1 Process of data analysis……77

4.1.1 Discussion and data analysis……79

4.1.1.1 Discussion of themes and sub-themes from questionnaires……79

4.1.1.2 Theme 1: Teachers' roles in the development of SRL……..80

4.1.1.3 Theme 2: Teachers personal attributes in developing SRL skills in learners……..….83

4.1.1.4 Theme 3: Teachers behavioural attributes in developing SRL skills in their learners……88

4.1.1.5 Theme 4: Resources and the socio-economic status of learners at higher quintile schools……99

4.2 Summary of chapter……103

CHAPTER 5: CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS……104

5.1 Overview of chapters……104

5.1.1 Conclusion and summary of findings……..104

5.1.1.1 Secondary research questions……105

5.1.1.2 Primary research questions……..111

5.2 Limitations……115

5.3 Recommendations for training and practice……..…116

5.4 Recommendations for future research……117

5.5 Conclusion……..117

BIBLIOGRAPHY……118

ANNEXURES ……128

LIST OF TABLES

Table 1-1: Participants biographical and contextual information (Table 1)……...63

Table 2-1: Table presenting the summary of themes (Table 2)……..79

LIST OF FIGURES

Figure 1: Bandura's Model of Triadic Reciprocality (1986)……21

Figure 2: A cyclical phase model of self-regulation that integrates metacognitive processes and key measures of motivation (Zimmerman & Moylan, 2009:300)……..23

Figure 3: A scale depicting the balance between the Person-Process and Context of SDL (Hiemstra & Brockett, 2012:159)…….....39

Figure 4: Five stages of Data Analysis (Denscombe, 2010)……78

Figure 5: Theme 1: (Teachers' role in the development of SRL skills) and sub-themes……..83

Figure 6: Theme 2: (Teachers' personal attributes in developing SRL skills in learners) and sub-themes……..83

Figure 7: Theme 3: (Teachers' behavioural attributes in developing SRL skills in their learners) and sub-themes……89

Figure 8: Theme 4: (Resources and the socio-economic status of learners at higher quintile school) and sub-themes……. 99

Figure 9: Visual presentation of themes and related research questions of the study……...105

CHAPTER 1

ORIENTATION

The development of self-regulated learning by selected secondary school teachers in KwaZulu-Natal

1.1. Clarification of key concepts

Contextual Factors

Contextual factors encompass communities in which learners reside, the school and classroom environment, as well as the manner in which classroom teaching is conducted. Diversity is another contextual factor that impacts on a learner's ability to learn. Contextual factors include environmental factors, classroom factors, and student factors (Wilbanks, 2012). Contextual factors are made up of the community (example: geographic location-rural and urban, community support for education, stability of the community, race and ethnicity, socio- economics), classroom (example: physical features, technology, parental involvement, classroom management), gender, age, culture, interests, and goals.

Environmental Factors

Environmental factors of teachers entail the social and physical factors that include parents, colleagues, classroom space and size, the Department of Education social and working environment of teachers. Environmental factors of learners involve their classroom, school, home, peer, parents, social and physical factors such as a noisy classroom, lack of furniture and resources.

Personal Factors

Personal factors involve control over one's thoughts, feelings, motivation, and actions (Zimmerman, 1989:330). Personal factors in teachers can include their training, pedagogical knowledge of self-regulated learning, and other motivational aspects that address one's self-beliefs, feelings and actions. Personal factors in learners include their thoughts and attitudes about their learning capabilities.

Self-Directed Learning

Self-directed learning (SDL) can be defined as the self-initiated learning practices of individuals, with or without assistance from others, in an attempt to understand their own learning needs and

setting attainable goals that are directed at appropriate learning outcomes (Knowles,1975: 15). In other words, self-directed learning involves the self-discipline of an individual without the assistance of an instructor. However, the individual is adamant to acknowledge their learning needs and strives to develop strategies to attain their personal goals by themselves. The relationship between self-directed learning and 21st century skills development is pivotal for learners to be critical thinkers, and to acknowledge that school content knowledge is not enough for progressive learning. Therefore, more self-initiated practices such as researching information taught in class should be emphasised to learners by their teachers (Van Zyl & Du Toit Brits, 2017: 50). Self-directed learning is regarded as an important aim of teaching that entails directing learners and motivating them to learn and be active participants in classroom discussion (Mulube & Jooste, 2014:1778). The self-directed learning of individuals is the basic building block of strong families, organisations, communities, and countries (Guglielmino, 2013: 4). In this study, the researcher viewed self-directed learning as an umbrella or broader construct that included self-regulated learning (Jossberger, Brand-Gruwel, Boshuizen & Van de Wiel, 2010:423). In this study, teachers' views on how their self-directed learning skills enable them to develop specific self-regulated learning skills in their learners, were explored.

Self-Regulated Learning

Several definitions of self-regulated learning exist. Self-regulated learning (SRL) skills refer to the innate development of skills within an individual (Malebese, 2013: 39). Self-regulated learning has most often been related to the thought out and demonstrated activities of learners who are goal-oriented, and who seek to achieve academic excellence through their progressive learning. Furthermore, these learners have the abilities to engage in effective monitoring, self-motivation, and insightful thoughts, which are often guided by their set goals and contextual factors (Zimmerman, 2002: 65). Self-regulated learning is made up of three crucial aspects, namely; metacognition, self-motivation, and the planned out actions of learners (Zimmerman, 1989). Self-regulated learning is an ongoing process where learners develop the skills (Lear, Li & Prentice, 2016: 13) and self-efficacy to achieve academic success. Self-regulated learning does not only involve the regulation to achieve academic success but the extent to which an individual is determined to acquire knowledge that will enhance their growth and development in all aspects of their lives.

1.2 Background to the study

The decline of South Africa's education system is evident in comparison to another middle-income countries that are involved in the cross-national assessments which determine the level of education among the different countries. The National School Effectiveness study highlights

the poor performance of grade three and four learners in numeracy and literacy (news24, 1 Jan 2017). Furthermore, South Africa's low rankings in the Trends in International Mathematics and Science study, indicate the need for more effective measures in areas of mathematics and science, in curriculum development and planning, as well as in productive teaching approaches in schools. After completing schooling some South African learners are incapable of conducting basic calculations. According to the school subjects report (2021:6), provincial performance in selected subjects, KwaZulu-Natal obtained a 54,2 % pass rate in Mathematics, and a 71,2 % pass rate in Science, in the 2021 National Senior Certificate (NSC) examinations. The overall National performance for Mathematics and Science is alarming, as learners' results indicate that they have much difficulty in these subjects. For many, Mathematics and Sciences are viewed by teachers, parents, learners and other education stakeholders, as the most crucial subjects in the school curriculum, this may be due to the difficulty many learners experience in understanding the content.

Some South African mathematics teachers are unqualified to teach the subject (Southern and Eastern African Consortium for Monitoring Education Quality, 2018). It is believed that South Africa spends more on its education system than other developed countries in the world, but ironically very poor academic achievement is noted in South Africa's primary education system (Ngozo & Mtantato, 2018). The several weaknesses of the South African education system have an enormous impact on the economy. Aside from failing the majority of South African learners, the low achievement contributes to the weakening of the labour force, with many individuals possessing little to no skills. This resultantly limits their contribution to the economic growth of the country.

In an epoch of educational transformation in South Africa, the province of KwaZulu-Natal (KZN) manifests a myriad of cultural and contextual factors that impact on the learning and academic performance of learners in schools. The ideology of 'Masisukume Sakhe-Let us rise and build,' is the motto of KZN. However, in relation to education, the struggle to attain excellence remains a challenge. The NSC examination results indicate that KZN is among the underperforming provinces of South Africa. In the past four years, the high failure rate and poor academic achievement of learners' in the NSC examinations have challenged the KZN province. The National average pass rate for the NSC examination for 2018 was 78,2%, lower than the National average, KwaZulu Natal's overall pass percentage for 2018 was 76,2%. Three schools in the KZN province achieved a 0% pass rate in 2017 (Mngadi, 2018). In 2016, nine schools in the KZN province obtained a 0% pass rate, and in 2015 fourteen schools obtained a 0% pass rate for the NSC examination. The high failure rates in the NSC examinations compromise the learners' entry into Higher Education Institutions (HEI) (Statistical Indicators of the Annual Performance Plan 2018/2019: 131). In addition to the problem of high failure rates and poor academic performance

of learners, a contributing factor is the limited effort of principals and teachers to ensure the progression of learners to each grade or to assist learners to attain good results in formal assessments. The high failure rate or poor academic performance of learners also affects teachers.

The researcher has taught in six secondary schools in KZN, for the past 15 years and noticed that, although teachers have similar ideals for the academic achievement of learners, they do not have enough knowledge to help learners to achieve academically and function in the 21st century. Some teachers do not promote strategy instruction in the classroom during their lessons. As a result, learners are subjected to ineffective learning strategies. Furthermore, some teachers are not proficient in strategy development, implementation, and monitoring. Another related issue is that teachers experience time constraints when both are necessary for preparing learners to be self-regulated. As a result, the acquisition of self-regulated learning skills become difficult for learners to attain during lessons.

Some teachers are unable to foster their learners' metacognitive knowledge and self-reflection necessary for learners' self-improvement. Some do not engage in ongoing questioning during their lessons. As a result, learners are unable to self-reflect on what they are familiar with and understand how much more knowledge of the content they need. In addition to this problem, some teachers do not create learning environments conducive for learners to self-regulate. Teachers do not develop self-regulated learning skills in learners adequately enough for them to take responsibility for their learning.

Several challenges persist relating to the role that teachers play in enhancing learners' abilities to become self-regulated learners. A key element is not simply to relay syllabus content knowledge or problem-solving methods, but also to teach learners how to learn. Some teachers are unable to model examples of their metacognition processes. The researcher observed that in some schools in the iLembe district of the KZN province, teachers are most often concerned with syllabus completion according to Departmental requirements, as indicated in the Annual Teaching Plan (ATP). The ATP stipulates the prescribed content by the DOE that must be followed and dates for completion. Teachers faced with time constraints for syllabus coverage and completion are unable to teach learners how to learn the content covered during their lessons. There is also no provision for teaching learners how to learn on the ATPs.

Some teachers are unsupportive when it comes to enhancing learners' self-regulated learning. Learners that work with unfamiliar content may struggle with adopting strategies, and as a result, become demotivated if teachers do not offer guidance to them (Zimmerman, 2002: 69). Some teachers do not emphasise the importance of self-regulation or inform learners that self-regulated learning is essential for learning new skills. Motivation and self-satisfaction improve when learners

are able to develop new skills on their own, with support from their teachers. Some teachers do not encourage learners to ask for help when they need it. In other instances, when learners ask for assistance, some teachers yell at them and blame them for not concentrating. The inability of some teachers to provide opportunities to close the gap between current and desired performance (SAGE 2YC), is also evident in some schools in KZN. Some teachers do not explain what good performance is, or relay the importance of goals, criteria, and expected standards from learners. Furthermore, some teachers do not facilitate the development of self-assessment, which is essential for enhancing self-regulated learning. Encouraging positive motivational beliefs and self-esteem of learners are sometimes not practised.

School principals and school management teams can offer their assistance with curriculum development by ensuring resources are easily accessible (Duby, 2006:114). However, in some schools in the iLembe district, there is a great shortage of resources such as textbooks, computers, and stationery, all of which are essential for developing self-regulated learning skills in learners. When learners' are struggling to learn, this could mean that teachers and school management teams are not doing enough to help these struggling learners' (Duby, 2006:17). It is the responsibility of leadership together with teachers, to ensure that organisations achieve their desired outcomes. Failure of school leaders and teachers to attain the academic success of learners may be due to principals' lack of support to teachers, and teachers' failure to develop self-regulated learning. Little is known about the paths through which school leaders enhance organisational and learner outcomes, and their interplay with contextual factors (Kruger, Witziers & Sleegers, 2007; Hallinger, 2003; Hallinger & Heck, 1996). Some principals may find it challenging to work with teachers, due to being trained in different learning areas and subjects (Sebastian & Allensworth, 2012: 627). Principals in high schools may not have the skills to direct institutional practice in all subjects, but they can create a climate in which teachers in all subjects can be successful (Sebastian & Allensworth, 2012: 628).

The researcher opines that the development of learners' self-regulated learning skills might alleviate the high failure rates, equip learners with 21st century skills, and prepare them to function effectively in their careers and lives after school. Self-regulated learning skills allow learners to manage their emotions, behaviour, and cognition when they are challenged with situations beyond their capabilities. The abilities of learners to regulate their learning may enable them to modify and monitor their behaviours using metacognition, motivation, self-awareness, and positive self-efficacy beliefs, in order to reach the desired learning outcome (Harding, Nibali, English, Griffin, Graham, Alom & Zhang; 2018: 6). Therefore, learners' self-regulated learning skills should be developed in order for them to become more critical thinkers, as well as to enhance their motivation, self-awareness, and self-efficacy needed to reach desired learning outcomes (Harding et al., 2018: 14). Furthermore, learners whose self-regulated learning skills

are not developed may struggle to engage with tasks in class, due to being de-motivated, and choose to give up instead of trying to conduct tasks. Lear, Li, and Prentice, (2016: 20) report that learners are seldom taught how to learn, and are rarely encouraged to reflect on their work. There is, therefore, a need to develop learners to move beyond the traditional learning practices to support their self-regulated learning behaviours (Alvi, Iqbal, Masood, & Batool, 2016: 51). Against this background, this study explored how teachers developed learners' self-regulated learning skills, and how their self-directed learning influenced their ability to develop learners' self-regulated learning skills.

1.3 Motivation for study

In the 21st century, several societal changes in relation to the way people live, the way they learn and work, as well as advancements in science and technology, have taken place. Technological advancements in relation to teaching and learning means that education systems across the globe need to continuously develop teachers' teaching skills and improve learners' self-regulated learning skills, in a rapidly changing world (Tigist, 2013: 1). With a deeper understanding of how teachers support the development of self-regulated learning, we will be better equipped to make informed choices about how to further support teachers to develop their learner's self-regulated learning skills and their self-directed learning skills. As a result, this study was undertaken due to the paucity of research pertaining to teachers' development of self-regulated learning skills among their learners in KZN.

1.4 Literature Review on Secondary school teachers' development of self-regulated learning in selected KwaZulu-Natal schools

Tigist (2013: 2) alludes that self-regulated learning should be developed in primary schools. Self-regulation refers to the impetus of an individual's control over their own emotions, the way they think, their perseverance, and actions within their external environment (Bandura, 1986). Lear, Li & Prentice, (2016: 13) indicate that self-regulated learning highlights the personal actions undertaken by the individual learner towards their successive learning. However, the behaviour and beliefs of teachers, and the knowledge they possess of self-regulated learning, are important aspects needed to promote self-regulated learning skills in the classroom (Dignath Van Ewijk & Van der Werf, 2012:1). Researchers in the field of self-regulated learning allude that self-regulated learning involves the active role undertaken by learners towards a more effective self-learning process (Xu, 2008:1). Teachers' perceptions indicate that they do have positive beliefs of self-regulated learning, but lack knowledge on how to foster it (Dignath & Van Werf, 2012:7)

Another crucial aspect is the recognition that teaching approaches around the world that promote self-regulated learning are focused on learner-centred teaching in order to enhance skills (Tigist,

2013:2). Teacher feedback to learners is important for developing advanced self-regulated learning skills (Martinez- Ponz, 2002: 127). Some teachers are unable to ignite the self-regulated behaviours from within learners. For this reason, they need to model different forms of self-regulated learning skills during their lessons, for learners to emulate similar self-regulated skills. For self-directed learning to manifest in the classroom environment, the teachers ought to be self-directed themselves (Van Zyl & Du Toit Brits, 2017: 51). In all learning processes, there is a high possibility of developing skills and attitudes to promote self-directed learning. However, some institutions do not engage or promote self-directed learning (Guglielmino, 2013: 2). Furthermore, teachers are challenged by their inability to teach as they were taught to teach during their training, a demanding syllabus that needs coverage, and learners' ineffective methods of studying, like rote learning (Guglielmino, 2013: 10).

Teacher training programmes and development workshops should equip teachers and empower them for the 21st century classroom (Van Wyk, 2017: 274). It is noted that current teaching practices are not enough for promoting self-regulated learning (Xu, 2008:1). Haines (2012: 13), notes that several unqualified teachers are employed by SGBs, particularly in rural schools. However, it is pivotal for teachers to be qualified in order to exhibit the self-regulated learning skills they have obtained during their training (Lear, Li & Prentice, 2016: 20).

1.5 Theoretical Perspectives

The study applied the Social Cognitive Theory as a theoretical framework. The Social Cognitive Theory indicates that children can emulate similar self-regulatory behaviours adults who exhibit, and consequently attain academic success (Tigist, 2013: 35; Orange & Hodges, 2015: 10). The social cognitive theory can explain the influences of behavioural, personal, and environmental determinants on learners' self-regulated learning development. Furthermore, the theory explains how self-regulated learning skills can be developed through the modelling of self-directed learning and self-regulated learning skills of teachers (Martinez-Pons, 2002; Zimmerman & Moylan, 2009).

This study applied the two theoretical frameworks to conceptualise how secondary school teachers develop self-regulated learning skills, (or not) by modelling their self-directed learning. These theoretical frameworks are the Person-Process-Context model of self-directed learning by Hiemstra and Brockett (2012), and Zimmerman and Moylans' (2009: 302) model of self-regulated learning.

To begin with, the Hiemstra and Brockett (2012: 156) Person-Process-Context (PPC) (2012: 158) model has three basic elements: the person or learner; the teaching-learning transaction or process; and the social context. The model also highlights the importance of the sociocultural context in self-directed learning. The PPC model emphasises that self-directed learning is

effective when learners are highly self-motivated; that the instructional process motivates learners to control their learning; and that the sociocultural context and learning environment constitute a conducive atmosphere for the manifestation of self-directed learning. The Person-Process-Context model of self-directed learning by Hiemstra and Brockett (2012) was useful in this study to ascertain the way in which contextual factors influence the development of self-regulated learning, as well as the amount of motivation offered by teachers towards learners, in order to control their learning. The model was also necessary to understand whether the type of learning environment was conducive for self-directed learning, from participants' responses in this study (teachers). Furthermore, Hiemstra and Brockett's (2012) model contributed to the study's research questions and the data analysis process, conducted in relation to literature and data collected from participants.

The next framework for this study was Zimmerman and Moylan's (2009) model of self-regulated learning, which proposes that the structure and processes of self-regulation consist of three phases; forethought, performance, and self-reflection. Firstly, the forethought phase entails preparation for self-regulated learning. Goal setting, strategic planning, and self-motivation beliefs are essential for a self-regulated learner who, most often, analyses tasks before learning something new. Next, the performance phase deals with self-control and self-monitoring, whereby the learner manages his/her learning. This phase also includes strategic planning by self-regulated learners, with careful monitoring of their learning. For instance, a self-regulated learner may be involved in self-recording and self-experimentation in order to provide feedback for his/her self-monitoring process and to develop his/her learning strategies. Finally, the self-reflection phase entails self-judgement and self-reaction, where learners self-evaluate and think about the causes of failure or success regarding the learning process. Self-regulated learners are able to diagnose whether they have achieved their learning goals or not, as well as to measure their level of self-satisfaction. Zimmerman and Moylan's (2009) model of self-regulated learning will contribute to answering the study's research questions by providing an understanding of how teachers' self-directed learning enables them to develop self-regulated learning skills in learners. Data collected from participants is compared to existing literature and used to determine the extent to which self-regulated learning skills are developed (or not), in the participating schools in the study.

1.6 Aims of the study

The primary aim of this study was to explore how quintile 4 and 5 secondary school teachers' self- directed learning influenced the development of self-regulated learning skills in their learners.

Secondary research aims:

The secondary aims were to explore quintile 4 and 5 secondary school teachers:

• views on their confidence to develop self-regulated learning skills within their classroom practices;

• views on how they modelled positive motivational beliefs to develop task interest and intrinsic motivation in learners;

• views on how they modelled planning and goal setting to develop these skills in learners;

• views on how they modelled different task strategies to encourage learners to use a variety of task strategies;

• views on how they modelled metacognitive monitoring to develop metacognitive monitoring skills in learners; and

• challenges related to teachers' experience in their attempts to develop self-regulated learning skills in their learners

1.7 Research questions

The primary research question was as follows:

How do quintile 4 and 5 secondary school teachers' self-directed learning influence their classroom teaching, to develop self-regulated learning skills in learners?

Secondary research questions

What are quintile 4 and 5 secondary school teachers:

• views on their confidence to develop self-regulated learning skills with their classroom practices?

• views on how they model positive motivational beliefs to develop task interest and intrinsic motivation in learners?

• views on how they model planning and goal setting to develop these SRL skills (planning and goal setting) skills in learners?

• views on how they model different task strategies to develop learners to use a variety of task strategies?

• views on how they model metacognitive monitoring to develop metacognitive

monitoring skills in learners?

• challenges when they attempt to develop self-regulated learning skills in their learners?

1.8 Research design and methodology

This study was located within an interpretivist philosophical orientation. The interpretive philosophical orientation deals with meaning and attempts to gain an understanding of individuals' perceptions of situations they experience (Maree, 2016:60). In understanding the interpretive perspectives, the case study provided a comprehensive (holistic) understanding of how contextual influences of secondary school teachers, as well as their self-directed learning skills, influenced their abilities to develop self-regulated learning skills in their learners in quintile 4 to 5 secondary schools.

A qualitative research approach was used in this research. A qualitative design is concerned with the researcher making knowledge claims that deal with gaining answers to the phenomenon in question, by understanding the meaning of an individual's experiences (Creswell & Plano Clark, 2007:22). A qualitative research design is defined as an attempt to collect data on the phenomenon, in order to gain more understanding (Maree, 2016:75). The researcher used a qualitative research design based on the philosophical assumptions and potential it offered for teachers' individual experiences and meanings of self-regulated learning and self-directed learning, and its development in learners. The case study was suitable for this research due to its investigative nature to examine a contemporary phenomenon in a real-life situation and the wealth of multiple data it can give (Yin, 2009:18). It led to a deeper understanding of the dynamics of teachers', own self-directed learning skills to develop self-regulated learning skills in their learners.

Case study research is a qualitative approach whereby, the researcher explores a case over a period, which entails a detailed and in-depth data collection process (Maree, 2016: 81). In this study, a type of school (quintile 4 to 5) and its participants (teachers) was the case.

1.9 Methods of data generation

The study used questionnaires as data collection methods. The use of open-ended questions in the questionnaires allowed the participants to provide detailed answers, explanations, and information, which contributed to the thematic analysis of data (Maree, 2016: 93). Maree and Pietersen (2016) add that the advantage of open questions is that participants can give detailed answers, their thinking process is revealed, and thematic analysis of responses yields interesting information, categories, and sub-categories. Nieuwenhuis (2016:93) highlights that qualitative

interviews is to view the world through the experiences of participants. Rich descriptive data helped the researcher to understand participants' construction of knowledge and social reality.

Paper-based questionnaires were administered to participating teachers from quintile 4 and 5 secondary schools. The aim of the questionnaires was to explore the perceptions of the teachers regarding how their self-directedness influenced their ability to develop learners' self-regulated learning skills and enhance self-directed learning.

Sampling strategies

For this study, the researcher used purposive sampling. Maree and Pietersen (2016: 198) define purposive sampling, 'as a method used in special situations where the sampling is done with a specific purpose in mind.' In this study, secondary school teachers were purposively selected because they had information about themselves, their perceptions, beliefs, and experiences regarding their self-directed learning, and how their self-directed learning skills enabled them to develop self-regulated learning skills in their learners. They had information about contextual factors that influence the development of self-regulated learning skills.

Type of schools

Research was conducted in the KZN province of the iLembe District in KwaDukuza (previously known as Stanger). There are very few secondary schools in KwaDukuza (approximately five). Among these five schools, only one quintile 5 school is located in KwaDukuza, and three quintile 4 schools. Data were collected from four quintile 4 and 5 secondary schools.

Secondary school teachers

The researcher collected data from sixteen secondary school teachers. Four secondary school teachers per quintile 4 and 5 secondary schools were selected (sixteen participants). The criteria for the selection of the secondary school teachers were as follows: the participants had to be qualified teachers teaching in the senior phase (Grades 8 to 11), and willing to participate in answering the questionnaire.

1.10 Method of data analysis

The researcher transcribed all the data from questionnaires collected from the teachers. Content analysis and a thematic approach to data analysis were used. The researcher transcribed data to generate clear meaning and understanding of the information in relation to the research aims of this study. The researcher's intention was to analyse the content, attitudes, understanding,

knowledge, values, feelings, and experiences of the participants using Hiemstra and Brockett's (2012) Person Process Context (PPC) model of self-directed learning, and Zimmerman and Moylan's (2009) model of self-regulated learning as a theoretical and conceptual lens. The researcher explored the possible contextual and personal similarities and differences between the participants' self-directed learning, their development of self-regulated learning skills, and the contextual factors that influenced the development of self-regulated learning skills in learners.

The researcher used the following stages of analysis outlined by Denscombe (2010) in order to analyse the data. During the first stage, data was recorded and prepared for transcription. During the second stage, the initial exploration of data (looking for themes or issues, adding notes to the data, and writing memos) occurred. In the third stage, the analysis of the data (coding the data, grouping codes into categories and themes, comparison, and encapsulation) occurred. In the fourth stage, the representation and display of the data (writing interpretations of findings and illustrations) took place, and in the fifth stage, the validation of the data (crystallisation, validation, and comparison with alternative explanation) was done.

1.11 Trustworthiness

Trustworthiness is defined as an indication that the evidence for the results reported is rational, and when research findings are accepted due to the strong arguments that are made (LaBanca, 2010). Trustworthiness is of the utmost importance in qualitative research. Assessing trustworthiness is the acid-test of data analysis, findings and conclusions (Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen & Plano Clark; 2016: 123). McMillan and Schumacher (2001: 409) states that verbatim accounts of conversations, transcripts, and direct quotes from participants are highly valued as data in qualitative studies.

In ensuring the credibility of the study, frequent debriefing sessions between the researchers' reflective notes and member checks were done. Participants were involved in checking and verifying raw data, to safeguard accuracy during the analysis and interpretation of data. The researcher ensured that data gathering and data analysis are credible and trustworthy. This meant that the researcher was able to contextualise the findings within the body of existing knowledge on the topic, and was able to indicate how it corroborated what was already known, as well as the new insights that were uncovered, to enhance understanding of the phenomena (Creswell et al., 2016: 123).

The following measures were undertaken to enhance the trustworthiness of the study:

- The provision of context: the researcher provided the context in which data was

collected, analysed, and interpreted.

• The researcher reviewed literature that pertains to the research topic and aims of the study.

• The researcher drew on relevant literature as well as on the theoretical framework of the study when the research findings were analysed and interpreted.

• Interim data analysis and deliberation with participants took place and ensured the confirmation of findings and accurate reflection of their realities.

1.12 Ethical issues

Ethics in research is very important, particularly with research involving people and animals, (Nuremberg Code, 1946-47; Helsinki Declaration, 2000; Belmont Report, 1979 cited in Thomas, 2003: 3-4). It is important that all research studies follow certain ethical principles. These principles are autonomy, non-maleficence, and beneficence (Durrheim & Wassennaar, 2001:66). An application for ethical clearance was made to the North West University (an ethical clearance certificate was attached: Annexure A). In addition, all actions were based on ethical conduct. The researcher gained permission from the Department of Basic Education (Annexure C) as well as the goodwill permission from principals (Annexure D) and School Governing Bodies (Annexure E).

Consent of participants was pivotal. The researcher explained the purpose of the study to the independent persons on each research site. The independent persons were given a chance to ask questions that enabled them to make an enlightened decision to participate in the research study. The independent person was asked to recruit participants at the four secondary schools. The independent person explained to participants what the research was about, and what was expected of them, so that they were able to make an informed choice, and participate voluntarily in the research. The researcher obtained consent from every person that was part of the study. Participants also had the right to withdraw from the study without any consequences.

Participants were assured that the research would not harm them or any other people. The study did no physical, emotional, social, or other harm to any person. All participants were assured of the confidentiality of the information they supplied. Participants were informed how the information would be made public. The researcher was competent in all the procedures that were carried out. The researcher was careful and protected the identities of the participants when they published the results of their study. The researcher did not makeup data in the publications and ensured the limitations of the study were pointed out. Raw data (paper documents, consent forms, and print

outs) that contained personal identifying information was stored securely in a locked file cabinet, when not in use by the researcher and supervisor. Storage devices such as flash memory devices, CDs, and DVDs were stored in a safe with only the researcher and supervisor having access. The researcher ensured encryption technologies on devices, with strong passwords, to ensure data security. The passwords were used to access electronically stored data on PC and laptop computers was undertaken. Computers were configured to 'lock out' after 15 minutes of inactivity in order to reduce unauthorised use of gadgets, in the event the researcher did not log out. The transfer of data from the researcher to the North West University included a University-supported Google drive or SharePoint, that ensured confidentiality of data.

Study chapters

Chapter 1: Orientation

Chapter 2: Self-directed learning and self-regulated learning

Chapter 3: Research design and methodology

Chapter 4: Data analysis and interpretation

Chapter 5: Summary, findings, and recommendations

1.13 Contribution of this study

The experiences and perceptions of teachers pertaining to how their self-directed learning enabled them to develop self-regulated learning skills and the contextual influences on the development of self-regulated learning skills, may contribute to the understanding of the role teachers own self-directed learning play in the development of self-regulated learning skills in KZN schools. The study contributed to the awareness of the importance of self-directed teachers to enhance learners' self-regulation in order to attain academic excellence and skills that will contribute to learners' personal growth in relation to societal norms and expectations. The study also aimed to create awareness among school leaders, the Department of Education (DOE), educators, learners, parents, and the community, of the important role they could play in the enhancement of learners' self-regulation. Due to the paucity of research pertaining to self-regulated learning and self-directed learning in KZN, it is pivotal for future researchers to provide more insight on the topic, as well as develop strategies to enhance self-regulatory skills among learners in KZN schools.

CHAPTER 2

SELF-REGULATED LEARNING AND SELF-DIRECTED LEARNING

The previous chapter commenced with the clarification of concepts: contextual factors, self-directed learning (SDL), and self-regulated learning (SRL). Thereafter, the problem statement and motivation for the study were provided. Next, a literature review on the development and enhancement of self-regulated learning among secondary school teachers was made and, the theoretical perspectives were highlighted. This was followed the aims of the study and research questions. Next, the research design and methodology as well as methods of data generation were presented. The sampling strategies, type of schools, and the study's participants were also highlighted. Thereafter, the methods of data analysis were explained, followed by trustworthiness and ethical issues as well as the contribution of this study.

This chapter firstly focuses on self-directed learning (*cf. 2.1*) and self-regulated learning (*cf. 2.1.1*); the two main concepts of the study. Second, the similarities and differences between self-directed learning and self-regulated learning (*cf. 2.1.1.1*) are presented. Third, the characteristics of self-regulated learners (*cf. 2.1.1.2*) are highlighted. Fourth, the theoretical and conceptual frameworks (*cf. 2.1.1.3*) are discussed, followed by the Social Cognitive Theory (*cf. 2.1.1.4*). Fifth, a triadic analysis of self-regulated functioning (Zimmerman, 1989) (*cf.2.1.1.5*) is discussed. Sixth, a Cyclical Phase Model of Self-Regulation (Zimmerman & Moylan, 2009) (*cf. 2.1.1.6*) is discussed under the following processes and sub-processes; Forethought Phase (*cf. 2.1.1.6.1*), the Performance Phase (*cf. 2.1.1.6.2*) and the Self-Reflection Phase (*cf. 2.1.1.6.3*). Next, my example to illustrate learners' self-regulated learning in the three phases of self-regulated learning (*cf. 2.1.1.7*) is presented, followed by Hiemstra and Brockett's (2012) self-directed learning Model (*cf. 2.1.1.8*). Thereafter, Zimmerman and Moylan's self-regulated learning Model (2009) and Hiemstra and Brockett's self-directed learning Model (2012) (*cf. 2.1.1.8.1*) are linked. The Person, Process, and Contextual influences of teachers' abilities to develop and enhance self-regulated learning skills (*cf. 2.1.1.8.2*) are presented. Next, the Person, Process, and Context determinants that influence teachers' development and enhancement of self-regulated learning skills (*cf. 2.1.1.8.3*) to (*cf. 2.1.1.8.5*) are highlighted. Following, are teachers' challenges in developing self-regulated learning and self-directed learning skills (*cf. 2.1.1.8.6*). The Person, Process, and Context challenges that affect teachers' development of SRL and SDL (*cf. 2.1.1.8.7*) to (*cf. 2.1.1.8.9*) are considered. Lastly, the chapter concludes with a summary of the chapter (*cf. 2.1.1.8.10*).
The study looked at higher quintile schools (quintile 4 and 5) as it is a part of a bigger study that investigates how cultural and contextual factors in lower and higher quintile schools influence the

development and support of self-regulated learning to enhance self-directed learning in classrooms. I explored higher quintile schools to see if the perceptions we have about teachers and their self-regulated learning as well as how they develop self-regulated learning skills in these schools are true.

The post-apartheid South African education allowed the government to use quintile categorisation of schools based on the socioeconomic status of the community in which schools are located (Spaull, 2013: 6). The quintile categorisation was based on the socio-economic status of a school in relation to income, employment rates, literacy level, and the school's geographical location. The main purpose of the quintile categorisation was to address educational inequalities of the past, whilst taking into consideration learners' socio-economic backgrounds. The South African government categorised public schools into five quintiles for the purpose of allocating financial aid to less fortunate learners and poorly resourced schools (Ogbonnaya & Awuah, 2019:106). This means that if a school is situated in a higher income residential area but poor and disadvantaged learners attend this school and live far in surrounding rural areas, the school will still be classified as a higher quintile school, and not receive much financial support from the government.

Quintile 1-3 schools are ones in economically disadvantaged geographical areas and are non-fee paying schools that receive more money per learner from the government (Ogbonnaya & Awuah, 2019:113). Quintile 4 and 5 schools are those in more economically advantaged areas and are fee-paying schools. It is most often assumed that learners who attend quintile 4 and 5 schools hail from affluent backgrounds with wealthy parents who can afford to pay school fees. Therefore, we may assume that high quintile schools are better resourced in terms of human and physical resources to allow for the development of self-regulated learning skills.

The next paragraphs define self-directed learning, characteristics of self-regulated learners, and the definition of self-regulated learning.

2.1 Self-directed learning

The origin of self-directed learning is deeply embedded in adult learning, due to adults' lived experiences, self-motivation, and independence to direct their learning. Self-directed learning assumes an adult who identifies his or her own learning needs, sets attainable goals, selects learning resources, formulates learning strategies, and evaluates learning outcomes. However, self-directed learning is also significantly applicable to younger learners (Carson; 2012: 19). The 21st century skills require the ability of an individual to think critically, with proper identification of resources, and responsibility to take control of their learning (Van Zyl & Du Toit-Brits; 2017: 50).

It is for this reason that self-directed learning is a pivotal skill in the 21st century. The common views in most self-directed learning research studies focus on the open-mindedness of individuals to direct their learning, characterised by self-discipline and a desire to learn (Malison & Thammakoranonta; 2018:3).

Self-directed learning occurs when an individual is able to learn on their own or by gaining assistance from others, in identifying their own learning needs; goals, resources, learning strategies and evaluating their learning outcomes (Knowles, 1975:18). Self-directed learning involves the initiative of learners in identifying their own learning needs, which may be undertaken with supervision and assistance or even without the help of others (Schweder; 2018: 2).

Another crucial concept underpinned in self-directed learning is metacognition, which is defined as the ability of an individual to think about their thinking (Khodabandehlou, Johandar, Seyedi & Abadi, 2012: 1). Sharing similar views, Martinez (2006: 696) define metacognition as the monitoring and control of self-thoughts. Furthermore, metacognition highlights conscious and deliberate mental activity. However, thinking that takes place without much awareness or effort is referred to as cognitive automation. Sharing a similar perspective on metacognition Collins (2012: 16) emphasises higher-order thinking as a crucial component of self-directed learning.

Self-directed learning shares similarities and differences with self-regulated learning, but one should not be confused with the other. In the next section, the definition of self-regulated learning is discussed. Thereafter, the similarities and differences between self-directed learning and self-regulated learning are presented.

2.1.1 Self-regulated learning

Definition of SRL

Self-regulated learning is defined as an effective execution of a process and activity that demonstrates self-acquired knowledge, which is effectively organised by an individual with the intention of self-development (Zimmerman, 1990: 4). In other words, self-regulated learning is a process that is only achieved through careful behaviour self-monitoring, self-thoughts (thinking about one's thinking), and self-motivation. Self-regulated learning is a process in which an individual independently seeks new knowledge for personal growth (Saks & Leijen, 2013: 191). In a study by Lear, Li, and Prentice (2016:13), self-regulated learning is highlighted as the personal actions undertaken by an individual learner towards their successive learning.

From my understanding of these aforementioned definitions of self-regulated learning, I describe self-regulated learning in relation to a schooling context, as the proactive engagement of an individual in transforming their learning processes, with an enthusiastic urge to gain new knowledge and to know more. Moreover, self-regulated learning can be explained as learning conducted by oneself with the assistance of others through help-seeking and learning with, and from peers, teachers, and parents. Self-directed learning can be defined as a process in which learners take the initiative and responsibility for their learning with or without the help of others (Mentz & Bailey, 2020: 39).

2.1.1.1 Similarities and differences between SDL and SRL

Self-directed learning and self-regulated learning appear to share significant similarities. Long (2000:20) stresses the link between self-regulation and self-direction and claims that self-regulation is a critical element in self-direction. This means that success and quality of self-direction in learning are linked to most of the processes of self-regulation. In other words, self-monitoring, self-instruction, self-reinforcement, goal setting, planning, selection of strategies and self-evaluation, are processes undertaken in self-regulated learning and self-directed learning. Furthermore, achievement, motivation, self-esteem, and self-efficacy are grounded in the process of self-regulated learning and self-directed learning.

Pilling-Cormick and Garrison (2007:14) explain that 'both self-directed learning and self-regulated learning essentially deal with the same concepts: external management practices and internal monitoring processes'. Likewise, Saks and Leijen (2014:193) acknowledge the similarities between self-regulated learning and self-directed learning, describing both concepts as involving external processes and events, as well as internal processes in relation to personality and aptitude. Both concepts highlight the importance of learners in setting goals, conducting proper learning strategies, and evaluating their learning outcomes (Gandomkar & Sandars, 2018:862).

Both have four key phases in the learning process, namely; defining tasks, setting goals and planning, enacting strategies, monitoring, and reflecting. Metacognition and intrinsic motivation are further similarities between self-regulated learning and self-directed learning. Furthermore, in both self-regulated learning and self-directed learning, active participation and goal-directed behaviour is key similarity (Saks & Leijen, 2014:192). Human interaction is another similarity in both self-regulated learning and self-directed learning (Saks & Leijen, 2014:192). In other words, communication and interaction between teachers and learners, are evident in both, self-regulated learning and self-directed learning.

While the previous paragraphs focused on similarities, in the literature on self-directed learning and self-regulated learning, it is evident that there are also differences between the two concepts. The following paragraph highlights these differences.

The early work of self-directed learning, initiated in the 1960s, established the research into self-regulated learning that has occurred in the last two decades (Pilling-Cormick & Garrison, 2007: 14). Self-directed learning and self-regulated learning were founded upon different concerns and concepts. Self-directed learning emerged from the work of Tough (1971), who focused on its sociological aspect; as well as from the work of Knowles (1975), who focused on the pedagogical aspect (Pilling-Cormick & Garrison, 2007:15). Another point is that both self-regulation and self-direction in learning have multiple definitions that reflect the psychological orientation of who is defining these concepts. This means that the definitions may vary from a psychological point of view and a pedagogical point of view. Self-directed learning and self-regulated learning can be confused by many, thereby attributing the same meaning to both concepts (Jossberger et al., 2010:7). One main difference is that in self-directed learning, the individual sets his or her own goals. However, in self-regulated learning, the learning goals are set by the teacher. Self-directed learning entails a learner's approach to learning, whereas self-regulated learning focuses on detailed learning processes (Jossberger et al., 2010:7).

Differences between self-regulated learning and self-directed learning have also been identified in the study of Saks and Leijen (2014:193), who state that 'self-directed learning originates from adult education, whereas self-regulated learning originates from cognitive psychology. Self-directed learning is practised mainly outside the traditional school environment, whereas self-regulated learning is practised mainly in the school environment. Self-directed learning involves designing the learning environment and planning the learning trajectory, whereas self-regulated learning involves tasks usually set by the teacher. Self-directed learning involves a broader macro-level construct, whereas self-regulated learning involves a narrower micro-level construct. 'Self-regulated learning is a micro-level concept because it deals with processes within task execution' (Jossberger et al., 2010:7). Self-directed learning may include self-regulated learning, but self-regulated learning may not include self-directed learning. For example, teachers may be self-directed and possess self-regulated learning skills, however, learners who demonstrate self-regulated learning, may not be self-directed enough to diagnose their learning needs, formulate learning goals, identify human and material resources for learning, choose and implement appropriate learning styles, and evaluate learning outcomes. These aforementioned characteristics are pivotal in self-regulated learning.

In the next paragraphs, the characteristics of self-regulated learners are discussed.

2.1.1.2 Characteristics of self-regulated learners

A learner who is self-regulated is often successful in knowledge acquisition and understanding, even when challenging circumstances may arise (Zimmerman, 1990: 4). Self-regulated learners can be referred to as 'agents of their thinking', who are in control of the knowledge that is deemed relevant and important to know and remember and derive personal methods and new techniques to master their learning strategies. (Hacker, Dunlosky & Graesser; 2009).

Self-regulated learners often engage in several strategies to conduct tasks and learning activities in their various learning areas and subjects. Tigist (2013:3) posits that 'self-regulated learners have the capacity to manage their learning behaviour for the duration of their courses, as they possess their plans, goals, and strategies for their studies and for completing their tasks.'
A self-regulated learner keeps track of his/her learning activities, engages in note-taking about the material and content he/she is reading, and also constantly engages in self-observation strategies to decipher whether he/she is moving towards their own desired learning outcomes and goals. They are intrinsically motivated to learn and persist to attain their academic goals even if they experience difficulty (Zumbrunn et al., 2011:10; Geduld, 2019:63; Tigist, 2013:37; Joseph-Edwards, 2019:8).

In the next section, the theoretical and conceptual framework of the study are discussed.

2.1.1.3 Theoretical and conceptual framework

A theoretical framework entails all the theories that have been used in the field that a researcher plans to investigate, from which one draws to generate a theoretical coat hanger for data analysis and interpretation of results (Kivunja, 2018:46).

A conceptual framework entails everything that makes up the structure of the entire research study, such as; the topic, problem, questions, literature, theories, methodology, instruments, data analysis, recommendations, and conclusions (Ravitch & Riggan, 2017:5).

The theoretical framework for this study will be Zimmerman and Moylans' (2009) model of self-regulated learning, rooted in the social cognitive theory; and Hiemstra and Brockett's (2012) model of self-directed learning. First, I present the social cognitive theory and the self-regulated learning model of Zimmerman and Moylan (2009) and explain the processes in each phase of their model. Thereafter, I discuss the self-directed learning model of Brockett and Hiemstra (2012), namely; the Person-Process-Context (PPC) used in this study.

The lens of this study is the Social Cognitive Theory (Bandura, 1986) because of its utility in explaining the impact of the social environment on learners' self-regulatory development. The Social Cognitive Theory was relevant to my study because the two theoretical frameworks used in my study; Zimmerman and Moylan's (2009) model of self-regulated learning and Hiemstra and Brockett's (2012) model of self-directed learning, are both viewed through a social cognitive theoretical lens.

2.1.1.4 Social cognitive theory

The origin of the Social Cognitive Theory is rooted in Psychology as an expansion of Bandura's Social Learning theory. Bandura's Social Cognitive perspective (1986) provides a strong background for self-regulated learning and emphasises that self-regulated learning as a process is influenced by the interaction between personal, behavioural, and environmental factors of teachers (Zimmerman, 1989: 330). This study adopted a social cognitive view, which suggests that self-regulated learning is a social process that is influenced by personal, behavioural, and environmental factors of teachers and learners in praxis. The personal determinants involve control over one's thoughts, feelings, motivation, and actions (Zimmerman,1989: 330). Personal determinants in teachers can include participants' teacher training, pedagogical knowledge of self-regulated learning, and other motivational aspects that enable them to develop self-regulated learning skills in themselves and learners (Geduld, 2019:63). The personal determinants address one's self-beliefs, feelings, and actions that are planned and adapted for goal attainment (Joseph-Edwards, 2019:6). Moreover, the personal determinants entail the knowledge of the learners, their metacognitive processes, the goals they set, and the outcomes (Tigist, 2013:35).

The following paragraphs highlight Bandura's Model of triadic reciprocality, which focuses on personal, environmental, and behavioural determinants.

2.1.1.5 A triadic analysis of self-regulated functioning (Zimmerman, 1989:330)

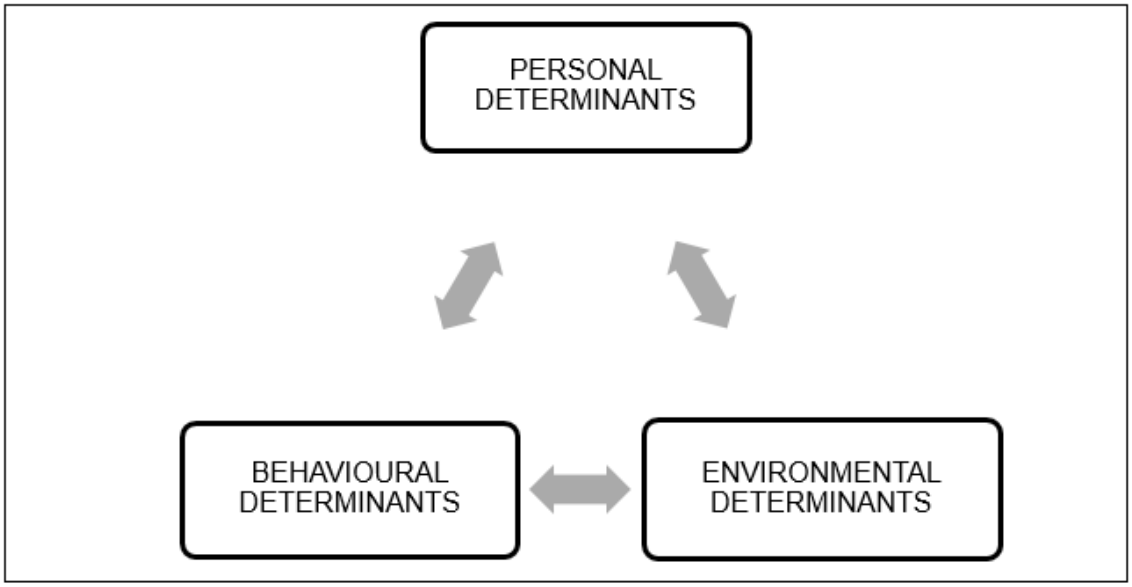


FIGURE 1: Bandura's Model of triadic reciprocality (Adapted by Zimmerman, 1989: 330)

In this study, the **Personal determinants** for teachers involve the training that they have had, and their teaching knowledge and perceptions of self-regulated learning. Also, teacher's self-efficacy, their thoughts, feelings, beliefs and motivational aspects, knowledge, skills, and confidence to developing self-regulated learning skills in their learners. In this study, personal determinants for learners include their thoughts and attitudes about their learning capabilities, that affect their current learning and that inform their subsequent behaviours (Peel, 2017:61). It further includes their self-motivation to conduct tasks efficiently, and self-beliefs to attain their academic goals. 'Learners' self-efficacy perceptions depend on four other types of personal influences: their knowledge, metacognitive processes, goals and affect' (Zimmerman, 1989: 332).

The **Environmental determinants** of teachers in this study entail the social and physical factors that include parents, colleagues, classroom space and size, the Department of Education, as well as the social and working environment of teachers that influences their abilities to develop self-regulated learning skills in learners. However, the environmental determinants of learners involve their classroom, their school, home, peers, parents, as well as social and physical factors such as a noisy classroom, lack of furniture and resources in a classroom, or residing in the outskirts of urban areas, where there is a difficulty in accessing libraries or internet.

The **Behavioural determinants** of teachers in this study involve their teaching strategies, their choice of tasks, as well as their efforts to develop learners' self-regulated learning skills. This includes, how they apply positive reinforcement and motivation in their teaching, such as complimenting learners for the proper execution of tasks. However, the behavioural determinants

of learners include their effort in learning tasks, the learning strategies they apply, their planning and goal setting before they commence with tasks, as well as their self-judgement, and self-evaluation during and after completion of a task.

Teachers can do many things at school to foster their learners' confidence and competence through contributing to the improvement of the learner's personal factors, their behaviour, and environmental factors (Tigist, 2013: 36). For example, teachers can motivate their learners and model self-questioning and task strategies through feedback that enhances learners' self-belief (personal factors); they can assist learners in their academic skills by teaching them to ask for help and to persist when they experience difficulties in learning (behavioural factors); as well as, change the classroom structure and design a conducive environment void of distractions, to enhance learners' concentration and motivation to complete tasks (environmental factors). When teachers provide learners with encouraging feedback, then learners will be motivated to work harder and perform better. Teachers who create a positive classroom environment will allow learners to be more engaged in class tasks (Zimmerman & Schunk, 2007:8).

Many researchers have created self-regulated learning models based on the triadic reciprocality model of Bandura (1986). For example, Zimmerman (1998,2002) proposed a cyclical self-regulated learning model of three phases of self-regulated learning, namely; the forethought phase, performance/volitional control phase, and self-reflection phase (Nilson, 2013:9). The self-regulated learning model of Zimmerman (2000) is well known and frequently used in self-regulated learning research (Zumbrunn, Tadlock & Roberts, 2011:4). The model clearly illustrates the self-regulated learning skills self-regulated learners apply, and identifies the self-regulated learning skills teachers should develop in learners. Within each of the three cyclical phases, are main processes and sub-processes, which illustrate the mental processes and behaviours self-regulated learners demonstrate during their learning processes. Zimmerman and Moylan (2009) adapted Zimmerman's (2000) model by adding more sub-processes in the volitional phase of the model. The self-regulated learning model of Zimmerman and Moylan (2009) was relevant for this study since these researchers also view self-regulated learning through the social cognitive theoretical lens.

In the next section, the self-regulated learning model of Zimmerman and Moylan (2009) is discussed, to highlight the skills self-regulated learners apply and direct what self-regulated learning skills teachers should develop in learners.

2.1.1.6 Zimmerman and Moylans (2009) SRL Model

As previously mentioned, Zimmerman and Moylan's (2009) self-regulated learning Model has three cyclical phases presented in Figure 2 below.

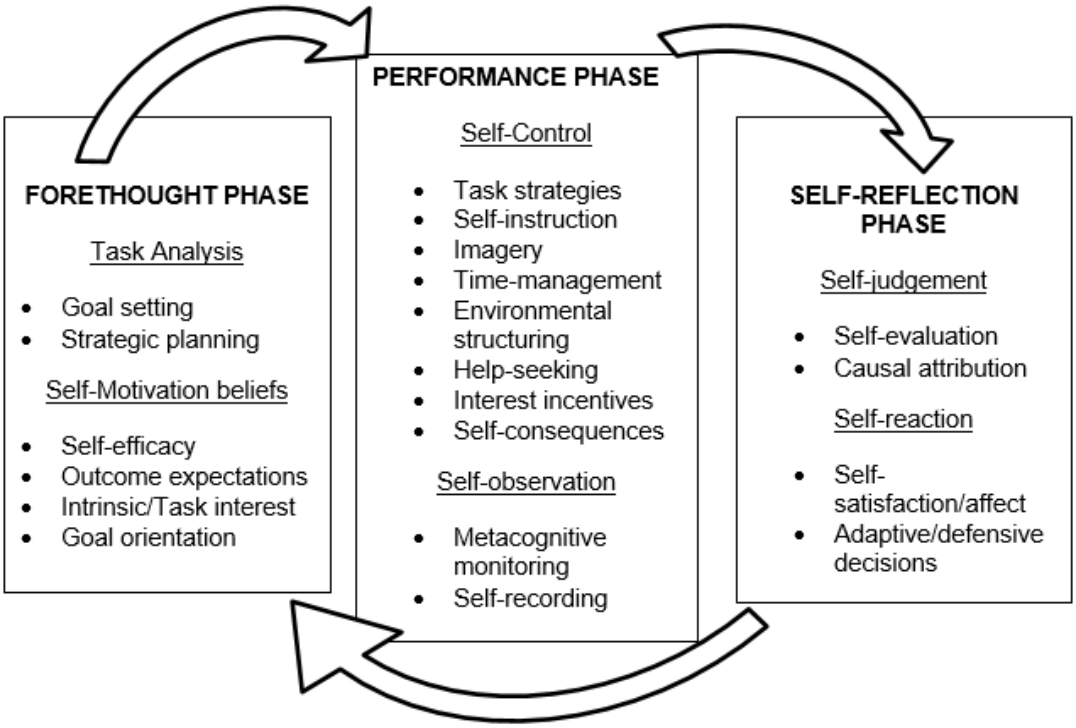


Figure 2: A cyclical phase model of self-regulation that integrates metacognitive processes and key measures of motivation (Zimmerman & Moylan, 2009: 300)

2.1.1.6.1 Forethought Phase

Zimmerman and Moylan's (2009) model of self-regulated learning highlights the forethought phase, which entails learners planning in advance on how to approach and conduct their academic tasks (Joseph-Edwards; 2019: 7). The forethought phase requires learners to identify goals and self-beliefs in relation to intended tasks (Lear, Li & Prentice, 2016:13; Alvi et al., 2016:43).

The forethought phase refers to the processes and beliefs that occur prior to learning (Zimmerman, 2000: 16). Jossberger et al. (2010:11) state that, in this phase, 'the learner prepares and orientates initial plans and steps to complete a learning task'. The first main process under the forethought phase is task analysis, which includes sub-processes, goal setting, and strategic planning.

The second main process involves self-motivation beliefs and has sub-processes self-efficacy about one's learning, outcome expectations about the personal consequences of learning, and intrinsic interest in the task and goal orientation (Zimmerman & Moylan, 2009:300). Next, the main processes and sub-processes of the first phase are discussed in more detail.

Task Analysis

'Task analysis involves analysing a learning task and its context into constituent elements and constructing a personal strategy from prior knowledge of these elements' (Zimmerman & Moylan, 2009:301). Task analysis includes setting specific goals and planning strategies, to achieve academic goals (Alvi et al., 2016:42). In addition, the goal-setting and strategic planning processes are influenced by learners' motivational beliefs to strategically plan to attain their goals (Joseph-Edwards, 2019:7). According to Haibach, Reid, and Collier, (2011:179), task analysis also entails the activation of learners' perceptions about the difficulty of the task, as well as their knowledge of the task. Self-regulated learners analyse the learning task, set a clear goal, make a plan, and select strategies for achieving the goal. To elucidate this point, when learners encounter unfamiliar topics and do not know the most appropriate way to conduct the task, or what goals may be the most appropriate; teachers and more experienced peers can instruct and assist them on effective approaches in such situations.

Goal Setting

Goals are characterised by the amount of time that they take to be achieved (Tigist, 2013:37). Tigist (2013:37) mentions that 'if goals are achieved within a short space of time, it is called proximal goals.' Proximal goals are more effective than distal goals (long-term goals) since distal goals involve higher motivation of an individual, as well as better self-regulation over a long period. For example, if a self-regulated learner has to study for an upcoming test, they will tend to focus on all aspects of the content that needs to be revised, whereas their long-term goal may be gaining admission to University when they have completed their Grade 12 examination. Zumbrunn et al. (2011:9) observe that in the classroom, goals may be as simple as earning a good grade on an exam, or as detailed as gaining a broad understanding of a topic.

Self-regulated learners are goal-driven and will work diligently to achieve their proximal goals (attaining good results in their tests and examinations during their schooling years), but still work towards their distal goals. Goals can be regarded as the standards that regulate an individual's actions. When learners attain their proximal goals, they may become motivated to reach their distal goals. Research suggests that, when teachers encourage learners to set proximal goals, learners may become more enthusiastic to monitor and reflect on their academic performance (Zumbrunn et al., 2011:10).

By setting self-initiated goals, learners may develop their standards, which will assist them in attaining their set goals (Joseph-Edwards, 2019:11). Setting goals is a crucial aspect that should be considered by self-regulated learners. Having learners set positive goals prepares them for later self-regulating practices (Nilson, 2013: 17).

Strategic Planning

'Strategic planning refers to choosing or constructing advantageous learning methods that are appropriate for the task and environment setting' (Zimmerman & Moylan, 2009:301). For instance, when learners link their strategic plans for learning to short and long-term goals in a sequential system, they can practice self-regulated learning effectively by themselves over long periods. Strategic planning can help learners self-regulate their learning prior to engaging in learning tasks. Planning occurs in three stages; (i) setting a goal for a learning task, (ii) establishing strategies for achieving the goals, and (iii) determining how much time and what resources will be needed to achieve the goal (Zumbrunn et al., 2011: 10).

Self-regulated learners set specific goals for learning, and make strategic plans to achieve their academic goals (Alvi et al., 2016: 40) Self-regulated learners plan ahead, prepare for their academic tasks and further plan how to approach them (Joseph-Edwards, 2019: 8). Planning and goal setting steer the wheel in the direction to learn and set the pace for learning (Geduld, 2017: 145). Added to this, self-regulated learners set learning goals and use and adapt cognitive strategies to achieve these goals.

Self-Motivational beliefs

As mentioned earlier, the second main process in the first phase involves self-motivation beliefs. These include self-efficacy beliefs, positive outcome expectations about learning, intrinsic interest in the task, and goal orientation (Nilson, 2013:9; Joseph-Edwards, 2019:8).

Self-motivation refers to an individual's innate ability to learn (Tigist, 2013:37). Learners who are highly self-efficacious tend to choose challenging academic tasks and display positive attitudes towards learning (Tigist, 2013:38). For example, if learners have high self-efficacy beliefs about their capabilities to perform academically, and if they believe that what they learn at school will be beneficial for their future, either at University or work place; then they are more likely to be motivated to learn in a highly self-regulated manner (Tigist, 2013:38).

Self-efficacy is crucial in this phase, as it encompasses the learner's self-motivation and interest, which forms the basis to engage in tasks in an efficient manner. Self-motivation beliefs promote and sustain self-regulated learning because learners are more likely to invest time and effort using various strategies (Zimmerman & Schunk, 2008).

Self-Efficacy

'Self-efficacy beliefs can affect performance processes directly, such as one's choice of activities, their effort and persistence' (Zimmerman & Moylan, 2009:301). This means that learners' academic performance can be affected by the amount of effort and persistence they put into their learning activities. For example, if learners do not display motivation and persistence towards gaining favourable outcomes of learning tasks and activities, then they will gain poor results. Moreover, self-efficacy beliefs have an impact on the type and difficulty of the tasks that are chosen, and that learners engage in (Tigist, 2013:38). When learners demonstrate high self-efficacy, they are capable of selecting challenging academic tasks and display positive attitudes towards learning.

Outcome Expectations

'Outcome expectancies refer to beliefs about the ultimate ends of one's performance, such as receiving social recognition or obtaining a desirable employment position' (Zimmerman & Moylan, 2009: 301). For instance, learners' outcome expectancies depend on their awareness of various outcomes, such as the benefits that a profession may offer, the salary of a specific profession, and overall quality of life.

Outcome expectancy is a person's estimate that a certain behaviour will produce a specific outcome (Landry, 2003:19). In addition, an outcome expectation is a belief about the consequences of behaviour. For instance, learners who are confident in their map skills expect high marks on their Geography map work examination and expect the quality of their work to be commensurately rewarded. However, learners with negative outcome expectations set lower goals, and have lower motivation, or drive to complete academic tasks.

Intrinsic/Task Interest

'Intrinsic/ Task interest refers to one's liking or disliking of a task because of its inherent properties, rather than for its instrumental qualities in gaining other outcomes' (Zimmerman & Moylan, 2009: 301). Intrinsic/ Task interest refers to the learners' valuing of the task skill for its own merits (Tigist, 2013:38). If learners see the value and relevance of tasks, they tend to become more intrinsically motivated by the task, and put more effort in order to successfully complete it. Intrinsic motivation describes the innate propensity to pursue novelty and challenge, to extend one's skills, and foster growth (Frederico, Ezequiel & Lourenco, 2016:17). It has been found that intrinsically motivated learners show higher levels of task persistence, and are more committed to learning tasks than those who are not.

Goal Orientation

Goal orientation refers to learners valuing the process of learning for its own merits (Tigist, 2013:38). Goal orientation is known to positively affect performance in training situations (Frederico et al., 2016:16). According to Zimmerman and Moylan (2009, 302), 'learners' who adhere to a learning goal orientation or mastery goal orientation seek to improve their competence through learning, whereas those who adhere to a performance goal orientation seek to protect their competence perceptions through favourable comparisons with the performance of others'. Mastery orientations are positively related to knowledge acquisition and skilled performance, whereas performance orientation is usually extrinsically motivated to out-do others or to perform for approval from others (Zimmerman, 2002: 68). For example, mastery goal-orientated learners acknowledge that the subject matter in Life Sciences is interesting and that it is enjoyable to try and master it. That way they will be motivated to learn in a self-regulated manner.

2.1.1.6.2 Performance Phase

According to Zimmerman and Moylan's self-regulated learning model (2009:300), the first main process in the performance phase is self-control, which includes the following sub-processes; task strategies, self-instruction, imagery, time-management, environmental structuring, help-seeking, interest incentives, and self-consequences. The second main process in the performance phase entails self-observation, with sub-processes metacognitive monitoring and self-recording. The performance phase involves processes and sub-processes that occur during learning efforts, and influence concentration and performance to attain goals (Geduld, 2017:145). Learners implement the plans formulated in the forethought phase (Alvi et al., 2016:43). The main processes and sub-processes in the performance or volitional phase of Zimmerman and Moylan (2009), the self-regulated learning model, is explained next.

Self-Control

'Learners use of self-control methods involves a variety of task-specific as well as general strategies' (Zimmerman & Moylan, 2009: 302). These strategies are crucial to enhance the learners' performance in terms of the attention they display towards their work and the manner in which their efforts are efficiently utilised (Zimmerman, 2000:18).

Self-control sub-processes involve maintaining concentration, interest, and motivation in the learning episode (Joseph-Edwards, 2019:8). In addition, self-consequences, environmental structuring, time-management, self-instructions, and interest enhancement are some of the strategies used in this process (Joseph-Edwards, 2019:8). Self-monitoring and self-adjusting are central activities during the self-regulated learning process (Jossberger et al., 2010:12). Self-monitoring is crucial because learners need to track their performance, in order to make

necessary changes if more work needs to be done. Hence, strategies and techniques, such as self-control and self-observation, are applied to help learners focus on the task and improve performance (Jossberger et al., 201012). Zumbrunn et al. (2011:4) note that 'learners employ strategies to make progress on the learning task and monitor the effectiveness of those strategies as well as their motivation for continuing progress towards the goals of the task'. However, when strategies are new, learners tend to use more familiar, and sometimes ineffective strategies to complete tasks. For instance, if a learner reverts to rote learning and memorisation for a mathematics test (which is often the technique they use when studying for theoretical subjects such as History, English literature, or Geography), it may be an ineffective strategy for problem solving.

Task Strategies

'Task strategies refer to developing a systematic process for addressing specific components of a task, such as creating steps for multiplying fractions in mathematics' (Zimmerman & Moylan, 2009:302). Task strategies entail 'the assistance in learning and performance by reducing a task to its essential parts, by re-organizing the parts meaningfully' (Zimmerman, 2000:19). Effective task strategies may include highlighting content material, summarising, and using mnemonics (Joseph-Edwards, 2019:10). Nilson's (2013:3) study concurs that learners need to devise a plan for conducting their tasks effectively. For example, a learner may engage in the following tasks; listening attentively, taking down notes, highlighting material (keywords) as they read, conducting self-assessments such as quizzes, and writing a summary of what they have read and understood.

Another point in relation to task strategies in self-regulated learning is made in a study by Nunez et al. (2015:376), who maintain that 'when learners complete a reasonable amount of homework on a daily basis, it helps them develop study habits that facilitate learning and ultimately improve academic achievement.' Alvi, Iqbal, Masood, and Batool (2016:41) concur that 'positive study habits are strategic actions of learner's knowledge, skills, and behaviours, that allow them to effectively and efficiently perform their tasks. Moreover, findings in Alvi et al.'s (2016:53) study reveal that learners use a range of self-regulated learning strategies, starting from limited and shallow to wider, cognitively rich, and deep processing. In addition, the study identified notetaking and repetition (rehearsal and memorisation) as dominant strategies reported by learners. It is pivotal for learners to adopt effective strategies that enhance their self-regulated learning skills, and that impact on future learning, and not only equip learners to perform well in tests and examinations through rote learning. Lear, Li and Prentice (2016:21) observe that 'learning strategies affect the learner's selection, organization and integration of new information, thus increasing efficiency in learning and preparing learners for more independent learning'.

Self-Instruction

'Self-instruction refers to the overt or covert descriptions of how to proceed as one executes a task, such as self-questioning as one reads textual material' (Zimmerman & Moylan, 2009: 302). For example, teachers could prompt learners by presenting them with question stems, which can be used to develop effective self-questions. Appropriate stems allow learners to link new information with previously learnt information. The following examples of stems can be used by learners; (i) In what way is A related to B? (ii) How does it fit in with what we have learned before? (iii) What are the causes, impact, or strategies? (iv) What are the strengths and weaknesses? These aforementioned stem self-questioning methods can encourage learners to consider information more deeply, and apply it to new concepts.

Imagery

'Imagery is a self-control strategy that involves forming mental pictures to assist learning and retention, such as converting textual information into visual tree diagrams, flow charts, and concept webs' (Zimmerman & Moylan, 2009: 302).

The following is an example of how imagery is used by some learners. Many Grade 12 Geography learners remember content on the topic of rivers, by identifying the resemblance of a leaf to concepts that they learn in their Geography syllabus. Some learners picture an image of a leaf from a plant or tree and link it to the content of rivers. For instance, the veins of the leaf resemble tributaries of a river, the tip of the leaf depicts the source (starting point) of the river, the stem resembles the mouth (ending point) of the river, the acute angles where the smaller veins of the leaf join the central main vein may resemble the rivers confluence and interfluve. These geographical concepts can be learned through the use of imagery, whereby the learner relates an image to the geographical terms presented in the syllabus.

Time-Management

Time-management refers to strategies for accomplishing learning tasks on schedule. Such strategies include setting specific task goals, estimating time requirements for those tasks, and monitoring progress towards attaining those goals (Zimmerman & Moylan, 2009: 303). Time management entails the effective management of time to attain academic success (Joseph-Edwards, 2019:12). Homework time management can have a powerful effect on homework completion (Xu, 2010:37). For instance, when a learner allocates a certain amount of time to conduct their daily homework, they may become more familiar with the practice of self-regulated learning behaviours. These behaviours may include motivation to complete homework tasks,

monitor the amount of time spent on the completion of their homework, and also set the pace to complete their homework within the time frame they allocate for themselves. Productive homework behaviours include, among other factors, organising the study environment, managing time to meet deadlines, and concentrating on the tasks (Nunez et al., 2015:379).

Another point on the concept of time management is evident in the study of Orange and Hodges (2015) who observed that 'increases in time spent on distractions from the study, such as television and videos, can result in negative contributions to academic performance.' This calls for wise time-management and environmental structuring in order to be progressive in academic work.

Environmental Structuring

'Environmental structuring is a self-control method for increasing the effectiveness of one's immediate environments' (Zimmerman & Moylan, 2009: 303). Environmental structuring involves learners organising an appropriate study environment free of any distractions and is comfortable and conducive for learning (Joseph-Edwards, 2019:10). Nilson (2013:4) says that learners need to find out what environment is suitable for them to conduct their learning. For example, sensory inputs such as the place of study, temperature (humid, too cold), background sounds (television, music, noisy), physical position (classroom, home, library), access to electricity at home and schools (too dark environments), may enhance or impede learning. They should determine what sort of environment is suitable and conducive to engage in self-regulated learning.

Help-Seeking

'Help-seeking is a method of self-control that involves soliciting assistance when learning or performing' (Zimmerman & Moylan, 2009: 303). Help-seeking refers to seeking academic help with the aim of overcoming academic challenges (Joseph-Edwards, 2019:11). Learners may seek academic help from various sources, for instance, they may solicit assistance in the use of technology, from their peers, parents, and teachers. The relationship between technology usage and academic performance is confirmed by Eyyam and Yaratan (2014:31), who state that 'technology can be helpful in classroom settings by encouraging inquiry, helping communication, constructing teaching products, and assisting learner's self-expression.' Added to that, learners can connect with anyone around the world, and discuss topics they are interested in or have difficulty understanding, whilst engaging with other experts and scholars (Saxena, 2013:3).

Smith and MacGregor (1992:1) explain that 'collaborative learning is an umbrella term for a variety of educational approaches involving a joint intellectual effort by learners, or learners and teachers

together, whereby peers work in groups of two or more in order to search for understanding, solutions and exploring course materials together.' Malison and Thammakoranonta (2018:13) note that most learners have started doing collaborative learning using various technology devices to promote self-directed learning ability. Lear, Li, and Prentice (2016:12) say that it is important to investigate the ways in which learners can use technology-supported learning communities, communicate and share ideas, and develop knowledge with their peers to achieve set goals. It is evident in research studies that collaborative learning with peers, together with the teacher, as well as an integrated effort in the use of technology in the learning process, assists learners when they resort to help-seeking in order to gain more understanding of content in the self-regulated learning processes.

Learners can also seek help from parents to support their academic achievements. Parents are motivational resources and should foster positive engagement in school work when they provide help with homework and other school tasks (Nunez, Suarez, Rosario, Vallejo, Valle & Epstein, 2015: 394). Parental academic assistance, control, and support also promote learners' self-control and self-regulation of homework behaviours, at a time when homework assignments are more difficult and require learners' serious attention (Nunez et al., 2015:395).

Malebese (2013:26) notes that parental support and self-regulation contribute a great deal towards self-regulated learning behaviours. However, parents who complete their children's homework provide less opportunity for their children to develop independence, self-directedness, or self-imposed contingencies (Geduld & Mdakane, 2020:331). One way for parents to help their children is to develop and enforce family rules, like restricting television viewing, modelling good time management, to being approachable if needed by their children for academic tasks too difficult for them to conduct on their own. They should 'help children create a learning environment arrangement that promotes self-regulated learning' (Xu, 2008:82). Some parents believe that conducting their children's homework benefits them to gain academic success (Nunez et al., 2015:376).

Interest Incentives

The sub-process interest incentive 'seeks to render mundane tasks more attractive by increasing game-like qualities' (Zimmerman & Moylan, 2009: 303). Incentives are the means employed by teachers to evoke attitudes conducive to learning among their learners, such as when learners compete with their classmates in a quiz.

Self-Consequences

‘Self-consequences involves setting rewarding or punishing contingencies for oneself’ (Zimmerman & Moylan, 2009:303). What may be done by learners during school hours as well as after school, is switching off the cellular phone (punishing) in order to avoid disturbances and complete a task. In so doing, a learner may attain better academic scores (rewarding) in a test or examination due to avoiding distractions whilst studying.

Self-observation

‘Self-regulatory strategies need to be adapted based on learners’ outcomes, and this is why self-observation plays an integral role in learners’ efforts to self-control their performance’ (Zimmerman & Moylan, 2009: 303). Self-observation means that learners monitor their performance in a systematic manner (Zimmerman, 1989:333). Self-observation entails self-recording events and self-experimentation with personal events, to understand their causes. For example, learners may keep track of how they use their time to study. Learners may notice that they complete their work faster and more efficiently, when they conduct the task on their own, without any distractions, in comparison to working with peers (Tigist, 2013: 39). Joseph-Edwards (2019: 8) notes that in the self-observation process, the learner engages in metacognitive monitoring, where the learner evaluates their performance against set criteria. This process is very similar to the third phase of the cyclical model-self-reflection. The only difference is that, in the self-reflection phase, the monitoring takes place after the performance; whereas, in the self-observation, the monitoring takes place during the performance (Joseph-Edwards, 2019: 8). The second sub-process involved in self-observation is self-recording. Here, the learner traces and codes his/her actions as they are being performed.

Metacognitive Monitoring

‘Metacognitive monitoring refers to informal mental tracking of one’s performance processes and outcomes, such as one’s learning processes and their effectiveness in producing learning’ (Zimmerman & Moylan, 2009:303). Self-regulated learners use their metacognitive knowledge to identify their capabilities and motivation to pursue goals. They think about what they know, as well as what they do not know, and they plan strategically how to proceed with their learning (Peel, 2017:72).

Self-Recording

‘Self-recording refers to creating formal records of learning processes or outcomes, such as a graph of a learner’s spelling errors in their written assignments (Zimmerman & Moylan, 2009: 303). Creating a record of one’s efforts to learn is advantageous for learners because it increases the reliability, specificity, and time span of self-observation.

2.1.1.6.3 Self-reflection phase

The self-reflection phase is the final stage of Zimmerman and Moylan's (2009) model of self-regulated learning, in which the learner assesses the processes they undertook during their attempt to complete their tasks, and evaluates whether their methods were efficient enough to attain their goals. Learners ascertain whether they need to re-visit their strategies or attempt new methods to move towards the desired outcome and attain their goals. For example, the learner may acknowledge that the study material was too difficult to analyse, the environment that they attempted to conduct the task was noisy and not conducive for learning, or they undertook inefficient planning strategies. The learners' self-reflection and acknowledgement of their poorly initiated strategies lead to re-visiting and rectifying the strategies in their future attempts, thus; enhancing their self-regulated learning strategies directed towards reaching their set goals. A teacher's contribution in the self-reflection phase of learners could be creating an appropriate teaching and learning environment, as well as providing feedback to learners. A class that is attentive, not noisy, and engaged in questioning can also set the foundation for the essentials of a conducive learning environment, necessary for developing self-regulated learners.

The self-reflection phase involves two main processes. The first main process entails self-judgement, which includes self-evaluation of one's performance against some standard, and one's causal attribution of results (Zimmerman & Moylan, 2009:303). The second main process includes the degree of self-satisfaction, which enhances or undermines further motivation; and adaptive or defensive adjustments, which lead to more effective learning strategies in the future (Nilson, 2013:9). The self-reflection phase highlights learners' evaluation of their performance in the learning task, in terms of the effectiveness of the strategies that they chose (Zumbrunn et al., 2011:5). Added to this, learners should also manage their emotions about the outcomes of their learning experiences. Stoeger, Sontag, and Ziegler (2014: 799) say that the self-reflection phase begins after learning when learners evaluate the outcome of their learning.

This phase involves self-regulated learners evaluating their performance and making causal attributions about their performance (Geduld, 2017: 145). When a learner has accomplished a task, it is crucial for the learner to evaluate whether their plan and strategies were effective (Jossberger et al., 2010: 13). Such evaluation is pivotal and may contribute to the future learning experiences of the learner. Moreover, reflection is important for the learners, as they reflect on their previous learning experiences. From the reflections, the learner may draw on what is already known (prior knowledge) to gain new knowledge (what needs to be learned).

Self-judgement

Self-judgement has two sub-processes; self-evaluation and causal attribution (Alvi et al., 2016: 43). Self-judgement can be viewed as a consequence of self-observation, where the learners evaluate their performance against a standard or goal (Joseph-Edwards, 2019:8). Self-judgement involves a learner comparing their past performance, taking into account the cause of errors they have made or the success they have achieved (Zimmerman, 2002:68). In other words, self-judgement is a critical analysis conducted by a self-regulated learner, of their activities and behaviours towards attaining their set goals, by constant evaluation and tracking of their performances.

Self-Evaluation

Self-evaluation refers to comparisons of one's performance with a standard (Zimmerman & Moylan, 2009:303). Self-evaluation is a critical aspect of SRL in which learners self-appraise their current performance against set goals (Joseph-Edwards, 2019:12). Tigist (2013:1) posits that 'self-regulated learners monitor and evaluate their actions to identify their weaknesses, and they use self-encouragement to enhance their strengths. Self-evaluation allows learners to reflect on their learning methods and make alterations to strategies, to improve on their future tasks (Geduld, 2019:64). Nilson (2013:3) observes that the learner must constantly monitor his/her mind and behaviours to maintain focus and eliminate any distraction or self-discouragement, such as giving up and feeling that they are unable to conduct their tasks. Self-reinforcement is essential to learners, as developing a sense of self-encouragement and understanding the reason behind their success contributes to success in their future.

Causal Attribution

Causal attributions are defined as beliefs about the reasons for successes or failures to successfully complete a task (Zimmerman & Moylan, 2009: 304). Positive attributions generate self-satisfaction and negative attributions result in adaptive or defensive behaviours, that play an integral role in how learners cope with similar or different tasks in the future.

Self-reaction

Self-reaction includes two sub-processes; self-satisfaction and adaptive response (Alvi et al., 2016:43). Self-reaction involves learners evaluating their performance, which can trigger causal attributions (adaptive inferences or maladaptive inferences) that explain their performance (Joseph-Edwards, 2019: 8). Self-reaction involves the negative and positive evaluation of the

progress that learners make to achieve set goals (Tigist, 2013:40). Additionally, self-reaction implies that learners react according to the goals they have accomplished. In other words, self-reaction highlights processes that allow the learner to take self-initiated actions on what works for them in achieving set goals. It also involves self-critique on what hinders their ability to reach their desired goals.

Self-satisfaction/affect

Self-satisfaction is defined as cognitive and affective reactions to one's self-judgements (Zimmerman & Moylan, 2009: 304). Self-satisfaction is experienced when a learner successfully completes a task. Self-satisfaction results in higher motivation beliefs. For instance, when learners are satisfied with their progress and are pleased with their achievements, they may be more motivated to complete a given task, and adjust task strategies to further enhance their learning.

Adaptive/defensive decisions

Adaptive decisions refer to learner's willingness to engage in further cycles of learning by continuing their use of a strategy or by modifying it (Zimmerman & Moylan, 2009:304). Whereas, learners who demonstrate defensive decisions will avoid further efforts to learn in order to shield themselves from future dissatisfaction and aversive effects (Zimmerman & Moylan, 2009: 304). In adaptive inferences, learners change their cognitive strategies so that the learning goal can be attained. However, in maladaptive inferences, learners attribute poor performance to uncontrolled causes and demonstrate defensive behaviour such as procrastination, task avoidance, and cognitive disengagement (Joseph-Edwards, 2019:9).

In the next section, I provide my example to illustrate a learners' self-regulated learning in the three phases of self-regulated learning.

2.1.1.7 My example to illustrate a learners' SRL in the three phases of SRL

In order to obtain more insight on the major components of the self-regulated learning phases, let us take for example the situation of Sipho Nkosi, a Grade 12 learner from the KZN province in South Africa. In 2020, the global Coronavirus (COVID 19) pandemic has altered the lives of people. In the education sector, both teachers and learners were forced to engage in online teaching and learning during the countries' nationwide lockdown. Sipho Nkosi is generally a high-performing learner, who was further motivated during the pandemic to perform well in his upcoming National Senior Certificate (NSC) examinations.

In the forethought phase, Sipho begins to draw up a plan of what he would want to achieve in the upcoming examinations. Taking into account that Sipho considers learning valuable, and owing to the fact that he is highly self-motivated, he sets out to identify a goal that will bring him academic success. Hence, he sets a goal of attaining distinctions (A aggregates) in all subjects in his upcoming examinations.

In order to reach his goal, he recognises that devoting three hours per day for reviewing the content material in preparation for the examination is crucial (goal setting). Thereafter, he thoughtfully chooses the learning methods and techniques that will be fruitful in accomplishing the task. In addition, Sipho decides that highlighting content material, paraphrasing, generating mnemonics, and generating questions about the content would be requisite for achieving his desired goals (strategic planning).

The performance phase is where Sipho executes the plan set in the forethought phase. Thus, he selects the appropriate learning content (by going over past years NSC examination papers and also a scope provided by the Department of Education), spends three hours (time management) due to majority of the NSC examination papers duration is three hours (which may further train Sipho to manage his writing time more efficiently). In reviewing the content by paraphrasing, highlighting key concepts, generating mnemonics, and generating questions about the material (task strategies), Sipho contributes towards his self-regulated learning process. During his review, Sipho judges his understanding of the material (self-monitoring). He then takes note (self-recording) of the areas that are unclear or challenging, by placing an asterisk with a red pen next to the appropriate content.

At the end of the week, Sipho decides to review his progress towards getting a distinction for the examinations. In evaluating his performance, he realises that he did not always manage his time wisely when answering past year examination papers (he often exceeded three hours), as well as only spending 45 minutes in test preparation.

Environmental distractions such as his cellular phone, noisy siblings, television, and radio, laying on his bed whilst learning, and falling asleep; prevented him from meeting his test preparation target. He, therefore, decides to rectify the maladaptive behaviour (self-reaction) by studying in a quieter learning environment away from any distractions, switching his cellular phone off, not studying on his bed but rather at a table seated, for future learning. Furthermore, Sipho realises that there are still a few areas that he needs assistance in, so he decides that seeking assistance from his peers or teachers via Skype, online classes, or other social media platforms, is the best

method to improve on his performance during the upcoming examinations (adaptive behaviours). In his reflection, he ascertains that his performance would be a direct result of how much and how well he studies (causal attribution).

Teachers can assist learners in setting positive and attainable goals by asking learners to write answers to the questions relating to the reasons and purpose they attend daily lessons, and what they want to achieve in the subject. According to Nilson (2013:17), one goal-setting activity that has proven suitable for the development of SRL, is to have learners write an essay on 'How I earned an A for a test.' This exercise allows learners to track their activities and their behaviours on how they achieved a distinction in a test they previously wrote. The information they gain on their studying methods will assist them in setting goals for their future assessments and tasks. However, struggling learners who have not attained a distinction in any assessment should also be given a similar topic, explaining their behaviours that impeded their achievement of distinction grades. They would discuss the processes they would undertake to improve their strategies to achieve favourable results in the future.

Teachers can assist learners with methods of self-monitoring their performance, by showing learners how they (teachers) monitor performance in tasks, with the use of rubrics and marking memos as tools (criteria) to assess learners' performance. If learners are taught how to develop a rubric for tasks they conduct, they will be familiar with criteria used in various assessments, and the expectations of each subject and learning area they are involved in. That would improve their performance due to self-monitoring their set criteria and requirements for tasks they attempt on their own.

In the next section, Hiemstra and Brockett's (2012) self-directed learning model is discussed.

2.1.1.8 Hiemstra and Brockett (2012) SDL Model

According to Long (2000:20), 'success and quality of self-direction in learning are associated with the processes of self-regulation.' Hence, this study looks at the two models Zimmerman and Moylans' (2009) self-regulated learning model and Hiemstra and Brockett's (2012) self-directed learning model to gain insight into how quintile 4 and 5 secondary school teachers self-directed learning influence the development of self-regulated learning skills in their learners. Moreover, the use of these two models in the study provides a link between self-regulated learning and self-directed learning which highlights that active participation and goal-directed behaviours from both learners and teachers are common factors presented in both models.

As already mentioned, self-regulated learning and self-directed learning both involve setting goals and analysing tasks, and accomplishing the plan and self-assessment of the learning process (Saks & Leijen, 2014:192). Moreover, self-directed learning and self-regulated learning trigger metacognitive skills and intrinsic motivation. Saks and Leijen (2014:93) say that 'Self-regulated learning and self-directed learning involve processes and events, as well as internal processes regarding an individual's personality and aptitude, which focuses on setting goals and planning, enacting strategies, monitoring and reflecting.' The current study concurs with the views of Saks and Leijen (2014) in acknowledging the link between self-regulated learning and self-directed learning, as the lens through which this study is viewed.

In my study, I used Hiemstra and Brockett's (2012) PPC Model. The PPC model encapsulates the person (the learner is the teacher as participant), the process (effective learning), and the context (conducive learning environment).

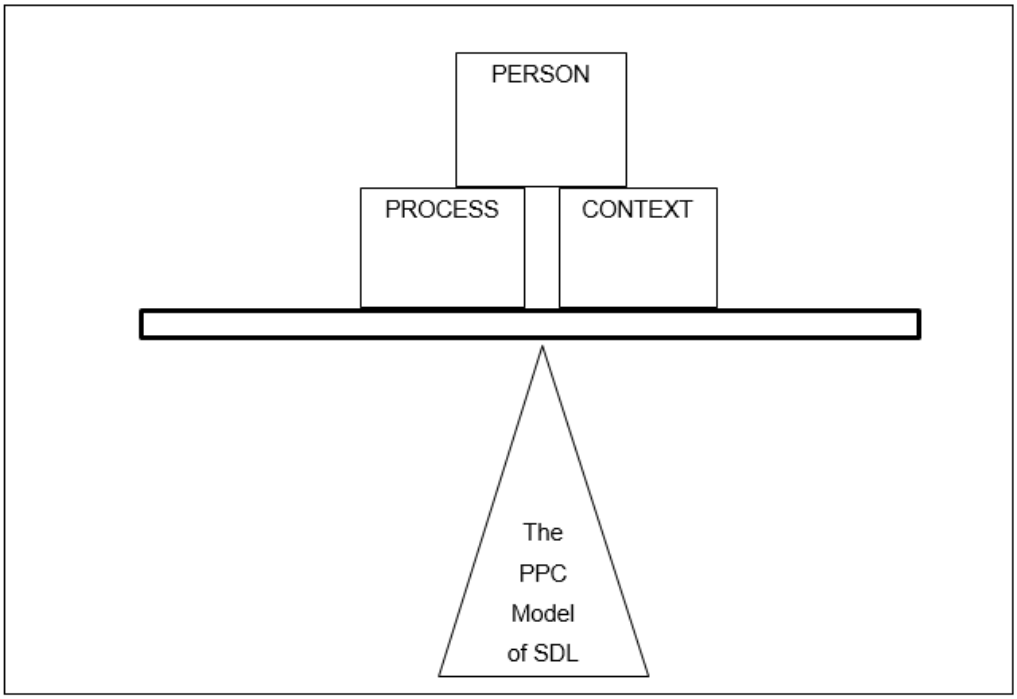


FIGURE 3: A Scale depicting the balance between the Person Process and Context of SDL: Hiemstra and Brockett (2012:159)

The above diagram (figure 3) depicts a scale which indicates that 'the PPC Model can be best understood when the three elements Person, Process and Context are in balance (Mentz, De Beer & Bailey, 2019:105). According to Hiemstra and Brockett (2012: 159), this balance entails the learner (which are the teacher participants in my study) being highly self-directed, the teaching-learning process being constructed in ways that allow learners to take control of their learning, and the socio-political context and learning environment being supportive of self-directed learning. Beard (2016:33) concurs with the views of Mentz et al. (2019:106) that 'the authors of

the PPC Model believe that the Model aims to guide future self-directed learning research and is viewed as the 21st century vision for self-directed learning.' Beard (2016:33) posits that the 'person' component represents characteristics of the individual; the 'process' involves teaching-learning transactions like learning skills, technological skills, and learning styles among other characteristics; and the 'context' component highlights environmental and socio-political aspects.

The model also highlights the importance of the sociocultural context of self-directed learning. The person, process, and context model of Hiemstra and Brockett (2012) was useful in this study to ascertain the way in which personal, process (teaching and learning transactions) and contextual factors of participants influenced the development and enhancement of self-regulated learning skills in their learners. In this study, the 'person' component presented characteristics of the teacher participants; the 'process' involved participants teaching-learning transactions with their learners when they developed or enhanced self-regulated learning skills; and the 'context' component highlighted the socio-economic contexts of the schools and the school communities where they taught.

Beard's study examined the relationship between self-directed learning and teachers' confidence to integrate technology into their classroom practices (Beard, 2016:46). Teachers' confidence is pivotal in self-directed learning. Teachers need to enter the teaching arena as confident self-directed individuals with knowledge of self-directed learning and self-regulated learning, in order to be able to develop and enhance self-regulated learning skills among their learners. After reviewing the literature on self-regulated learning and self-directed learning, it emerged that teachers needed to be confident in planning and implementation of tasks, they needed to be confident in teaching-learning transactions with their learners in order to develop learners' self-regulated learning skills, and they further needed to display confidence in tackling socio-economic challenges that they encountered in the schools where they taught.

The PPC model highlights the complexity of self-directed learning, incorporating the personal and contextual factors that affect the process of self-directed learning (Sawatsky, Ratelle, Bonnes, Egginton & Beckman; 2017:2). Sawatsky et al. (2017: 9) notes that contextual factors such as learning environment and culture can affect both the process of and personal motivation for, self-directed learning. Moreover, personal growth can influence the process of self-directed learning. Mentz et al. (2019:105) concur with the views of Curran, Gustafson, Simmons, Lannon, Wang, Garmsiri, Fleet, and Wetsch (2019: 78) who posits that 'while previous models centre the individual as the focal point in understanding self-directed learning, the PPC Model acknowledges the optimal situation for self-directed learning is when the person, process and context are in balance.' Self-directed learning is most effective when the socio-political context and the learning

environment all support the learner. Ali (2019:25-26) posits that ‘as humans mature, the way they learn and the reasons why they learn to change.’ A key change is the desire for self-direction and learning, that allows self-direction to yield better engagement and better learning outcomes. However, learners must be taught how to self-direct their learning; a lifelong skill offering opportunities to implement learning activities (Ali, 2019: 58).

Teachers need to understand the purpose and strength of supporting learners’ self-directed learning, to foster self-directed learning behaviours. Sebotsa, Kriek, and De Beer (2019:354-355) note that ‘teachers play a vital role in creating motivational spaces in their classrooms.’ Furthermore, teachers need to be self-directed learners in order to improve classroom interaction, develop practical work opportunities embedded in inquiry learning, and engage in innovative assessments (Sebotsa et al., 2019:358).

Learner self-direction in Hiemstra and Brockett’s model (2012) entails the personal traits of the learner, their needs and characteristics, in order to attain learning goals. Similar views are cited by Knowles (1975: 14) who maintains that learners who take a keen interest and willingness (positive behavioural traits) towards self-directedness are able to learn more effectively, than those who constantly need direct instruction. In addition, self-directed learners conduct their learning with great depths of self-motivation and purposefulness and possess great methods of remembering content and gaining knowledge.

2.1.1.8.1 Linking Zimmerman and Moylan’s SRL model and Hiemstra and Brockett’s SDL model

Self-regulated learning and self-directed learning involve active engagement and goal-directed behaviours. Moreover, both ‘self-regulated learning and self-directed learning entail goal setting, task analysis, implementation of the plan that was constructed and self-evaluation of the learning process’ (Sofie, Loyens, Magda, Remy & Rikers; 2008:417). In the self-regulated learning literature, these self-regulated learning skills are described as main and sub-processes under the forethought, performance, and self-reflection phase which Zimmerman & Moylan (2009) describe (*cf. 2.1.1.1.6.1 to 2.1.1.1.6.3*). In self-directed learning literature, these components (characteristics of teacher participants, participants teaching and learning transactions with their learners in developing self-regulated learning skills among their learners, and the socio-economic contexts of their schools and the communities where they teach) are highlighted in the Person-Process-Context (PPC) model of Hiemstra and Brockett (2012).

The forethought phase (which highlights an individual's innate ability, activation of goal-setting efforts, self-motivation, belief, personal interests, and self-efficacy) is similar to the personal characteristics highlighted in the 'Person' component of the PPC model of self-directed learning of Hiemstra and Brockett (2012). The 'Person' component includes characteristics of the individual, which entail creativity in planning, enthusiasm to conduct a task, critical reflection, life experiences, motivation, and a positive self-concept. The 'Personal' influences highlighted in Hiemstra and Brockett's (2012) PPC model of self-directed learning can also be linked to Zimmerman and Moylans' (2009) views on self-efficacy beliefs that explain how learners' thoughts and attitudes about their learning capabilities can affect their current learning and inform their subsequent behaviours (Peel, 2017:61). Geduld (2019:63) highlights personal determinants similar to 'personal' influences highlighted in the PPC model of a self-directed learning model by Hiemstra and Brockett (2012). These include thoughts, feelings, beliefs, and other motivational forces that allow teachers to develop self-regulated learning skills in themselves and learners.

The performance phase, which emphasises self-monitoring, self-instruction, attention focusing, application of task strategies, self-observation, self-control, and self-recording, are similar to the aspects highlighted in the 'Process' concept of the PPC model of self-directed learning. Hiemstra and Brockett (2012: 158) posit that the 'process' component involves the teaching-learning interaction, and includes facilitation, learning styles, planning, organising and evaluating abilities, teaching styles, and technological skills. Similar components are highlighted in the self-regulated learning model of Zimmerman and Moylan's (2009) performance phase. For example, learners' application of different task strategies and concentration are important during learning and influences one's focus and behaviour (Stoeger, Sontag & Ziegler, 2014:799). Moreover, the 'behavioural' determinants highlighted in the social cognitive theory can also be associated with the performance phase of self-regulated learning. The 'process' component of the PPC model of self-directed learning as behavioural determinants which include 'self-discipline and effort' (Nilson, 2013:5), as well as 'influences to learner's experiences and their observations impact on the ways that they respond through strategic actions and decisions (Peel, 2017: 61).

The self-reflection phase highlights self-judgement and self-reaction, in which learners go through a process of self-evaluation and causal attribution. They observe their performance according to their self-evaluation and try to identify the causes of their own mistakes and successes during causal attribution (Alvi et al., 2016:42). The 'Context' component of the PPC model of self-directed learning, encompasses the environmental and socio-political climate such as culture, power, learning environment, finances, gender, learning climate, organisational policies, political milieu, race, and sexual orientation (Hiemstra & Brockett, 2012: 158). These context components are not mentioned in the model of Zimmerman and Moylan (2009), but many of these context components

can influence the development and enhancement of self-regulated learning, and help learners evaluate and judge their failures and successes in learning. For example, some learners may perceive their failures in learning to be attributed to poverty, inadequate access to basic services, lack of study facilities, and various other socio-economic factors. Vandevelde, Van Keer and Merchie (2017:115) opine that learners from low socio-economic backgrounds and ethnic minority learners have more difficulty in engaging in self-regulated learning behaviours. Bayat, Louw, and Rena (2014:183) concur that in South Africa, poorer learners perform worse academically due to hunger, ill health, lack of parental support, inadequate access to basic services and housing, and lack of resources in classrooms. However, learners from more affluent socio-economic backgrounds may attribute their success to possessing proper and adequate study facilities, hailing from financially stable backgrounds, attending well-resourced schools, and enjoying more parental support.

Some of the context components of self-directed learning can be linked to the self-reflection phase, as learners depend on a conducive learning environment to engage in progressive learning. For example, when learners self-evaluate their own mistakes, they may acknowledge that learning in a quieter learning environment, instead of learning whilst listening to music or watching television, will positively contribute to their academic performance. As for teachers, some may find it difficult to create a conducive learning environment for learners to engage in self-regulatory learning behaviours, especially in cases where there are high enrolment figures and shortage of resources in classrooms. For instance, some older teachers are challenged to develop self-regulated learning skills among their learners, as they perceive that they have been trained in a different education system, and others struggle to adjust to different curriculum changes and new editions to teaching and learning (Baloyi, 2020:25).

In yet other cases, ‘teachers may be disheartened by the environment or culture in which the school is in, issues such as violent learners, poor living conditions, lack of basic resources, teenage pregnancy, and demotivated learners’ (Baloyi, 2020:26) These can affect teachers’ enthusiasm in developing and enhancing self-regulated learning skills among their learners. Baloyi (2020:26) further states that ‘English medium of instruction is a barrier to teaching and learning,’ especially where both teachers and learners have limited proficiency in it. English as a medium of instruction disadvantages African language speaking learners, in terms of gaining confidence in the language of instruction, and in understanding lesson content presented in English.

In addition, environmental influences highlighted in the social cognitive theory can be linked to the ‘context’ component of the PPC model of self-directed learning. The environmental influences

derived from the physical design of the classroom and the social interactions that occur within it, impact learner's opportunities to engage purposefully in the social learning system (Peel, 2017:61). Geduld (2019:63) notes that 'environmental determinants are social and physical factors and contexts that can affect an individual's behaviour.'

2.1.1.8.2 Person, process, and contextual influences on teachers' abilities to develop and enhance SRL skills

There are various roles teachers play in the development of self-regulated learning skills. In this section, some of the person, process, and contextual influences on teachers' development of self-regulated learning skills in learners, as identified from the literature, are discussed under the components of the PPC model of Hiemstra and Brockett (2012). As indicated earlier, the 'person' component will present characteristics of the teacher participants, the 'process' involves participants' teaching-learning transactions with their learners when they develop or enhance self-regulated learning skills, and the 'context' component highlights the socio-economic contexts of their schools and the school communities where they teach.

To promote self-regulated learning in classrooms, teachers should teach learners the self-regulated processes that facilitate learning (Zumbrunn et al., 2011:9). According to several research studies, these processes include goal setting, planning, self-motivation, attention control, flexible use of learning strategies, self-monitoring, appropriate help-seeking, and self-evaluation (Zumbrunn et al., 2011:9). Teachers play a crucial role in promoting self-regulated learning (Peeters, Backer, Reina, Kindekens, Buffel & Lombaerts, 2014: 1963). Teachers need to constantly be updated with new knowledge because some teachers have been trained many years ago, and their teaching skills may not be adequate for challenges posed in their current teaching experiences (Peeters et al., 2014: 1964). For instance, they need to seek help from mentors, look for feedback and search professional literature for new ideas. It is for this reason that self-regulated teachers are mostly described as 'proactive agents who trigger certain educational beliefs, construct appropriate instructional practices accordingly, and proactively control the teaching environment and conditions' (Peeters et al., 2014: 1965). Geduld, (2017:144) notes that 'teachers who engage in the development of self-regulated learning skills among learners will help many struggling learners to attain academic success, as well as improve learner pass rates.'

In the following section, determinants that influence teachers' development and enhancement of self-regulated learning are explained under the following headings; Person, Process, and Contextual determinants that influence teacher's development of self-regulated learning skills.

2.1.1.8.3 'Person' determinants that influence teacher's development and enhancement of SRL skills

Teachers can promote self-regulated learning skills among their learners in a direct and indirect manner (Dignath, 2016: 84). The direct way involves providing learners with strategies, knowledge, and skills on methods to self-regulate. The indirect manner to promote self-regulated learning skills is through offering a conducive environment in which learners' self-regulated learning skills can be developed with ease. Learners' self-belief grows when teachers create a conducive self-regulated learning classroom environment. A positive attitude from teachers contributes to learners' willingness to engage in self-regulated learning. However, negative attitudes from teachers restrict the development of self-regulated learning in the classrooms, thus; resulting in uninterested and inattentive learners. This is in line with Jossberger et al.'s (2010:6) observation that student learning takes place in a social environment that requires the interaction of both learners and teachers.

Self-regulated learning can be emulated by learners only when teachers start modelling the characteristics of a self-regulated learner, and creating possibilities for learners to be self-regulated, such as allowing learners to make their own choices in learning. This may lead to learners being motivated due to teachers' beliefs in their capabilities to achieve the desired learning outcomes. Teachers need to build a cooperative learning environment in which learners are engaged in practices of their learning, and are available to their learners for consultation during the learning process (Melzner, Griesel, Dresel & Kollar, 2019: 318). Furthermore, to be able to effectively apply and promote self-regulated learning in a classroom, the teacher must be self-regulated.

Another crucial personal determinant that influences teachers' development and enhancement of self-regulated learning skills is teacher efficacy. Teacher efficacy is related to teachers' academic achievements (Powers, Kaniuka, Phillips & Cain; 2016:1). Research studies have found that teachers display much improvement in their self-efficacy, motivation of learners to believe in themselves, and encouragement of learners to value learning (Powers et al., 2016:13) when they seek assistance from their colleagues of outstanding performance. Teachers can engage with high-performing colleagues to appraise what they are doing right, and how they engage learners to attain academic excellence. Teachers can also learn from colleagues how to develop efficient classroom management strategies, as well as how to come up with good questioning methods to gain ultimate learner engagement in self-regulated learning practices. The development of a

teacher's self-efficacy is crucial in the teacher's performance in the classroom, which in turn, leads to learners' high academic achievement. Self-regulated learning strategy development can be observed through vicarious experiences, when teachers observe their colleagues' strategies and learn from them, (Departmental Heads or peers). The Department of Basic Education, for example, attempts to bridge this gap between theory and practice of self-regulated learning skills, with the implementation of the Integrated Quality Management Systems (IQMS). The IQMS comprises the Personal Growth Plans (PGP) and developmental needs of educators which highlights the process supporting educators at schools.

Similar to Zimmerman and Moylan's (2009) self-regulated learning phases of forethought, performance, and self-reflection, the IQMS stipulates four phases of the performance management cycle of teachers. The first phase is the 'planning performance' and deals with teachers setting objectives, outlining development plans, and getting commitment. The second phase pertains to 'maintaining performance' where teachers monitor performance, coach, and mentor, and make interventions related to support, development and feedback. The third phase involves 'reviewing performance', which entails informal reviews, formal reviews, and assessments against objectives. Finally, the fourth phase, 'rewarding performance', deals with pay progression, resulting in equal performance (SACE Mini seminar, 2014).

The process of IQMS in South African schools is an example of Departmental Heads observing teachers' lessons, and providing feedback on improvement strategies. However, most often, the Departmental Heads check teachers' record keeping, files, and learners' notebooks, but do not assist feedback to better engage learners or suggest new strategies to assist learners to achieve better results through ideal learning practices.

Teachers promote self-regulated learning through their own beliefs on instructing self-regulated learning pertaining to their self-efficacy (Dignath, 2016: 83). Studies have indicated, that teachers differ a great deal in the manner they approach their personal learning experiences. Some are lifelong learners, while others do not take the initiative to study further. Delfino and Persico (2018:840) argue that if teachers must empower their learners to achieve better, they need to learn to self-regulate their learning. Moreover, for learners to acquire high levels of strategic skill, they often require encouragement and motivation from their teachers' (Martinez-Ponz, 2002:127).

Teachers need to make active efforts to model various forms of self-regulation in the classroom and to provide social feedback and support for students to emulate (Martinez-Ponz, 2002:127). Person determinants also include the strategies teachers use to develop self-regulated learning. For example, teachers can encourage learners to engage in tasks at home on their own. The

influence of homework on academic performance is highlighted in several studies (Kitsantas & Zimmerman, 2009; Bembenutty, 2011; Ramdass & Zimmerman, 2011). Increase in homework hours brings about a positive outcome in learners' academic performance. In Orange & Hodges' (2015:10) study, findings indicate that learners who practise self-regulatory behaviours such as effective study skills, good attitude, high motivation, and high self-efficacy, achieve academically.

2.1.1.8.4 'Process' determinants that influence teachers' development and enhancement of SRL skills

'A useful approach towards self-regulation in the school curriculum is team/group work' (Rajabi, 2012:374). In classes where learners have the opportunity to work with their peers, the prospect of self-regulation appears to be more promising. However, peer or group work is more difficult in quintile 1 to 3 schools, due to overcrowded classrooms that lack furniture and space. However, team/group work can be more effective in higher quintile schools due to larger classroom space (spacious), moderate enrolment of learners, sufficient furniture that can be arranged differently (grouped) to accommodate group work, ample resources (textbooks, learner study guides, worksheets), and where all learners are in possession of, in order to enhance self-regulatory behaviours, such as help-seeking from their peers.

According to Powers et al. (2016:14) peer coaching is one of the most influential methods of teacher professional development, that assists with the revival and re-awakening of teaching practices among all teachers and contributes to teaching skills that promote self-regulated learning. During non-teaching moments, teachers should be allowed to observe other teachers' (those who attain outstanding learner pass rate) behaviours and daily practices that encourage self-regulated learning skills development among the learners. Learning from other experiences is often an effective method to attain new strategies for one's self-development. In the same way, that vicarious learning may also allow learners to model the similar behaviours they observe from their teachers. Observations may develop a substantial amount of dedication and commitment towards any task teachers may engage in. Teachers should share their learning strategies with learners (strategies they implemented during their years as a student), which they used to attain their academic achievements. This method may reinforce learners' beliefs that they are also capable of learning effectively on their own. Teachers can also ascertain that failure to achieve a good result after a task has been completed by a learner does not mean that the learner is weak or a slow learner, but the process of planning, goal setting, implementation of the task, and reflection may have been inefficiently organised. Although the outcome may not be the learner's desired result, the teacher can encourage the learner to follow a more effective approach in future tasks (Powers et al., 2016:14).

Interacting with learners, teachers need to assist learners to improve their self-efficacy beliefs. For instance, if the learners have conducted a certain task in the past and excelled, teachers can encourage their learners that they are capable of attaining a similar outcome through the use of proper planning, strategies, setting attainable goals, and evaluating the outcome of their achievements to see whether their methods are effective or not. Learners may develop self-belief, and acknowledge that they are capable of accomplishing anything they set their minds on.

Another suggestion is that teachers need to inform their learners what exactly a self-regulated and self-efficacious learner does to achieve academically. For instance, teachers should mention that high-flyers challenge themselves with difficult tasks to test their wings; they invest the effort to meet their goals; and they do not regard failure as a set-back, but rather a challenge to do better in their next attempt (Margolis & McCabe, 2006). Teachers should engage in moderate to difficult tasks, slightly above learners' current ability level. Too simple tasks will be a bore to learners with high self-regulatory learning skills, and may not be a challenge. However, tasks should not be too difficult as this may lower learners' self-efficacy and contribute to their low academic performance. Teachers need to teach specific self-regulated learning strategies. For example, give learners a solid plan of action for working on tasks, and guide the process after they begin to implement the strategy on their own.

Teachers should engage in various strategies to foster self-regulated learning strategies, as well as guide learners in using self-regulated learning methods. They should establish their objectives by coming up with stimulating means relating to tasks and activities completion. Teacher's use of scaffolding and modelling are key components of self-regulated learning. Teachers must help learners to achieve their (learners) goals. Goals can pertain to examination achievement, career goals, or learning goals. For example, teachers can ask their learners to write down their short-term, and long-term goals, as well as the necessary steps they will take to attain them. A teacher can write on the chalkboard what their goals were during the years they were students, and the necessary measures they took to work towards their goals and attain them. The teacher can display on the chalkboard the processes they had undertaken in order to accomplish their goals. The requirements of learners to work towards their objectives should be clearly emphasised for learners to develop some hope, self-determination, and willingness to tackle any aspect they set their minds to (Martinez-Ponz, 2002:127). Prabha, Jayawardena, Christina, Van Kraayenoord and Carroll, (2017: 195) observe that 'teachers could also assist learners to develop their learning independently by allowing learners to take responsibility in their learning.' Teachers need to inform their learners that learning on their own is a task that they alone are responsible for, and the outcome of their learning reflects the amount of initiative and effort that they put in. There is a

need for intense reflection and revision towards favourable and progressive outcomes in the future.

As a strategic intervention, if learners are given the opportunity to select their topics for assignments, they will gain the confidence and strive to give their best because they would have been recognised as important and capable of progressive and self-directed learning (Harding, Nibali, English, Griffin, Graham, Alom & Zhang, 2018: 14). For instance, I often ask my Grade 12 Geography learners to come up with research topics during the first term of the school relating to the content they will be studying for the year. Research assignments are usually due in the third term. Learners begin familiarising themselves with all the content they will learn for the year by going over their suggested readings, textbooks, and internet sources. They bring to class their topics after a week. I group similar content areas and allow group discussions on similar topics. I then ask them to summarise their topics to form one logical statement or question that ultimately becomes the main research topic. I give the learners a week to work on the formulation of topics and discuss their efforts with the rest of the class. Thereafter, I include all learners' topics (usually 7 to 8 topics depending on the number of groups) into one major research assignment. By so doing, learners develop a sense of motivation and display eagerness to tackle the research assignment that they have played a major part in formulating.

Self-regulated learning skills provide learners with methods to deal with their feelings, actions, and responses when they battle with situations beyond their capabilities. However, the inability of learners to regulate their learning may lead to their inability to modify and monitor behaviours using fundamental processes of self-regulated learning, like metacognition, motivation, self-awareness, and self-efficacy, in order to reach the desired learning outcome (Harding, Nibali, English, Griffin, Graham, Alom & Zhang; 2018:6). Moreover, learners who are unable to practice self-regulatory skills in learning may need more direct instruction. Conversely, self-regulated learners may not benefit from instructions or teacher assistance, because of already possessing their methods to learn more effectively (Zimmerman, 2002:65).

Another factor that advantages the development of self-regulated learning skills among their learners is how regularly learners are allowed to consult with teachers, and how available teachers are to give learners advice and solutions to their learning problems. 'Through such a process of interaction and negotiation with teachers, learners receive the kind of support they need for independent learning' (Rajabi, 2012:374). For example, during such interactions with learners' teachers can scaffold and direct them with processes such as planning, goal setting, and task strategies for them to be self-motivated and to complete tasks.

Teachers can focus on learners' strengths, progress, and the process of developing self-regulated learning skills. Teachers need to notice the small steps learners take towards achieving their personal best (Mulube & Jooste, 2014:1778). Teachers need to be the example for their learners and assist learners in writing their goals and preparing their minds and attitudes to become self-regulated and disciplined learners (Geduld, 2019:63). For instance, a simple monthly calendar is an easy way for learners to keep track of their success. On the calendar, learners can jot down ways they made progress, the content they understand, new vocabulary, or anything that indicates that they progressed in some way.

To develop and enhance self-regulated learning skills among their learners, teachers may use the interactive whiteboard to display photographs, audio clips, and videos (Lear et al., 2016:12). They can encourage learners to work in small groups or pairs to conduct class activities. Through verbally expressing their ideas and responding to other classmates, learners can develop their self-confidence, as well as enhance their communication and critical thinking skills. Teachers should pose thought-provoking questions, which may inspire their learners to think for themselves and become more independent. For instance, teachers can encourage learners to ask questions and investigate their ideas. This will help learners improve their self-regulated learning skills. 'Scaffolding entails the assistance offered by a teacher to support learning (Perry, Hutchinson, Thauberger, 2007: 98). For instance, the various facilitative tools that can be used in scaffolding learners in self-regulated learning include breaking down tasks into smaller, manageable parts so that the task may be more understandable to learners. Another strategy that may be adopted by teachers is thinking aloud or verbalising thinking processes when completing a task.

Another factor that may enhance teachers' development of self-regulated learning skills is the 'advances in educational technologies, in which learners are able to direct their own learning' (Rajabi, 2012:374). In higher quintile schools, learners have access to computers, smartboards, laptops, and the internet, all of which contribute to their self-regulated learning. However, lower quintile schools often lack technological advancements because most of the lower quintile schools are based in rural areas or on the outskirts of an urban area and most often do not have electricity. Hence, the development of self-regulated learning skills by teachers in these schools suffers due to the lack of technology to promote self-regulated learning skills. With quintile 4 and 5 schools, teachers can effectively develop self-regulated learning skills among their learners by providing their learners with various pedagogical methods through technology. For example, a teacher can give learners a research assignment, which will expect learners to gain insight from various internet sources. The research assignment should be typed out, and this allows the learners to become familiar with researching and computer technology, that will enhance their self-regulated learning skills.

A pivotal aspect in relation to feedback deals with the significance of learners' feedback regarding evaluation of teachers' methods of teaching. Many teachers do not allow feedback or lesson evaluation from their learners (Hiemstra, 2013: 31). However, when learners are provided the opportunity to evaluate teachers' methods of teaching or indicate how they can gain more from future lessons; learners tend to feel more motivated and confident to voice their opinions, as well as suggest the nature of future teaching.

2.1.1.8.5 'Context' determinants that influence teachers' development and enhancement of SRL skills

There are several factors that advantage teachers in the development of self-regulated learning skills. My study focuses on quintile 4 and 5 schools that are generally well-resourced. That alone enhances a teacher's development of self-regulated learning skills among their learners. Ogbonnaya and Awuah, (2019:113) indicate that learners in more advantaged schools (quintile 4 and 5) outperform learners in disadvantaged schools (quintile 1 to 3). This may be due to quintile 4 and 5 schools being better-resourced, having additional teachers and support staff through employing more School Governing Body (SGB) teachers. In the same vein, Spaull and Kotze (2015:26), report that 'Grade 3 learners in quintile 1 to 3 are already three years (worth of learning) behind their quintile 5 peers, and this gap grows as they progress through schooling, that by Grade 9 they are four years behind their quintile 5 peers.' This may be due to quintile 1 to 3 school teachers being pressured by extensive work-loads due to high enrolment of learners per class, shortage of resources that contribute to pedagogical burdens, and lead to poor academic achievement of learners in low quintile schools (Ogbonnaya & Awuah, 2019:113).

The development of self-regulated learning skills by teachers in low quintile schools may be more difficult. This may be due to, 'teacher's unawareness of self-regulated learning, and their lack of knowledge on engaging self-regulated learning strategies among their learners which contribute to the pedagogical failure in developing self-regulated learning behaviours and skills among their learners' (Geduld, 2017:144). In higher quintile schools, the development of self-regulated learning skills may be easier because, learners have better cognitive support from their parents, and they tend to be more self-regulated due to the assistance they receive from home and their teachers at schools (Geduld & Mdakane, 2020:335-336).

Learners can be directed toward self-regulated learning through relevant materials. Properly developed textbooks and other teaching resources promote learning through interaction (Rajabi, 2012:347). Moreover, materials can direct learners towards self-regulation. In high quintile

schools, a variety of textbooks are made available to each learner, as compared to the shortage of textbooks in lower quintile schools, where learners share textbooks, as they are often not enough to accommodate an entire class due to the high enrolment of learners (Geduld, 2017:144).

Teachers' attitudes may be an obstacle to parental involvement (Naong & Morolong, 2011). For example, teachers' beliefs on the impact of involving parents in students' learning affect their efforts to encourage family involvement. Some teachers are demotivated when it comes to engaging parents in their children's learning because they feel that parents may view them (teachers) as being inefficient and are unable to teach alone (Geduld & Mdakane, 2020: 331). Teachers need to engage parents in developing self-regulated learning skills in learners, for learners to realise that motivation stems from both the school context as well as the home. By so doing, learners get to view their teachers and parents as collaborators in enhancing their learning.

2.1.1.8.6 Teachers' challenges in developing SRL skills

There are several challenges teachers experience with the development of self-regulated learning skills. In this section, some of the challenges, as identified in the literature are discussed under the following headings: Person, Process, and Context challenges that affect teachers' development of self-regulated learning and self-directed learning skills.

2.1.1.8.7 'Person' challenges that affect teacher's development and enhancement of SRL skills

Some teachers lack the skills to develop self-regulated learning. A challenge indicated by Hiemstra (2013: 23) is that some teachers rely on teacher-directed approaches to learning, and fail to enhance the self-directed learning among their learners. Many findings concur that many teachers still practice teacher-centred approaches, traditional 'old school' chalk and talk methods, which impedes the development of a learner's self-regulated approaches to learning (Brockett & Hiemstra, 1991). Moreover, learners who rely on direct instruction become dependent on their teachers as the ultimate source of knowledge, which reduces self-efficacious behaviours that should contribute to their self-regulation.

Teachers need to transform their classroom environment to accommodate more self-regulated learning methods. Teachers spend very little time promoting self-regulated strategy instructions (Dignath, 2016: 84). Instructing learners on the content they need to learn is not enough, and

contributes to an ineffective strategy towards fostering self-regulated learning (Jossberger et al., 2010: 24).

Another pedagogical challenge pertaining to teachers' strategy of developing self-regulated learning skills in their learners involves, 'knowledge of possessing the ability to think about one's thinking is not enough to promote learner's achievement, learners need to be motivated to use strategies as well as regulate their thoughts and efforts' (Pintrich & De Groot; 1990: 33). Hiemstra (2013:23) observes that teachers do not take into account how their teaching practices motivate learners and contribute to enhancing a more learner accommodating approach. Teachers need to be more self-motivated and acknowledge that, in order to become an effective teacher, they first need to be effective learners and be self-regulated as well (Peeters, Backer, Reina, Kindekens, Buffel & Lombaerts; 2014: 1964). Teachers need to be lifelong learners, and should not depend on the knowledge they acquired during their initial teacher training. Jossberger et al., (2010: 36) say teachers must be aware of their actions and teaching methods, as well as acknowledge the expectation for them to foster self-regulated learning skills.

2.1.1.8.8 'Process' challenges that affect teacher's development and enhancement of SRL skills

Studies have highlighted the importance of assessing learners' competencies relating to their learning skills, attitudes, and knowledge (Jossberger et al., 2010: 23). Assessment should be used as a tool for learning. There are assumptions that assessments can drive and foster learning. Formative assessments can be related to aspects of self-regulated learning, whereby the learner has the ability to self-assess their learning performance and their progress. However, although formative assessments are expected to improve learning, they can also be ineffective if learners are unable to accomplish a task on their own (Jossberger et al., 2010: 23). For example, some teachers may not be able to set assessment tasks that test learners' capabilities according to their cognitive learning skills. If assessment tasks have several low order questions, this disadvantages high performing learners, when tasks are not challenging enough. If tasks comprise the majority higher-order questions, then struggling learners will find it difficult to complete the tasks and resultantly, perform poorly.

Teachers are also challenged by the fact that some learners have been spoon-fed by their previous teachers, who prepare such learners for tests and examinations. As a result, they lack ability to engage in self-regulated learning (Guglielmino; 2013: 10). In other words, instead of allowing learners to take control of their learning and engage in strategic planning and goal setting, some teachers provide learners with a 'scope' for tests and examinations; spelling out to

their learners what content they should learn or leave out. In this way, learners engage in rote learning and memorisation of specific content in order to gain high test scores. Such learning styles (like memorisation) are viewed as the lowest form of learning, which does not develop a learner's skills to become critical thinkers who can evaluate and analyse their behaviours, attributes grounded in the 21st century skills.

Some teachers fail to provide appropriate feedback to their learners, especially pertaining to tasks that do not contribute to School Based Assessment (SBA) marks. In addition to motivation from teachers that serves as a pivotal milestone in the development of SRL, teacher feedback to learners allows learners to take control of their learning with guidance and written reports from their teachers. Ongoing feedback from teachers most often heighten learners' attempts to attain better results. Feedback works much, especially when there is a lack of knowledge on the learners' part, and where challenges persist (Jossberger et al., 2010: 27). Moreover, learners feel more involved and motivated when they receive adequate feedback from their teachers. When some teachers do not conduct remedial work, or do corrections on class activities, and do not provide remarks on test and examination sheets relating to learner's performance, learners' motivation and performance in future tasks decrease.

2.1.1.8.9 'Context' challenges that affect teacher's development and enhancement of SRL skills

Spaull and Kotze (2015:3) and Delfino and Persico (2018:93) say, South African teachers are challenged to foster learning for every learner in the classroom, and to come up with ways that do not leave any learners behind due to increasing class sizes. Hiemstra (2013: 30) states that large class sizes pose a challenge to the promotion of peer interaction. Noise levels increase in overcrowded classes resulting in distractions and inability to concentrate. Such classrooms are not conducive for learning and teaching, and in turn, contribute to the absence of initiatives to promote self-regulated learning skills.

A major challenge to teachers are less self-regulated learners who are not exposed to self-regulated learning behaviour (Zimmerman, 2000). Many learners do not take the initiative to complete their daily class activities in most of their subjects. Some learners display lack of interest in tasks that may develop their self-regulatory skills. The constant lack of motivation to complete tasks poses a challenge to teachers who believe that learners are progressively engaged in their learning through daily activities.

Another challenge is the lack of opportunities for instructional improvement (Hiemstra, 2013: 31). For example, teachers may not be provided opportunities to attend workshops and programmes that improve their teaching methods or assist them with teaching learners how to learn. Delfino and Persico (2018:841) concur that there is a lack of teacher training workshops to raise awareness on the necessity of promoting self-regulated learning as a 21st century skill among learners, as well as among teachers.

2.1.1.8.10 Summary of Chapter

This chapter focused on the influence of teachers' self-directed learning and the development of self-regulated learning skills among learners. The chapter commenced with the definitions of self-regulated learning and self-directed learning, as well as Social Cognitive Theory as the theoretical framework for the study. Teachers' influence on self-regulated learning and self-directed learning were explored, in relation to classroom practices, the importance of feedback, modelling positive motivational behaviours, and the use of effective strategies to enhance self-directed learning and self-regulated learning. Thereafter, the person, process, and context determinants that influenced the development and enhancement of teachers' self-regulated learning skills were highlighted. The chapter concluded with an exploration of challenges teachers faced in developing self-regulated learning skills. The following chapter, presents the research design and methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The previous chapter defined self-directed learning (SDL) and self-regulated learning (SRL). The similarities and differences between self-directed learning and self-regulated learning were discussed. The characteristics of self-regulated learners were explained and thereafter, the theoretical and conceptual framework of this study was provided. The Social Cognitive Theory was highlighted, followed by the self-regulated learning Triadic Model (Zimmerman, 1989). Next, the linking of the Social Cognitive Theory and self-regulated learning was done. Thereafter, the self-regulatory processes and sub-processes in the self-regulated learning Model (Zimmerman and Moylan, 2009), and Hiemstra and Brockett's self-directed learning Model (2012), were explained. What followed next was linking Zimmerman and Moylan's self-regulated learning Model (2009) with Hiemstra and Brockett's self-directed learning Model (2012). The Person, Process, and Contextual influences of teachers' abilities to develop and enhance self-regulated learning skills were discussed. Next, the Environmental, Behavioural, and Personal determinants that influence teachers' development and enhancement of self-regulated learning skills, were provided. Thereafter, teachers' challenges in developing self-regulated learning and self-directed learning skills were highlighted. The Environmental, Behavioural, and Personal challenges that affect teachers' development of self-regulated learning and self-directed learning were discussed. Thereafter, the chapter concluded with a summary.

In this chapter, the methodological aspects of the investigation are discussed. Methodological aspects entail the research paradigm (*cf. 3.1*), research design (*cf. 3.1.1*), strategy of inquiry (*cf.3.1.1.1.1*), population and sampling (*cf. 3.1.1.1.2*) participants' contextual information, participants' biographic information, and the description of research sites. The data collection methods (*cf.3.1.1.1.3*), and the data collection processes are discussed. Furthermore, the role of the researcher is explained as well as the quality criteria and data analysis (*cf.3.1.1.1.4*). Trustworthiness, validation and reliability (*cf.3.1.1.1.5*), credibility (*cf.3.1.1.1.6*), transferability (*cf.3.1.1.1.7*), dependability (*cf.3.1.1.1.8*) and confirmability (*cf.3.1.1.1.9*) are explained. Thereafter, the ethical considerations (*cf.3.1.1.1.10*) adhered to during the study are discussed. Finally, the summary (*cf.3.1.1.1.11*) of the chapter is provided.

3.1 Research Paradigm

The term paradigm has been defined as views or perceptions that one holds, that leads to measures to be undertaken (Lincoln, Lynham & Guba, 2011; Mertens, 2010). A research

paradigm is also referred to as a worldview which is defined as a 'general philosophical orientation about the world and the nature of research that a researcher brings to a study (Creswell & Creswell, 2018: 44). Paradigms are defined as 'conceptual and practical tools that are used to solve specific research problems' (Kaushik & Walsh, 2019: 1). In other words, paradigms function as heuristic tools in social research or approaches to problem-solving, that use practical methods to produce solutions within a limited timeframe.

The four main worldviews are; postpositivism, constructivism, transformative, and pragmatism. *Postpositivism* highlights determination, reductionism, empirical observation, measurement, and theory verification; *constructivism* emphasises understanding, multiple participant meanings, social and historical construction, and theory generation; *transformative* involves political power, is justice-oriented, collaborative and change-oriented; and *pragmatism* entails consequences of actions, is problem-centred, pluralistic and real-world practice-oriented (Creswell & Creswell, 2018: 44-48).

The worldview underpinning this study was the interpretivist paradigm, employed to gain an understanding of how teachers make meaning of self-regulated learning and self-directed learning situations. The interpretive approach that was undertaken in this study sought to understand people's lived experiences from the perspective of the people themselves (Hennink, Hutter, & Bailey; 2020: 15). Interpretivism is sometimes referred to as constructivism because it emphasises the ability of the individual to construct meaning. Social reality is represented by a large number of diverse people interpreting events differently, leaving several perspectives of the same phenomenon. Moreover, social constructivism emphasises understanding how people develop meaning and the researcher observes reality from their perspective and direct experiences (Maree, 2016: 61). Social constructivism was suitable for studying secondary school teachers' development of self-regulated learning in KZN schools, hearing from participants in their social environment, and gaining insights on their perceptions and confidence in engaging in self-regulated learning skills development in their classrooms. As well as, teachers as models of positive motivational beliefs, planning, and goal setting to develop self-regulated learning skills, development of metacognitive monitoring skills in learners, and their experiences in developing self-regulated learning skills in their learners. In other words, participants (teachers) make sense of the situations they encounter (Maree, 2016: 60).

Because social research is guided by the researcher's desire to understand social reality, all social research is interpretive (Shah & Al-Bargi, 2013: 257). Social constructivism highlights the notion that individuals try to understand the world and their lives, by their own lived personal experiences (Creswell & Creswell, 2018: 46). The more open-ended the questioning, the better; as the researcher pays careful attention to what participants do in their life and classroom settings.

Open-ended questionnaires were used in this study, to gain more insight from participants on their experiences and perceptions of self-regulated learning and self-directed learning.

3.1.1 Research design and methodology

Research designs are plans and the procedures for research, that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2009:1). A research design is often viewed as a 'systematic plan', on the procedures and processes the researcher engaged in, to collect and analyse data necessary to answer their research questions (Durrheim, 2002: 29). The main research question for this study was: How do quintile 4 and 5 secondary school teachers' self-directed learning influence their classroom teaching, to develop self-regulated learning skills in learners?' The research design is an important plan that considers the type of evidence and data collected in order to answer the study's research question/s, the data collection methods used, and the data analysis.

3.1.1.1. Qualitative Research

Qualitative research is defined as an approach to understand the meaning individuals attribute to the phenomena studied, within their social environments, whereby the researcher is responsible for generating the meaning of data presented (Creswell & Creswell, 2018: 41). Merriam (2009:14) points to four characteristics as key components to understanding the nature of qualitative research: Firstly, the focus is on process, understanding, and meaning; secondly, the researcher is the primary instrument of data collection and analysis; thirdly, the process is inductive; and lastly, the product is richly descriptive. These aforementioned characteristics of qualitative research are reflected in the current study in different ways.

The first characteristic focuses on meaning and understanding. Qualitative researchers are interested in how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences (Merriam, 2009:14). In this study, I gained an understanding of how participants were able to make meaning from the responses they provided pertaining to the development of self-regulated learning skills.

The second characteristic highlights the researcher as the primary instrument of data collection and analysis. Since understanding is the goal of this research, as the human instrument, I was responsive and adaptive during the process of data collection and analysis. In this study, I was able to expand participants' understanding of the topic through nonverbal as well as verbal communication, process information (data) immediately, clarified and summarised material, checked with participants for accuracy of interpretation, and explored unusual or unanticipated responses (Merriam, 2009:15). I used paper-based, open-ended questionnaires and follow-up telephonic, individual semi-structured interviews to collect data.

The third characteristic entails an inductive process in qualitative research, which stipulates that the researcher gathered data to build concepts, hypotheses, or theories rather than deductively testing hypotheses. Bits and pieces of information from individual semi-structured follow-up telephonic interviews and documents (paper-based open-ended questionnaires) were combined and ordered into larger themes. 'Qualitative content analysis is one of the research methods used to analyse text data.' Text data might be in verbal, print, or electronic form, and may be obtained from narrative responses, open-ended survey questions, interviews, focus groups, observations, or print media, such as articles, books, or manuals (Hsieh & Shannon, 2005: 1278). In this study, the researcher collected data from paper-based open-ended questionnaires and telephonic individual semi-structured interviews, to respond to the research question on the practices of quintile 4 and 5 secondary school teachers' self-directed learning, and how they influence classroom teaching to develop self-regulated learning skills in their learners.

The fourth characteristic entails qualitative inquiry being richly descriptive. 'Words rather than numbers are used to convey what the researcher has learned about the phenomenon (Merriam, 2009: 16). In this study, narrative reports of the data from open-ended questionnaires and semi-structured telephonic interviews with participants were included to support the findings of the study pertaining to the feedback practices on the development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal. These findings, discussed in Chapter 4, contribute to the descriptive nature of qualitative research.

Qualitative research is based on the assumption that meaning is socially constructed by individuals through the process of their interaction with others in the real world (Maree, 2016: 53). Moreover, in this study, the impetus of qualitative research was attaining an understanding of teachers' perceptions on the development of self-regulated learning, and self-directed learning skills among learners. Qualitative research comprises diverse perspectives and practices for generating knowledge (Hesse-Biber & Leavy, 2011). Denzin and Lincoln (2011:6) note that qualitative research entails a variety of interpretive practices. This study comprised sixteen participants from four different secondary schools in the iLembe District. Four participants from each school individually provided their distinct perspectives that contributed to the diverse understanding of the phenomena researched.

Qualitative research is a procedure undertaken by a researcher to examine people's experiences in great depth, through processes such as interviews, focus group discussions, observations, content analysis, life histories, and biographies (Hennink, Hutter & Bailey; 2020: 12). This qualitative study allowed me the opportunity to identify issues from the perspectives of my study participants. The qualitative orientation entailed the researcher being open-minded, curious, empathetic, flexible, and attentive to all the participants as they told their own experiences regarding self-directed learning and self-regulated learning skills. Studying people in their natural

settings provided for identifying how their experiences and behaviours were shaped by the context of their lives. The four pivotal aspects of qualitative research were: firstly, the researcher's intent to generate meaning from the experiences of sixteen secondary school teacher's in the iLembe District of KZN; secondly, the researcher as the interviewer and the observer of the processes of data collection and analysis; thirdly, the description from the data extracts; and lastly, using teacher participants' own words in the study's natural setting (Creswell, 2013; Denzin & Lincoln, 2011: 3).

3.1.1.1.1. Strategy of inquiry

A case study is an in-depth description and analysis of a bounded system (Merriam, 2009: 40). The bounded systems refer to 'what' exactly is to be studied (Merriam, 2009:40). Maree (2016:82) posits that there are several types of case studies: Firstly, explanatory case studies explain the presumed causal links in real-life interventions, which are too complex for the survey or experimental strategies. Secondly, exploratory case studies explore those situations in which the intervention being evaluated has no clear, single set of outcomes. Thirdly, descriptive case studies describe an intervention or phenomenon and real-life context in which it occurred. Fourthly, multiple-case studies enable the researcher to explore differences within and between cases. The goal is to replicate findings across cases. Fifthly, intrinsic case studies are intended to better understand the case, because the case itself is of interest. Lastly, instrumental case studies are used to accomplish something other than understanding a particular situation. They provide insight into an issue or help to refine a theory. The type of case study this study used was an explorative case study, due to the study's explorative nature, and the researcher's aim of seeking to learn from the pedagogical experiences and expertise of their participants.

Case studies are often used in the interpretivist paradigm whereby the researcher intends to capture the reality of participants' real-life experiences, their thoughts, and particular situations (Cohen, Manion & Morrison, 2000:182). A case study is an in-depth study of one particular case. For instance, a case could be a person, a group of people, a school, community, or organisation (Bertram, 2010: 37). For this study, the term case study referred to a qualitative approach in which the researcher explored the real-life systems of their participants through in-depth data collection involving several sources of information (Creswell, 2013: 97). There are characteristics of case studies that made them suitable for this study. Case studies are often viewed as effective for exploring research questions where there is a paucity of research; and collecting multiple sources of data (Ceswell, 2013: 98). In this study, the type of school (quintile 4 and 5) and the study's participants (teachers) was the case. Case study, as an empirical method of inquiry, provided multiple sources of evidence, which supported detailed and rich descriptions of the bounded settings (Yin, 2014).

3.1.1.1.2. Population and Sampling

A population refers to the total number of people that have certain shared characteristics pertaining to a specific research issue (Malhotra, 2010: 371). The population of my study included all secondary school teachers teaching in quintile 4 to 5 schools in KwaZulu-Natal (KZN.). Research was conducted in the KZN province of the iLembe District. Data were collected from four quintile 4 and 5 secondary schools. The population included people to whom the results of my study apply.

Sampling refers to a relatively small part (small sub-group) of the research population who are chosen to participate in the study (Denscombe, 2010:23). The two main methods of sampling are probability sampling (also called random sampling) and non-probability sampling (also referred to as purposive sampling). 'Probability sampling means that every member of the study population has an equal chance of being included in the sample. Whereas, 'non-probability sampling means that the researcher makes specific choices about which people to include in the sample' (Bertram, 2010: 43).

Non-probability sampling involves an element of discretion or choice on the part of the researcher (Denscombe, 2010:25). Moreover, non-probability sampling can be used where the aim is to produce an exploratory sample. The two non-probability sampling methods used in this research study were purposive sampling and convenience sampling. Purposive sampling is used in special situations where the sampling is done with a specific purpose in mind (Maree & Pietersen, 2016:198). Bertram (2010: 43) states that purposive sampling means that the researcher makes detailed specific choices about which people to include in the sample. In this study, the teachers of secondary schools were purposively selected because they had information about themselves, and their perceptions, beliefs, and experiences, that the researcher was interested. these related to their self-directed learning and how their self-directed learning skills enabled them to develop self-regulated learning skills in their learners. They furthermore, had information about contextual factors that influenced the development of self-regulated learning skills.

Convenience sampling refers to situations where population elements are selected because they are easily and conveniently available (Maree & Pietersen, 2016: 197). In addition, convenience sampling 'is useful in exploratory research where the researcher is interested in getting an inexpensive, quick approximation of the truth.' Convenience sampling was also used in this study as the researcher resided in the province of KZN, and data collection was easy due to the proximity of participants to the researcher.

The following criteria specified the characteristics that people in the population needed to possess in order to be included in the study: a) participants had to be qualified teachers teaching in the

senior phase (Grades 7 to 11); b) participants had to be teaching at quintile 4 or 5 secondary schools in the iLembe district; c) they had to be teaching in South Africa, KZN province; and d) they had to be willing to participate in paper-based questionnaires and if needed, follow up telephonic interviews. Sampling involves making decisions about which people, settings, events, or behaviours to observe (Bertram, 2010: 41). The group of individuals who participated in the study is the sample. The sample of my study included sixteen secondary school teachers. The secondary school teachers were selected in the following manner: four secondary school teachers per quintile 4 and 5 secondary schools (three quintiles 4 schools and one quintile 5).

Table 1: participants' biographical and contextual information

Participant Codes	Gender	Age Group	Teaching Experience	Type of School	Teaching Specialisation
SAP1	Female	36-45	10-20 years	Quintile 4	English
SAP2	Female	25-35	1-9 years	Quintile 4	English and Life Orientation
SAP3	Female	25-35	10-20 years	Quintile 4	English
SAP4	Female	36-45	10-20 years	Quintile 4	Geography
SBP1	Female	25-35	10-20 years	Quintile 4	Maths Literacy
SBP2	Female	56-65	30+ years	Quintile 4	English
SBP3	Female	36-45	10-20 years	Quintile 4	Technology and Isizulu
SBP4	Female	36-45	20-30 years	Quintile 4	Life Orientation
SCP1	Male	36-45	10-20 years	Quintile 4	Mechanical Technology, Fitting and Machining
SCP2	Female	36-45	10-20 years	Quintile 4	History and Social Science
SCP3	Female	25-35	1-9 years	Quintile 4	English
SCP4	Male	56-65	30+ years	Quintile 4	Technical Science, Mathematics and Motor Mechanics
SDP1	Male	46-55	20-30 years	Quintile 5	Life Sciences

SDP2	Male	56-65	30+ years	Quintile 5	Mathematics
SDP3	Male	36-45	1-9 years	Quintile 5	English
SDP4	Female	46-55	20-30 years	Quintile 5	English and Life Orientation

The following provides a description of each research site.

School A

School A is situated in the KZN province. The school is a quintile 4 school, with an enrolment of 1049 learners and 35 teachers.

School B

School B is situated in the KZN province and is categorised as a quintile 4 school. The enrolment of learners is approximately 950 learners and 40 teachers.

School C

School C is situated in the KZN province. The school is a quintile 4 school, with 1430 learners and 56 teachers.

School D

School D is situated in the KZN province. The school is categorised as quintile 5 and has an enrolment of 1300 learners and 45 teachers.

3.1.1.1.3. Data Collection

Data collection involves providing a clear and specific explanation of how data was collected, how themes and categories were derived, and reasons for decisions made (Maree, 2016: 37). The data collection strategy used in the study was determined by the research questions and also by determining which sources of data yielded the most appropriate and best information that provided genuine answers to the study's research questions. The study entailed paper-based open-ended questionnaires and follow-up telephonic individual semi-structured interviews, only when participants' responses to certain questions in the questionnaire were vague.

Data Collection Process

The data collection process involved getting permission from relevant stakeholders, processes prior to data collection, data collection in the form of open-ended questionnaires, and two telephonic interviews to gain clarity on participants' responses to questions from the questionnaire, then data analysis.

Step 1: Getting permission from relevant stakeholders

- The researcher applied and obtained ethical approval from the ethics committee, with approved certificate ethics clearance number: NWU-01280-20-A2 (Annexure A).
- The researcher obtained permission to conduct the research from the KZN Department of Education (Annexure C).
- Following the ethics approval, the researcher obtained permission from the four secondary school principals to conduct the research in their schools. (Annexure D).

Step 2: Processes prior to data collection

- A literature review was done to gather information, which guided the construction of the data collection instruments such as the open-ended questionnaires and semi-structured individual telephonic interviews.
- A questionnaire was developed by the researcher, and the supervisor ensured that the questionnaire items responded to the study's research questions (Annexure G).
- The questionnaire was submitted to the ethics committee and was approved by the ethics committee.
- Thereafter, the researcher gave questionnaires to the independent person, who recruited other participants at their research sites and handed them the questionnaires for completion. With the inclusion of COVID 19 protocols, I obtained the email addresses of participants via the independent person selected at research sites and sent out digital questionnaires to participants who preferred to have an electronic copy of the questionnaire.
- I checked for compatibility between questions for individual semi-structured telephonic interviews when participants' responses in the questionnaire were unclear or vague.

Step 3: Preceding measures and completion of data collection

- The study leader checked for clarity to determine the trustworthiness of the data collection instrument (questionnaire).

- An independent person assisted the researcher to gain consent from the participants to participate in the research, through a consent form (Annexure F).
- Once the questionnaires were completed, the independent person collected them from participants and handed them over to the researcher.
- Semi-structured individual telephonic interviews were only conducted in situations where participants' responses were vague (only two participants had unclear responses in two different questions).
- With the participant's permission, telephonic interviews were recorded.

Step 4: Data Analysis

- Questionnaires were analysed through coding the data to find emerging themes.
- The data from individual semi-structured telephonic interviews were transcribed and coded.

Data Collection Methods

Research questionnaires should be presented to address the following; a) 'be designed to collect information which can be used subsequently as data for analysis. As a research tool, questionnaires do not set out to change people's attitudes or provide them with information; b) consist of a written list of questions. The important point here is that each person who answers the particular questionnaire reads an identical set of questions; c) gather information by asking people directly, about the points concerned with the research' (Denscombe, 2010: 156). The items in my study's questionnaire sought to gain data that responded to the study's research questions, from participants. All questionnaires had the same questions (all participants answered the same questions). I generated the questionnaire considering self-regulated learning and self-directed learning literature, the aims of my research study, and my study's primary and secondary research questions.

'The information from open-ended questionnaires tends to fall into two broad categories; facts and opinions, and it is vital that all stages of using questionnaires the researcher is clear about whether the information being sought is to do with facts or to do with opinions' (Denscombe, 2010: 157). The introductory part of my questionnaire was based on factual information such as participants' gender, age, teaching experiences, type of quintile school they taught in, and grades participants taught. Opinions involved participants' attitudes, views, and beliefs, where participants were asked to reveal information about their perceptions of self-regulated learning and self-directed learning.

Open-ended questionnaires

'Open-ended questions are those that leave the participants to decide the wording of the answer, the length of the answer, and the kind of matters to be raised in the answer' (Denscombe, 2010:165). The questionnaires in my study had open-ended questions. An advantage of open-ended questions is that the information gathered by way of the responses is more likely to reflect the full richness and complexity of the views held by the participants. Participants in my study were allowed space to express themselves in their own words, providing their perceptions and experiences of self-regulated learning and self-directed learning. Participants took approximately an hour to answer the questionnaires.

Due to the current Coronavirus (COVID 19) pandemic, in cases where participants preferred electronic questionnaires, email questionnaires were simple to construct, and participants only needed to complete the answers and use the reply button to send back the questionnaires.

My questionnaire posed 23 questions to each participant. Each question was crucial and contributed to answers to the study's research questions. When generating my questions, I kept in mind to only ask questions that were absolutely vital for my research, to remove any duplication of questions, and I ensured responding to the questionnaire was as straightforward and speedy as possible. In addition, I made sure that the wording was unambiguous. I used words that were suited to the specific target group, and I avoided the use of words and phrases that might cause offence.

Follow-up telephonic interviews

'An interview is a conversation between the researcher and the participant. However, it is different from everyday speech between people, in that the researcher is responsible for setting the agenda and asking questions. Interpretivist research uses the interview method extensively. In exploring and describing people's perceptions and understandings that might be unique to them, interviewing is a useful method since it allows the researcher to ask clarifying questions and discuss research participants' understandings with them. Semi-structured interviews were conducted with two teacher participants, guided by open-ended questions. The semi-structured interview questions were designed around a set of themes or guiding topics rather than several pre-planned questions (Glesne, 2011; Merriam, 2009). The use of open-ended questionnaires and semi-structured telephonic interviews allowed the participants to provide detailed answers, explanations, and information, which allowed for thematic analysis of data (Maree, 2016: 93).

The aim of the semi-structured telephonic interviews was to elicit understandings from two teacher participants, not to tell them what to say, but rather to offer guidance to conceptualise issues and make connections among emerging responses (Holstein & Gubrium, 2004:123). General topic

discussions were guided by interpretive questions that assisted in focusing the discussion, advancing tentative explanations, and working the identified areas into conversations (Merriam, 2009).

During telephonic interviews ‘grand four questions were used.’ Spadley (1979:50) elucidates ‘grand four questions’ as an appropriate interviewing strategy, in which participants are asked to take the interviewer through a place, time, or event. As an icebreaker, this provided to be an effective method in order to set a comfortable tone for the interview. I started each interview with a scenario and question pertaining to the participants. For example, I told participants to think of a lesson in which they felt learners were most productive, engaged, learned much, and excited for both themselves and their learners. Then asked participants, ‘what made this lesson stand out from all other lessons you have ever taught?’

Moreover, the use of appropriate introducing statements was pivotal to asking questions. For instance, ‘from your experience of’, or ‘can you tell me about?’. The use of probes encouraged participants to speak. For instance, I would say: ‘that’s remarkable, tell me more,’ ‘very interesting, ‘how do you feel about this?’. Patton (2015) states that how a question is worded affects how a participant will respond. So, instead of asking simple questions to derive yes and no answers, I reworded the question to gain a more informative response from participants. For example, instead of stating, ‘do, you agree that self-regulated learners are able to learn on their own?’ I asked, ‘what do you consider to be effective self-regulatory skills in learning?’ ‘How can you develop these skills among learners?’

I requested permission from participants to record telephonic conversations. Follow-up telephonic interviews were audio-recorded, labelled with respective participants’ pseudonyms, and were transcribed. The recording was a detailed account of the discussion, and it enabled me, as the interviewer, to apply my undivided attention to the course of the interview instead of being distracted by note-taking. Telephonic interviews took approximately five minutes. At the end of the interviews, I thanked teacher participants for their time and participation.

3.1.1.1.4. Data Analysis

I used content analysis and thematic analysis in this research study. Content analysis assumes that the texts that are examined are the units of data collection (Neuendorf, 2019: 212). Thematic analysis is defined as a way of seeing’ and understanding material (Boyatzis, 1998: 4). Thematic analysis can be used when working with, and analysing large qualitative data sets (Nowell, Norris, White & Moules, 2017: 1). Thematic analysis provides core skills for conducting qualitative data analysis. It is a method used for identifying, interpreting, arranging, and stating themes that are

found in data sets. Thematic analysis assumes that the recorded messages are texts, which form the data codes developed by the researcher, who generates themes from examining the data.

In this study, I transcribed data in order to obtain a clear meaning of the data pertaining to the study's research aims. My intent was to gain an understanding of participants' perceptions through their emotions and beliefs by using Hiemstra and Brockett's (2012) Person-Process-Context (PPC) model of self-directed learning, and Zimmerman and Moylan's (2009) model of self-regulated learning as a theoretical and conceptual lens. Moreover, the researcher explored the possible contextual and personal similarities and differences between the participants' self-directed learning, their development of self-regulated learning skills, and the contextual factors that influence the development of self-regulated learning skills in learners.

In the data analysis process, the researcher used the stages of analysis outlined by Denscombe (2010). Questionnaires were analysed and themes were created. Thereafter, interviews were conducted, and interview data was then described to get a clearer understanding of the phenomenon being researched. During the first stage, data was recorded and prepared for transcription. During the second stage, the initial exploration of data took place, with the identification of themes, issues, adding notes to the data, and writing memos. In the third stage, the researcher coded the data, grouped codes into categories and themes, as well as compared the data that was obtained. In the fourth stage, writing interpretations of findings and illustrations took place. Lastly, the data validation took place with the following processes; crystallisation, validation, and alternative explanation.

3.1.1.1.5. Trustworthiness Validity and reliability

Trustworthiness is an important way researchers indicate and persuade readers that their research findings are worthy of attention (Nowell et al., 2017: 3). To validate something is to prove or confirm that it is true or correct (Collin English Dictionary, 1979). In ensuring the validity of my study, a well-trained and skilled supervisor and co-supervisor checked the questionnaire items for personal bias and ensured that responses were genuine and not influenced by what people wanted to hear. Validity refers to the accuracy and precision of the data (Denscombe, 2010:298). Furthermore, it also concerns appropriateness of the data in terms of the research questions being investigated. In this study, validity was ensured by returning to the participants with the data and findings as a means that checked the validity of the findings. This allowed a check on factual accuracy, and allowed the researchers' understandings to be confirmed (or amended) by those whose opinions, views and experiences were studied (Denscombe, 2010:299). In order to gain more factual accuracy, telephonic interviews were conducted with participants who provided unclear and vague answers to the questionnaires. To represent trustworthiness in this study, I

addressed four interrelated criteria for trustworthiness: credibility, transferability, dependability, and confirmability.

3.1.1.1.6. Credibility

Credibility seeks to determine how congruent the findings are with reality and ensure the reader believes data findings (Nieuwenhuis, 2016: 123). In this study, I ensured credibility by assuring that all questions in the questionnaire provided appropriate answers to the studies' research questions, guided by the literature review. The credibility of my study was dependent on the transparency of the research methods, considering philosophically aligned practices with the intent of answering the research questions (Lincoln & Guba, 1985). I engaged in frequent debriefing sessions with my supervisors as well as conducted member checks, by providing participants with my transcripts to correct errors of facts (Niewenhuis, 2016:123). Moreover, during follow-up telephonic interviews, I gained more understanding about the data that was obtained from them, by verifying if my interpretations were correct.

3.1.1.1.7. Transferability

Transferability allows readers of research to make links between aspects of the study and personal experiences. Moreover, readers determine whether findings are applicable to their settings and environment (Maree, 2016:124). It is the researcher's responsibility to provide the reader with an absolute and purposeful account of the context, participants, and research design so that the readers can make their own decisions about transferability. Data in the study was presented as rich thick descriptions, that allowed readers to compare the findings with their own experiences.

3.1.1.1.8. Dependability

Dependability is demonstrated through the research design and its implementation, the data gathering process, and the reflective appraisal of the project (Maree, 2016: 124). The initial research design was changed as I conducted my study. New data sources and new data-gathering techniques were incorporated to strengthen my study. I kept a journal for my decisions during the research process of data collection and analysis, in order to help others to follow my reasoning. Furthermore, I documented the category labels I created, and revisions I made to categories in relation to data, as I worked with the text. The analysis process was documented in order to allow others to see the decisions that were undertaken, and the criteria followed, as well as how I arrived at the interpretations. In order to maintain a comprehensive interpretation and reflection, the thematic data analysis involved making auditable decisions due to 'clarity maintained around processes and practice methods is pivotal' (Braun & Clarke, 2006). This was achieved through tabulating coded extracts of data systematically, thereafter providing explicit

code and category descriptions and thematic elaborations. I used graphical representations and recorded memos.

3.1.1.1.9. Confirmability

Confirmability highlights that the finding of the research study is moulded by the participants and not by the researchers' bias, motivation, or personal interests (Maree, 2016:125). Throughout the research process, I constantly liaised with my research supervisors, teachers, colleagues, and peers. I met regularly with my supervisors, who are both experienced researchers, and I was guided by their expertise and design in conducting research. I engaged in discussions with experienced school teachers, gaining more insight into their perceptions to strengthen my study. The use of expert evaluation enhanced the trustworthiness of research findings (Thomas, 2010:324).

Role of the researcher

In qualitative research, the role of the researcher as the primary data collection instrument necessitates the identification of personal values, assumptions, and biases at the outset of the study (Creswell and Creswell, 2018:281). Merriam (2009:124-125) notes that there are four types of observation: complete participation, participant as an observer, observer as a participant, and complete observer.

- Complete participant- the researcher is a member of the group being studied and conceals his or her observer role from the group so as not to disrupt the natural activity of the group
- Participant as an observer- the researcher as observer activities which are known to the group are sub-ordinate to the researcher's role as a participant.
- Observer as a participant- the researcher's observer activities are known to the group Participation in the group is secondary to the role of information gatherer.
- Complete observer- the researcher is either hidden from the group or is in a public setting.

In this research study, I took the observer as participant role, where the main focus on being an observer was the self-regulated learning, and feedback practices of self-directed learning in the classroom situation. By using this method in this study, the researcher had access to many people, and a wide range of information, but the level of the information revealed was controlled by the group members being investigated.

Researchers can be influenced by historical, social, and cultural experiences. The following paragraphs highlight measures that were undertaken in my study.

The status of the researcher could also influence the trustworthiness of the data. This included aspects of gender, age, and socio-economic status

Qualitative researchers are interested in understanding people's construction and sense-making of their world and experiences. Merriam (2009: 13) recommends that researchers should start a research project by considering their own beliefs, views, and principles in terms of the nature of reality, and the research aims My gender, age, and socio-economic status were factors that did not create any bias or influence the study's research purpose. 'The term participants (individuals that are being studied) are often used in qualitative research, this way of portraying the individuals is conducted with caution to assure that there is inclusion (Merriam, 2009: 192). Therefore, my study included participants from both genders as well as varying age groups (as provided for in the questionnaires: between 25 years to 65 years). Also, the number of years teaching (teaching experience from 1 year to over 30 years) was included.

According to Heigham and Crocker (2009: 11), 'researchers gender, age, ethnicity, cultural background, sexual orientation, politics, religious beliefs, and life experiences (their worldviews) are the lens through which they see their research.' It was for this reason, that I was constantly aware of, and systematically reflected on my identity, and the research setting, to ensure that they did not influence my research.

The researcher enters a research field with certain assumptions

According to Thomson and Walker (2010:144), 'researchers are ultimately responsible for the knowledge they produce, and how they produce it.' Therefore, reflexivity contributes to making better knowledge and better research practices. Self-reflexivity enabled me to become aware of my position and interests which could impact all phases of the research process. The observer as participant highlights the researcher's observer activities that are known to the group, and participation in the group is secondary to the role of information gatherer (Merriam, 2009:124). By using this method, I had access to many people (participants) and a wide range of information (data from questionnaires and follow-up telephonic interviews). However, the level of information revealed was controlled by the participants of the study. 'When researchers go into research settings, they also take their intellectual baggage and life experiences with them' (Heigham & Crocker, 2009: 11). As a result, in order to gain ethically sound data, I had to avoid my assumptions and focus on the data gathered from participants through the questionnaires and telephonic interviews.

The researcher can also influence trustworthiness if there is a personal connection to the research site

Ethical considerations regarding the researcher's relationship to participants are a major source of discussion in qualitative research, especially with the interest in critical, participatory, feminist, and postmodern research (Merriam, 2009:30). I did not have any personal connection to the research sites in my study. Research sites were selected on the basis of being a quintile 4 or 5 secondary schools, and being within proximity to the researcher. Furthermore, independent persons were selected from each research site, who assisted me with distributing the consent forms and questionnaires to participants, thereby minimising my direct engagement at research sites.

3.1.1.1.10. Ethical considerations

Ethics in research is very important, particularly in research involving people. It is pivotal that all research studies follow certain ethical principles. These principles are autonomy, non-maleficence, and beneficence (Durrheim & Wassennar, 2001: 66). The researcher has an obligation to respect the rights, needs, values, and desires of the participants (Merriam, 2009:287).

Ethical issues in the research problem

In the process of identifying the research problem, it is pivotal to identify a problem that will benefit the research participants. In this case, 'how do secondary school teachers develop self-regulated learning among their learners through their self-directed learning practices,' benefitted participants by reflecting on their development of self-regulated learning skills among learners.

Ethical issues in relation to the study's aim

Informed consent was obtained from participants and relevant stakeholders using consent letters that provided information about the benefits and procedures of my study. This allowed participants to make free and informed decisions about whether to participate.

Ethical issues regarding data collection processes

Permission to conduct research was obtained from the KZN Department of Education, the NWU Research Ethics Committee (ethical clearance number: NWU-01280-20-A2), and the principals of the four secondary schools in the iLembe District of KZN province. The research ethics committee (EduREC) is an independent, multidisciplinary, and legally mandated body that evaluated the study's research proposal and ensured ethical guidelines were followed. Following the granting of permission, the researcher approached the four secondary school principals, and permission was granted by principals to conduct research at their schools. The research participants gave their consent prior to the commencement of the study. No participant was forced

to take part in this research study, and participants had the right to withdraw from this study at any time. Prior to the collection of data, participants' anonymity was assured. Participants' names and the names of schools were not disclosed; instead, they were given pseudonyms. Confidentiality was guaranteed to participants, as the researcher ensured that all data would be kept private, stored securely, and accessible only to the research team.

Ethical issues in relation to data analysis and interpretation

I informed all relevant stakeholders (KZN Department of Education, principals, and participants) that I was prepared to share the findings from the data if any of the stakeholders developed an interest in knowing the findings of my research study.

Ethical issues pertaining writing and communicating the research

During the research process, the researcher avoided biased words and language, including words relating to participants' gender, race, or age differences.

Data storage procedures

The researcher ensured that all captured data were stored on the researchers' password-protected laptop. The hard copies of all data collected were stored in the study leaders' office at NWU, as well as at the researcher's home in a password-protected safe.

3.1.1.1.11. Summary of Chapter

This chapter presented the philosophical assumptions underpinning this study. The research design was outlined in a five-stage framework that identified the research questions at the centre of the exploratory case studies. The four secondary school settings provided the context for the case study, that included sixteen teacher participants. Qualitative data were collected through open-ended questionnaires and follow-up telephonic, semi-structured interviews. Thematic analysis was used in inductive processes of generating codes, categories, and themes. The chapter concluded by emphasising the relevance of ethics to this study. The next chapter (chapter 4) presents the analyses data in relation to the study's research questions. \

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4. Introduction

The previous chapter presented descriptions and justifications of the research design and methodology employed in the study. The population, sampling, methods of data collection, role of the researcher, and ethical considerations were discussed. This chapter presents the data generated from questionnaires and analyses and discusses it. The focus of my study was to explore how quintile 4 and 5 secondary school teachers' self-directed learning (SDL) influenced the development of self-regulated learning (SRL) skills in their learners, as well as the challenges that quintile 4 and 5 secondary teachers experienced, in an attempt to develop self-regulated learning skills in their learners.

Chapter 4 commenced with the process of data analysis (*cf. 4.1.1*). Thereafter, the discussion and analysis of data (*cf. 4.1.1.1*) from open-ended semi-structured questionnaires are made. Next, the themes and sub-themes from questionnaires (*cf. 4.1.1.2*) are provided. The first theme: teachers' roles in the development of self-regulated learning (*cf. 4.1.1.3*), with sub-themes; (i) teacher training, (ii) DoE workshops, and (iii) teachers' understanding of whether they do or do not have a role to play in the development of self-regulated learning skills, is discussed. The second theme: teacher's attributes in developing self-regulated learning skills in learners (*cf. 4.1.1.4*), with the following sub-themes; (i) knowledge and skills of self-regulated learning, (ii) adequate level of confidence, (iii) lack of confidence, (iv) personal characteristics that enable the development of self-regulated learning skills, (v) personal characteristics that hamper the development of self-regulated learning skills, is provided.

The third theme: teacher's behavioural attributes in developing self-regulated learning skills in learners (*cf. 4.1.1.5*), with the following sub-themes; (i) keeping learners motivated, interested, and excited in tasks, (ii) emulating ideas of goal setting, (iii) planning and assisting learners to achieve their goals, (iv) applying various task strategies to help learners understand their work, (v) assisting learners with metacognitive monitoring, is also discussed. Lastly, the fourth theme: environmental challenges to develop self-regulated learning skills (*cf. 4.1.1.6*) with the following sub-themes; (i) contextual factors that allow learners to learn or not from task strategies modelled to them, (ii) contextual factors that simplify the teaching of self-regulated learning skills, and (iii) contextual factors that make it challenging to teach self-regulated learning skills, is also discussed.

The primary aim of this study was to explore how quintile 4 and 5 secondary school teachers'

self-directed learning influenced the development of self-regulated learning skills in their learners. The secondary aims were to explore quintile 4 and 5 secondary school teachers;

- views on their confidence to develop self-regulated learning skills with their classroom practices;
- views on how they model positive motivational beliefs to develop task interest and intrinsic motivation in learners;
- views on how they model planning and goal setting to develop these skills in learners;
- views on how they model different task strategies to encourage learners to use a variety of task strategies;
- views on how they model metacognitive monitoring to develop metacognitive monitoring skills in learners; and
- challenges in their attempts to develop self-regulated learning skills in their learners.

4.1. Process of data analysis

A qualitative data analysis approach was used in this study to explore participants' perceptions, attitudes, understanding, personal beliefs and lived experiences to gain insight into the phenomenon (Creswell, 2016: 109).

Content analysis was applied in this study by compressing many words from participants into fewer content categories based on explicit rules of coding. Content analysis enabled me to sift through large volumes of data with relative ease, in a systematic fashion and allowed me to explore how quintile 4 and 5 secondary school teachers' self-directed learning influenced the development of self-regulated learning skills in their learners.

Content analysis assumes that the texts that are examined are the units of data collection (Neuendorf, 2019: 212). Thematic analysis is a method used for identifying, interpreting, arranging, and stating themes found in data sets (Nowell, Norris, White & Moules, 2017:1). I used content analysis and thematic analysis, for examining the data and generating themes.

In my research study, I transcribed data in order to obtain a clear meaning of the data pertaining to how quintile 4 and 5 secondary school teachers' self-directed learning influenced the development of self-regulated learning skills in their learners. Added to this, my intent was to gain an understanding of participants' perceptions through their emotions and beliefs, using Hiemstra

and Brockett's (2012: 159) Person-Process-Context (PPC) model of self-directed learning and Zimmerman and Moylan's (2009:300) model of self-regulated learning. Furthermore, I explored the possible contextual and personal similarities and differences between participants' self-directed learning, their development of self-regulated learning skills, and the contextual factors that influenced the development of self-regulated learning skills. In the data analysis process, I used stages of analysis outlined by Denscombe (2010: 281). Figure 4 summarises the data analysis process used in my research study.

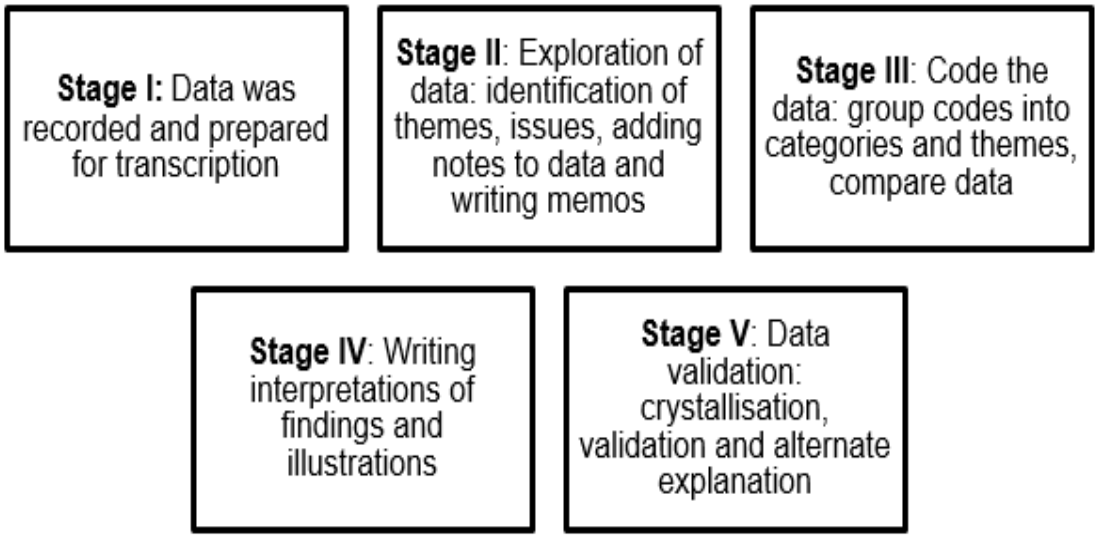


Figure 4 Denscombe (2010) five stages of data analysis

Figure 4 shows a summary of the data analysis process that was used in my research study from recording data and preparation for transcription, to the data validation process and drawing of conclusions and recommendations. The data analysis of my research study was based on the direct quotes (verbatim responses) of teachers, collected through questionnaires, and follow-up telephonic interviews with two participants whom I needed clarity on certain questions they had answered from the questionnaires. Firstly, I recorded data and prepared it for transcription. Secondly, I explored the data and identified themes, issues, added notes to the data, and engaged in writing memos. Thirdly, I coded the data, grouped codes into categories and themes, and compared data. During the data processing, the themes that were identified from the questionnaires were merged with the responses of the participants, and the two telephonic interviews that were conducted to gain clarity. Finally, data validation took place with crystallisation, validation, and alternative explanations. The paragraphs below use the participants' responses to analyse and discuss the findings.

4.1.1. Discussion and data analysis

The data analysis was conducted through the themes, sub-themes and categories identified. In order to identify the data, verbatim quotes from participants' questionnaires were used to code the data.

The following are examples of how participants and schools were coded in my research study:

SAP1- School A Participant 1

SBP2- School B Participant 2

SCP3- School C Participant 3

SDP4- School D Participant 4

4.1.1.1. Discussion of themes and sub-themes

The following table summarises the main themes of the study:

Table 2: Summary of main themes

Theme 1	Teachers' role in the development of SRL skills
Theme 2	Teachers' personal attributes in developing SRL skills in learners
Theme 3	Teachers' behavioural attributes in developing SRL skills in their learners
Theme 4	Resources and the socio-economic status of learners at higher quintile schools

Themes emerged from identifying and examining patterns from data collected from participants. Themes were identified as patterns across data sets that were important to the description of the phenomenon (secondary school teachers' development of self-regulated learning skills among their learners) and were associated with a specific research question. As an introductory process in the questionnaire, I asked the following questions: (i) have you ever heard of the concept of self-regulated learning? (ii) what is your understanding of the concept of self-regulated learning? (iii) were you ever made aware of teachers' roles in the development of self-regulated learning in your initial training and/or in current workshops offered by the Department of Education? (iv) why do you think teachers have a role to play or not, in the development of learners' self-regulated learning?

I wanted to gain a general awareness from participants on whether they had heard of self-regulated learning. I obtained participants' understanding of what self-regulated learning meant to them. Thereafter, I obtained data from participants on their role in the development of self-regulated learning through training, and Department workshops; and how this could influence their confidence to develop self-regulated learning. From the responses to these questions, theme 1 and its sub-themes were created.

4.1.1.2. Theme 1: Teachers' roles in the development of SRL

The first theme to be discussed was teachers' roles in the development of self-regulated learning skills among their learners. Dignath and Van der Werf (2012:1) note that, 'the behaviour and beliefs of teachers regarding the knowledge they possess, of self-regulated learning, are important aspects for promoting self-regulated learning skills in the classroom.'

- **Sub-theme 1: Teacher training**

Several participants in my study have indicated that they were made aware of the roles they should play in the development of self-regulated learning skills among learners during their teacher training. Participants' responses were categorised based on their similarities in the verbatim quotes when asked if they were made aware of their roles in the development of self-regulated learning skills during their teacher training:

> *Yes, during training, through both degree and Honours programme, SRL was discussed and expanded on (SAP4).*
>
> *Yes, my PGCE focused on learners learning by themselves, while the educator facilitates (SDP3).*
>
> *Yes, during my teacher training, with my teaching specialisation being Life Orientation- which content focuses on study skills/learning skills (SDP4).*

Although majority of the participants indicated that they were made aware of their roles in the development of learners' self-regulated learning skills during their teacher training, few participants were not made aware of the same.

Saks and Leijen (2013:191) say that self-regulated learning is a process in which an individual independently seeks new knowledge for personal growth. Participants (SAP4, SDP3, and SDP4) revealed that they had upgraded their teaching qualifications by studying the Post Graduate Certificate in Education (PGCE) and Honours. As a result of their further studies, they gained knowledge of self-regulated learning due to their further training. Peeters, Backer, Reina, Kindekens, Buffel and Lombaerts (2014: 1963) note that, 'teachers play a crucial role in promoting

SRL'. Teachers need to be able to learn in and from practise since knowledge to teach can hardly be fully obtained before or apart from practice. Teachers need to be mindful that they work in a rapidly changing environment and need to continuously update their teaching skills.

- **Sub-theme 2: DoE workshops**

Many participants have emphasised that there is a lack of insight by the DoE pertaining to teachers' roles in the development of SRL skills among learners. The following responses from participants indicate that the DoE paid very little or no attention to the promotion of self-regulated learning during workshops with teachers.

> *Personally, I have not attended such workshops, nor have I been invited to any (SBP1).*
>
> *SRL seems to be a new concept in Education. In Departmental workshops, the focus is on teaching, implementation, assessment, curriculum coverage, and not on concepts that involve the individual learning of children (SBP3).*
>
> *The above has not been initiated to my knowledge by the DoE (SCP2).*
>
> *There was no mention of SRL (SDP2).*
>
> *The DoE (through workshops) seems to view learners as being able to regulate themselves thus making the educator responsible for the students learning process (SDP3).*
>
> *Very seldom by the DoE during workshops. There is not much emphasis by DoE in making teachers aware of the roles in which they can develop SRL in learners (SDP4).*

According to Delfino and Persico (2018: 841), there is a lack of teacher training workshops to raise awareness on the necessity of promoting self-regulated learning as a 21st century skill among learners as well as teachers. Literature and some participants' responses indicate that teachers are not provided the opportunity to attend insightful workshops and programmes that improve their teaching methods or assist with teaching learners self-regulated learning skills.

- **Sub-theme 3: Teachers understanding of whether they do or do not have a role to play in the development of SRL skills**

According to Geduld (2017: 144), 'teachers who engage in the development of self-regulated learning skills among their learners will help many struggling learners to attain academic success as well as improve learner pass rate'. Thus, teachers should be made aware of the crucial role they play in the development of self-regulated learning skills, through their training and workshops conducted by departmental officials, subject advisors, School Management Teams (SMT), and

principals. All sixteen participants in my study agreed that teachers play a crucial role in developing self-regulated learning skills among their learners.

The following responses from participants in my study indicated that they acknowledged that teachers play a vital role in the development of learners' SRL.

> *Teachers have a role to play in the development of learners' SRL, as they have the ability to motivate and encourage learners to engage in cognitive tasks, look for feedback and support and increase their knowledge (SAP1).*
>
> *Teachers have to assist learners throughout SRL so that learners would know if they are on track with what needs to be done. If there are discrepancies in the way that a child engages in SRL, a teacher is able to offer guidance (SAP2).*
>
> *Teachers have the ability to provide learners with learning strategies and further have the means and abilities to create and provide constructivist learning environments. Such components can foster SRL (SBP1).*
>
> *Teachers can shape independent learning, encouraging learners to be responsible for their behaviour and goals….(SBP2).*
>
> *Teachers have a major role to play simply because it would create learners who are self-sufficient, independent, and who view the teacher as a guide rather than as a sole source of knowledge (SCP4).*
>
> *Teachers need to teach and model the steps in effective SRL (SDP3).*

Most of the participant's responses indicated the crucial role teachers play in the development of self-regulated learning skills through motivating, encouraging, and guiding learners with tasks, as well as providing crucial feedback to learners in order to achieve academic success. Furthermore, a teacher's role in the development of self-regulated learning skills is crucial in ensuring that learners are on the correct path in setting attainable goals. Figure 5 summarises the crucial roles teachers' play in the development of self-regulated learning skills among their learners (Peeters et al., 2014:1963), with emphasis on teachers' awareness of their roles during their training, during DoE workshops, and their perceptions on whether they have a role to play or not in the development of learners' self-regulated learning.

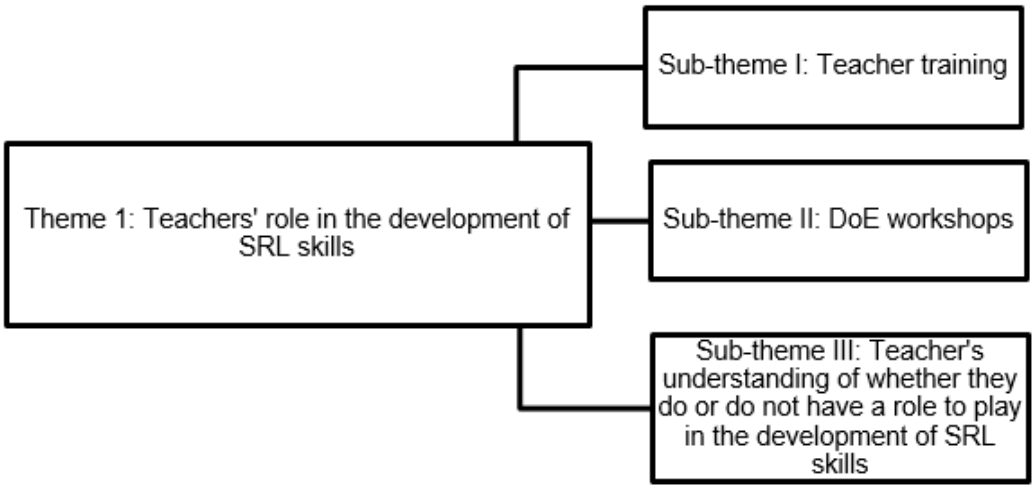


Figure 5: Theme (Teacher's role in the development of SRL skills) and sub-themes

4.1.1.3. Theme 2: Teachers personal attributes in developing SRL skills in learners

The second theme is the teacher's personal attributes in developing SRL skills in learners. The personal attributes included teachers' knowledge and skills in developing self-regulated learning skills among their learners, teachers' adequate level of confidence in developing self-regulated learning skills in learners, teachers' lack of confidence in developing self-regulated learning skills in learners, teachers' personal characteristics that enable them to develop self-regulated learning skills in learners, and teachers' personal characteristics that hamper the development of self-regulated learning skills. Following figure 6 highlights the theme and sub-themes:

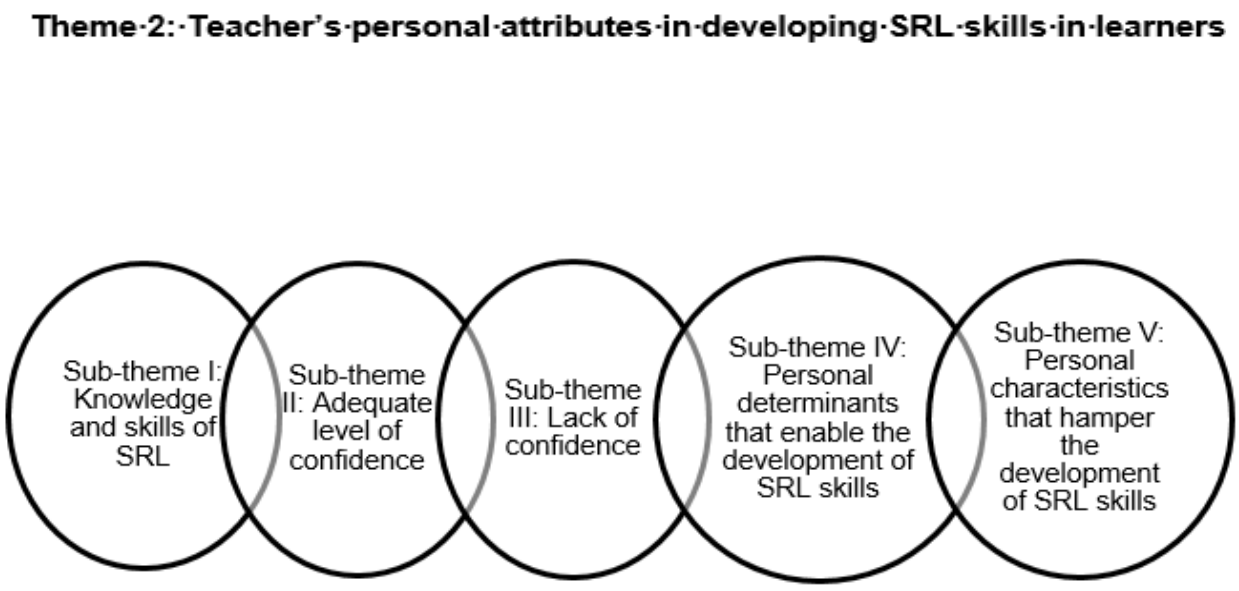


Figure 6 theme (teacher's personal attributes in developing SRL skills in learners) and sub-themes

- **Sub-theme 1: Knowledge and skills of SRL**

When participants in my study were asked if they felt they had enough knowledge and skills to develop self-regulated learning skills in their learners, five participants indicated they lacked the knowledge and skills to do so. The following were their responses:

> *No, I do not have enough knowledge and skills to develop SRL skills in my learners. It needs to be presented in department workshops on how I should go about developing these skills among learners (SBP3).*
>
> *No, I would need to be developed in respect of methodology so as to successfully implement SRL in the classroom (SCP2).*
>
> *No, more capacity is required (SDP1).*
>
> *I do not have enough knowledge to develop SRL skills, but my teaching experience gives me enough knowledge to develop it even though it may not be to the required standard since I was not formerly trained or workshopped to do it (SDP2).*
>
> *No, I need to be workshopped and provided materials on this aspect because our learners are too used to being 'spoon-fed', as a result, I cannot suddenly change my teaching style and would need assistance to make that change (SDP3).*

From the last verbatim quote (SDP3), it can be deduced that some participants still applied teacher-directed approaches to "spoon-feed" learners, which was detrimental to the development of self-regulated learning in their learners (Hiemstra, 2013: 23)

Although some participants indicated that they did not possess adequate knowledge and skills to develop self-regulated learning skills among learners, the majority of the participants indicated that they had enough knowledge and skills to do so. Some of their responses were as follows:

> *Yes, I do have the knowledge and skills to develop SRL skills in our learners. The nature of class activities, assessments and tests encourage and motivate learners towards SRL. Learners are encouraged to work through critical thinking questions/activities and do effective research in order to increase their knowledge and understanding (SAP1).*
>
> *Yes, experience in teaching for 35 years. Continuous involvement in my personal professional development. Reading avidly and keeping up with the current trend in education worldwide (SBP2).*
>
> *Yes, I have 16 years of teaching experience. I have attended and facilitated workshops on the above at school and for the Department of Education (SCP1).*

Yes, I do, my teaching specialisation (Life Orientation) focuses on developing SRL skills in my learners. For example, the things learners should do before they begin to study, what they should be doing whilst they study, and also what they should do after they have completed learning any specific content (SDP4).

From the majority of the participants' responses, it can be concluded that several participants possessed knowledge and skills to develop self-regulated learning among their learners, which is in line with the requirements of the Curriculum and Assessment Policy (CAPS). Moreover, participants' responses are supported by the literature. Peeters, Backer, Reina, Kindekens, Buffel, and Lombaerts (2014:1963) observe that 'as independent learners themselves, self-regulated teachers have the necessary skill to learn from teaching and are expected to apply similar self-regulated learning strategies as learners.' For instance, they should seek help from mentors, look for feedback, and search professional literature for new ideas. The participants' knowledge of self-regulated learning is beneficial for the development of self-regulated learning (*cf. 2.1.1.8.3*) which indicates that 'teachers' knowledge influences their own beliefs on instructing self-regulated learning pertaining their self-efficacy and beliefs to enhance self-regulated learning skills, and their personal beliefs relating to learning' (Dignath, 2016:83).

- **Sub-theme 2: Adequate level of confidence**

The following question was asked to participants in order to ascertain their level of confidence in developing self-regulated learning skills in their learners: why do you feel you have enough confidence to develop self-regulated learning skills in learners? The majority of the participants indicated that they felt they had enough confidence to develop self-regulated learning skills among learners. The following responses highlighted the adequate level of confidence some participants in my study possessed:

I am in a position to mould minds and make a difference in the life of a learner ….Learners need to be encouraged to work hard for their future….(SAP1).

Due to the fact that my learners display SRL skills, I feel confident that my focus on clear expectations, creations of a positive learning environment, and instruction on study skills are useful in developing SRL skills (SBP1).

One of the characteristics of an educator is confidence. It is important for an educator to have confidence in the classroom. When they are confident, the atmosphere of the classroom changes, and all works out well. I believe I have the confidence because I believe in my abilities and I know my learners as well as their personal learning styles (SCP3).

Although some of the participants indicated they had enough confidence to develop self-regulated learning skills among their learners, other participants also displayed areas in which further assistance is needed in their capacity to develop self-regulated learning skills in learners. 'For learners to acquire high levels of strategic self-regulated learning skills, they often require encouragement and motivation from their teachers' (*cf. 2.1.1.8.3, Martinez Ponz, 2002:127*). Teachers need to have a high degree of confidence in the development of self-regulated learning skills. By teachers having a high degree of confidence in developing self-regulated learning skills among learners, they may be productive during their lessons and accomplish self-regulated learning objectives among their learners.

- **Sub-theme 3: Lack of confidence**

The following responses showed participants' lack of confidence in developing self-regulated learning skills in their learners. This emerged when they were asked, why they felt they did not have enough confidence to develop self-regulated learning skills in their learners.

> *Currently, I do not have the confidence to develop SRL skills among my learners. I need more assistance from DoE or my subject advisor on how to go about doing so…. I have not been trained in this subject are. It is a new concept to me ….. (SBP3).*
>
> *Contextual factors make it difficult to assist learners in an individual capacity. Many learners are second language learners and need special attention, which is not always possible (SAP1).*
>
> *An overload of paper work placed on a teacher makes it difficult to carry out activities in an effective manner. A teacher can lose confidence when overburdened with paper work, as they feel that they do not have much left of themselves to help learners (SAP2).*
>
> *Once I am fully capacitated, I believe learners will be successful in SRL (SCP2).*
>
> *I need to evaluate the success of my teaching methods (SDP1).*
>
> *Lack of formal training or workshop on SRL (SDP2).*
>
> *I've been 'spoon-feeding' learners since I started teaching and would need help to transition to SRL. This can be done in the form of online workshops and handouts (SDP3).*

Some teachers felt that they lack the confidence to develop self-regulated learning skills among their learners, as they felt they had not been adequately trained to do so. Participants' responses are supported by literature (*cf.2.1.1.8.1, Baloyi, 2020:25*). Moreover, another finding evident in

participants' responses was that they lacked the confidence to develop self-regulated learning skills among their learners because many learners were second language learners and needed special attention. That posed much difficulty for participants (*cf.2.1.1.8.1, Baloyi, 2020:26*).

Added to this, participants' lack of confidence in developing self-regulated learning skills among learners was associated with the workload of teachers. Teachers are expected to be administrators, deliver content, work with a large enrolment of learners in classrooms, and deal with much marking, which tires them. This situation may further lead to their confidence levels dropping since there is too much for them to do in the classroom as well as at home that they do not have the confidence to attempt any alternate teaching strategies (*cf. 2.1.1.8.5, Ogbonnaya & Awuah, 2019:113).*

- **Sub-theme 4: Personal determinants that enable the development of SRL skills**

In order to explore participants' motivation and how they model it to develop task interest and intrinsic motivation, participants were asked, 'What personal characteristics of you enable you to develop self-regulated learning skills in your learners?'

Motivation is a personal determinant (*cf.2.1.1.8.3, Powers, Kaniuka, Phillips & Cain, 2016:1*) and (*cf.2.1.1.5, Bandura,1986*), and I have positioned the concept 'motivation' under the theme of personal determinants that enable the development of self-regulated learning skills. Some participants perceived themselves as motivated, optimistic, self-confident, self-determined, and possessing a high degree of self-efficacy. By having these dispositions, they believed their examples would influence their learners to develop the same characteristics. 'Positive attitudes from teachers contribute to the willingness of learners to engage in self-regulated learning' (*cf.2.1.1.8.3, Jossberger, Brand-Gruwel, Boshuizen & Van De Wiel, 2010:6*).

> *Optimism, accountability, and self-sacrifice (SAP2).*
>
> *Curiosity to identify how learners learn. Adaptable to the changing environment. A love for learning (SAP4).*
>
> *Openness and agreeableness (SBP1).*
>
> *My self-determination and motivation to know things that I may have less knowledge of (SBP3).*
>
> *I am a motivating teacher. I keep encouraging learners to set goals and achieve them …(SCP1).*
>
> *Self-confidence, self-motivation, positive thinking, discipline, and hard work (SDP2).*

I am motivated, determined, and always optimistic when it comes to assisting my learners to attain academic excellence (SDP4).

After reviewing participants' responses relating to the personal characteristics that enable them to develop self-regulated learning skills among learners, the most frequent response was their motivation, self-confidence, and optimism. These concepts played an integral part in teachers' personal development of self-regulated learning and contributed to their ability and willingness to develop self-regulated learning skills among their learners (*cf.2.1.1.8.3, Powers et al.,2016:1*).

- **Sub-theme 5: Personal characteristics that hamper the development of SRL skills**

The following quotes from participants in my study highlighted their characteristics, that hampered the development of self-regulated learning skills among learners:

….A lack of patience at times with learners that have academic challenges, especially second language learners who struggle to keep up with the rest of the class (SAP1).

Easily irritable when learners are disorganised, lack patience (SAP2).

….lack in developing electronic resources (SBP2).

Most of my learners are isiZulu speaking learners. I sometimes experience difficulty to get them to understand the medium of instruction (SCP1).

While several participants indicated that their lack of patience, inadequate training in technology, language barriers, and inability to provide daily feedback, were all factors that hampered their development of self-regulated learning skills among learners; few participants remained optimistic and did not provide any factors that restricted their development of self-regulated learning skills (*cf.2.1.1.8, Beard, 2016:46*).

4.1.1.4. Theme 3: Teachers behavioural attributes in developing SRL skills in their learners

In order to ascertain teachers' behavioural attributes in developing self-regulated learning skills in their learners, participants were asked questions relating to their teaching strategies, to develop strategic planning, goal setting, task strategies, and metacognitive monitoring. Teaching strategies are behavioural determinants (*cf.2.1.1.5, Bandura, 1986*), hence; I positioned it under the theme of behavioural attributes that enabled the development of self-regulated learning skills.

The third theme discussed was teachers' behavioural attributes in developing SRL skills in their learners. The sub-themes discussed are provided in figure 7 below:

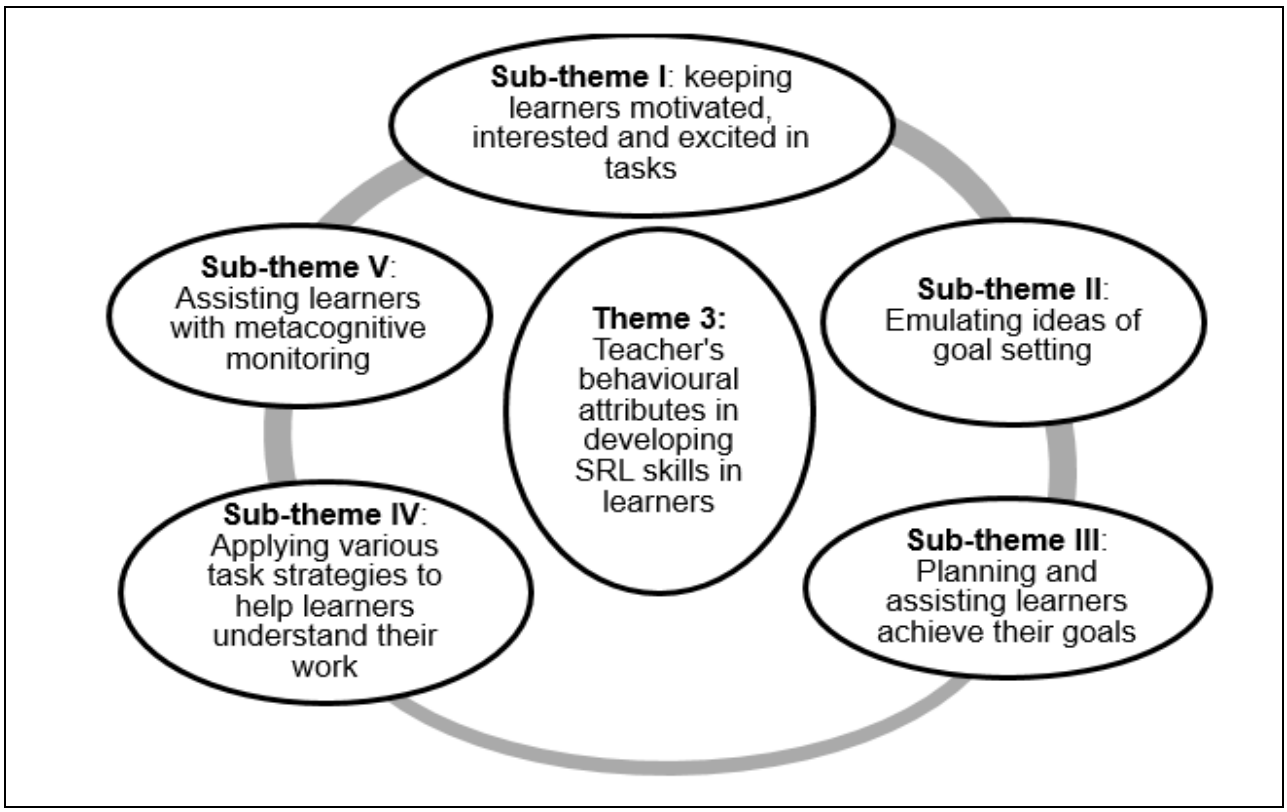


Figure 7: Theme (teacher's behavioural attributes in developing SRL skills in learners) and sub-themes

Behavioural attributes of teachers in this study involve their teaching strategies, their choice of tasks, as well as their efforts to develop learners' self-regulated learning skills. Therefore, under this theme, I discuss all the strategies teachers applied to develop self-regulated learning skills.

- **Sub-theme 1: Keeping learners motivated, interested, and excited in tasks**

The following responses from participants indicate ways in which they kept their learners motivated, interested, and excited in tasks:

> *I encourage my learners to do their work and explain to them that the tasks being done will help them in their exams or passing the term. Drawing connections to real life is a way of getting learners involved, thus motivating them to want to do the work (SAP2).*

> *As a Geography educator, I have introduced and encouraged the use of multi-media devices in learning. Learners have self-study tasks. They are encouraged to set goals and targets and we reflect on this at regular intervals. Learners are motivated by positive reinforcement, as we as bringing in diverse specialists especially regarding careers to address and provide additional opportunities for them (SAP4).*

Use of media, both print and electronic. Audio and visually stimulating resources. WhatsApp, Zoom, Teams, learners enjoy the novelty (SBP2).

Meeting due dates for assignments-incentive guarantee minimum pass rate. Emphasising the value of skills imparted keeps them motivated in seeking the bigger picture (SCP2).

I present my learners with certificates of excellence when they obtain an 'A' aggregate in tests, examinations, assignments, and Physical Education Tasks. My lessons are sometimes conducted outdoors, which allows my learners a change from their daily classroom-based environments, which they often enjoy. I reward learners with gold and silver stars in their notebooks whenever their work is neatly presented and all activities completed (SDP4).

As evident from participants' responses, many teachers conduct activities and use extrinsic motivation that keeps their learners motivated and interested about tasks. Through guidance by teachers, creation of a safe and exciting study environment, the use of technology, providing positive remarks in learner's notebooks with motivational stamps and stickers, allowing learners to participate in reading during class so that they feel included, scaffolding activities, and several class discussions on learners' career choices; learners are encouraged, on a daily basis, to feel excited and interested in tasks that they need to conduct. Intrinsic motivation describes the innate propensity to pursue novelty and to extend one's skills and foster growth (Frederico, Ezequiel & Lourenco; 2016:17). For instance, teachers can point out a positive area or a way learners have grown, which will boost learners' intrinsic motivation. Participants' responses are supported by literature (*cf.2.1.1.8, Sebotsa, Kriek & De Beer, 2019:354-355*).

- **Sub-theme 2: Emulating ideas of goal setting**

Research suggests that encouraging learners to set short-term goals for their learning, can be an effective way to help learners track their progress (Zumbrunn, Tadlock & Roberts; 2010:10). The following responses from participants highlight the importance of goal setting in order for learners to attain academic success, as well as the strategies teachers use to teach learners how to set goals:

Learners are encouraged to work with a timetable/timeframe. Learners are to indicate what they need to achieve/accomplish by a certain day/date. Learners are motivated and challenged to ensure that these tasks/activities are completed within the timeframe (SAP1).

I ask learners to write in their books the mark they have achieved previously in the subject and the mark that they want to achieve, and to work towards that goal. I encourage learners to set timeframes for themselves when studying or completing homework (SAP2).

I speak to my learners about different career paths that they can follow…. (SAP3).

Use examples of prominent local students of mine. Successful past students and elder address my learners. Use international examples …. (SBP2).

Monitoring of tasks on an ongoing basis …. (SCP2).

During lessons, I ask learners to write down their goals (both short-term, and long term goals)…. Learners are asked to write down their action plan for each of the goals they set. I ask learners to read their goals daily and visualise accomplishing them. They also reflect on their progress to see if they are on target (SDP4).

The responses of participants are supported by Nilson (2013:17) who says that 'having learners set positive goals prepares them for later self-regulating practices'. From the majority of participants' responses, the common focus was assisting learners in creating an action plan and timeframe after learners have set their proximal and distal goals. Although the majority of participants highlighted the ways they assisted their learners in setting proximal and distal goals, few participants indicated that there was no time to focus on goal setting, due to the only proximal goal being preparing for examinations.

- **Sub-theme 3: Planning and assisting learners to achieve their goals**

Planning and goal setting steer the wheel in the direction to learn, with the impetus to set the pace for learning (Geduld, 2017:145). In other words, in order to be successful in learning, one needs to plan appropriately and set goals that will guide them towards reaching academic excellence. The following strategies were implemented by the participants in assisting their learners to plan and achieve their goals:

Assists learners in identifying their strengths and weaknesses… work through past year exam papers…. Work with learners to isolate personal and academic goals …..(SAP1).

Time management, I encourage learners to draw up their personal study timetable …(SAP2).

Teach learners how to create an action plan for each goal and a timeline to follow up on (SBP1).

Teach learners to manage their time…. Draw up a plan with steps towards achieving the goal …..(SCP3).

I show my learners my methods of planning. For example, the template I use to prepare myself for each of my lessons (my daily forecast file). I have also shown my learners a copy of my lesson plan. Things that I will do during my lesson, things I expect my learners to do in my lesson, and also what I want to achieve/ my objectives from that lesson (SDP4).

Time management was the most common response from participants when asked how they taught learners to plan and achieve the goals they set. Teaching learners how to manage their time when conducting tasks, planning for assessments, and drawing up a study plan is supported by literature (Zimmerman & Moylan, 2009:303).

- **Sub-theme 4: Applying various task strategies to help learners understand their work**

Task strategies entail 'the assistance in learning and performance by reducing a task to its essential parts by re-organising the parts meaningfully' (Zimmerman, 2000:19). When participants in my study were asked which learning strategies they used to help their learners understand their work, and also when and why they used these strategies, their responses were as follows:

Use prior knowledge to link learners' thoughts and ideas to the concept/topic being taught. Introduce vocabulary in context, so that learners can deduce the meaning of text through context….used in comprehension passages, poems, novels, drama, and language. Prior knowledge always helps learners, taking them from a place of what they know to the unknown…This linking assists in learning and making meaningful connections (SAP1).

Charts and flow diagrams work for some learners. Others prefer to re-write work. Learners with some learning challenges are encouraged to use flash cards with parents/siblings. All learners are encouraged to use past papers… My classroom is a diverse environment. Learners all do not learn at the same pace or same style. It takes time for me to understand what each of my learners' learning styles are or to remedy learning barriers, therefore different approaches are to be tried (SAP4).

Co-operative learning, through verbally expressing themselves and responding to others. Self-confidence is developed and communication skills and critical thinking skills are taught. Inquiry-based instruction, by encouraging learners to ask questions and investigate …. This is conducted daily, such that I am able to respond to my learner's diverse needs. There is no 'one size fits all' method to help learners develop understanding but these strategies help to address individual needs (SBP1).

The use of mnemonics. This will improve and will become useful in remembering important dates, capital cities, etc. creating flow charts or mind maps… helps in understanding content. Get learners to highlight or underline important information…. I use these strategies in my everyday teaching… this helps my learners remember and understand what they learn. Makes learning fun, encourages the learner when they perform well in a test or exam (SBP4).

Visual learners, when doing a poem learner's must learn to form a picture of the imagery the poet describes… Connotations Schemata theory, when learning new words, learners relate it to what they already know… I use these strategies in my lessons. The incorporation of these strategies helps my learners understand the content in their way (SCP3).

Space out learning over time and not on a day before exam, to cram their work. I provide a detailed explanation and description of the content during lessons with practical examples…. I often combine written content with pictures…..during my lessons before learners attempt the class activities…. So that they can attain high marks for their assessments (SDP4).

Teachers can help learners with creating effective task strategies. As evident from participants' responses, using prior knowledge, creating charts and flow diagrams, co-operative learning, the use of media and technology, mnemonics and imagery, were some strategies they used in order to assist their learners to understand their work. The responses of participants are supported by Joseph –Edwards (2019:10) who mentions that 'effective task strategies may entail highlighting content material, summarizing and using mnemonics', in order to understand and remember content.

- **Sub-theme 5: Assisting learners with metacognitive monitoring**

'Metacognitive monitoring refers to informal and mental tracking of one's performance processes and outcomes and their effectiveness in producing learning' (Zimmerman & Moylan, 2009:303). Teachers need to assist struggling learners to become self-regulated learners and use their metacognitive knowledge to identify their capabilities and motivation to pursue goals (Peel, 2017:72).

Self-instruction refers to the overt and covert description of how to proceed as one executes a task, such as self-questioning as one reads textual material (Zimmerman & Moylan, 2009: 302). For example, teachers could prompt learners by presenting them with effective question stems, which can be used to develop effective self-questions. When asked how they developed metacognitive monitoring, the research participants responded in the following ways:

Do activities that are related to the topic discussed. Create own questions and self-test to determine if they understand the work… I encourage learners to ask themselves questions and to be able to answer those questions without the help of their notebooks. I encourage learners to self-question before, during, and after any content being looked at (SAP2).

I give learners homework that are related to the work we were doing in class that day. I give learners previous papers to answer, then we discuss the memo. They exchange notebooks and mark for each other….when it's a novel or drama, there are always questions that allow learners to reflect and think about their own opinions and ideas (SAP3).

Assessments are both formal and informal… Teach reading skills, critical reading skills. Encourage them to read for meaning and understanding (SBP2).

I encourage peer work… I ask my learners to generate their questions and then share it with their peers and also respond to their peer's questions (SCP1).

To read their work several times until it makes sense to them. Write down words that they do not understand, and they find the definition of these words. To read their work aloud to their peers/ or to themselves to understand what they have written…. I ask my learners to generate their questions. They share their questions with their peers and thereafter respond to their peer's questions as well as their own (SDP4).

Participants' responses indicated that they conducted activities with their learners related to the content they currently teach. By allowing learners to come up with their questions relating to the current content, learners become more familiar with the topic. Participants also indicated that they gave their learners homework related to the current topic. Some participants indicated that they provided their learners with past year examination papers. However, revision of past year examination papers can be viewed as a practice of 'teaching to test' instead of enhancing self-regulated learning skills in learners. Moreover, understanding memorisation and practice can be viewed as the beginning of a meaningful learning experience for learners, where they are active, constructive, engaged, and know-how to apply knowledge to new situations.

Peer work, critical reading, and analysis, building on vocabulary, and reading aloud are some of the strategies that participants used. These strategies are advocated by Rajabi (2012:374) and Perry, Hutchinson, and Thauberger (2007:98).

Although the majority of the participants indicated the ways they assisted their learners to check their work and apply self-questioning methods, few participants (SDP1 and SDP3) indicated that they did not assist their learners with checking their work, as their learners were expected to do

corrections, and then raise their hands to ask questions if they did not understand. Their learners are expected to be able to question themselves as these techniques are taught to learners at the primary school level. Some teachers do not take into account how their teaching practices motivate learners and contribute to enhancing a more learner accommodating approach (Hiemstra, 2013:23). Furthermore, 'teachers must be aware of their actions and teaching methods as well as acknowledge the expectancies of themselves to foster self-regulated learning skills' (Jossberger et al., 2010:36) and not expect learners to be self-regulated on their own.

Participants also indicated that they taught learners metacognitive monitoring by teaching them to prepare for class beforehand, at home. Teachers can assist learners with preparing for class, being organised with content material and homework, and developing enthusiasm among learners so that they become eager to learn (Nunez et al., 2015:376). The following responses from participants indicate how they prompted learners to think about how they prepared for class:

> *I communicate to learners what is expected from them by explaining to them the activities that need to be completed as well as the notes that they should read to be prepared for the next lesson ……(SAP2).*
>
> *Before I end the lesson, I give learners questions that are related to the next lessons. This is meant to prompt learners, to get their previous knowledge on a certain topic before we move on to the new knowledge (SAP3).*
>
> *I encourage learners to do the reading/notes on the material before the lesson, then ask them to review the work again (SBP1).*
>
> *They should arrive early, settle down and get ready for the business of the day. Go over what they have already learnt. Test their understanding of the content already covered. They must be organised, books in school, pens, and pencils, readily available. Carry all necessary items required for the lesson (SBP4).*
>
> *Background questions, sources. Reading prior to commencing a new section. Providing key questions (SCP2).*
>
> *During my lessons, in class discussions, I ask learners what are the things they do to prepare for lessons. Most often, learners indicated that they conduct their homework and have all their notes up to date before the next lesson. In this class discussion, learners learn from each other (SDP4).*

The majority of participants (SAP2, SAP3, SBP1, SBP4, SCP2, and SDP4) utilise strategies to develop the self-regulated learning skill, metacognitive monitoring that are supported by literature

(*cf.2.1.1.8.7, Pintrich & De Groot, 1990:33*). They indicated that they provided learners with reading material and key questions prior to discussing topics, and a clear explanation of activities that need to be conducted by learners. They emphasised critical reading, provided learners with questions in preparation for the next lesson, prompted learners to arrive in class on time. Learners were encouraged to be organised and have all necessary resources and stationery at hand and to engage in class discussion on how learners prepare themselves for class. In so doing, more meaningful class discussions took place because learners were familiar with the content. Added to this, certain participants indicated that they ensured learners' homework was completed before their lessons commenced, emphasising the importance of being punctual. Settling down and having all necessary resources expected of learners, were also pivotal in prompting learners to prepare for class.

When developing metacognitive monitoring skills, teachers should emphasise the importance of learning among their learners, and not only arriving at the correct answer. Learners could easily forget the methods or processes they used to get the answer (*cf.2.1.1.8.7, Jossberger et al., 2010:24*). The following responses from the participants indicated how they emphasised the importance of learning versus getting the correct answer, among their learners:

> *Learners should be encouraged to engage in elaboration and understanding of facts and ideas rather than rote repetition….this can be achieved through purposeful questions which can help learners deepen their thinking and understanding rather than merely reaching the correct answer (SAP1).*
>
> *In the learning process, mistakes are bound to happen. I motivate my learners by telling them that it is not about how many answers you get correct but ensuring that you learn from your mistakes in order to effectively apply knowledge in the long-term (SAP2).*
>
> *I encourage meaning acquisition rather than being correct. Reading for meaning allows one to engage in a critical understanding rather than right or wrong answers (SBP2).*
>
> *Encourage mistakes, as those are the best way to learn. Getting the correct answer may simply be due to following the correct methods of working and not necessarily understanding the problem (SCP4).*
>
> *Getting the correct answer does not necessarily mean that a learner has conducted the work themselves. Also, sometimes learners use their notebooks and textbooks to take down the correct answers….. (SDP4).*

The importance of critical thinking and learning with understanding was highlighted in the majority of the participants' responses (*cf.2.1.1.1.15, Pintrich & De Groot,1990:33*). However, some

responses indicated that very little was done to show the importance of learning versus getting the correct answer, as some teachers perceived that the South African education system is obsessed with the right answer. A response from one participant was as follows:

> …..*We teach to prepare learners for exams. There is no time to teach and encourage curiosity and exploration (SDP3).*

The response from participant (SDP3) above is highlighted in the literature (*cf.2.1.1.8.7, Dignath,2016:84*) who mentions that, 'some teachers spend very little time on promoting self-regulated strategy instructions'.

Teachers should encourage self-assessment among their learners (*cf.2.1.1.8.8, Jossberger et al., 2010:23*). This could be achieved by emphasising the importance of self-assessment and self-recording of learners' progress, achievements, and errors; reflecting on what they know, as well as what needs to be known, and the processes they need to take in order to gain new knowledge; and also acknowledging their mistakes when they attempt future tasks. Teachers can encourage learners to keep a journal and record their progress and mistakes. That way, teachers can help learners identify the areas of weakness for certain topics. Teachers can show learners how to create formal records of their learning process and outcomes. The following responses from participants indicated how they encouraged self-assessment among their learners:

> *Learners correct their work from the correction/rubric given. Learners do peer marking of activities (SAP1).*
>
> *Self-assessment is conducted daily, where learners mark their class activities (SBP3).*
>
> *Peer assessments, I give learners an assignment. They give it to their peers to mark using their textbooks (SCP1).*
>
> *Peer marking of topic tests. Copies of exam memos to show them what is required to achieve full marks (SDP1).*
>
> *Learners mark their activities and complete remedial work. Learners also set their tests, answer their questions, and give themselves scores after they have conducted their test (SDP4).*

Nine participants indicated that their learners often marked their class activities after answers are reviewed by the teacher, or provided with a marking memo. Peer marking was also highlighted in many responses from the participants, where learners are given the opportunity to mark their peers' work. By doing so, they become familiar with what is expected of them in their work and learn from the mistakes of their peers or even the correct ways and methods to conduct their work

in the future. These strategies are pivotal in learners' self-reflection and metacognitive monitoring, as they will learn how to track their progress and correct their mistakes (*cf.2.1.1.6.2, Smith & McGregor, 1992:1*).

The following responses from participants showed how they modelled metacognitive monitoring during their teaching. Participants revealed that they showed their learners how they thought during self-questioning when they taught, by thinking aloud and talking to themselves through the processes, or when correcting themselves when they explain content (*cf.2.1.1.8.7, Pintrich & De Groot, 1990:33*).

> *…when teaching a poetry lesson, for example, I usually ask myself questions out aloud to help me understand where the poet is coming from, his/her feelings, intentions, and tone. This is to show learners how to analyse the poem, how to break it down, and get a deeper understanding (SAP1).*
>
> *….during discussions, I place myself in scenarios to make it easier to explain and bring across the understanding. If I make a mistake during the teaching process, I immediately explain to the learners where I made a mistake and explain it correctly to bring clarity (SAP2).*
>
> *…..whenever I make mistakes, I often bring it to the attention of my learners and correct myself. I also, at times, when writing on the chalkboard to explain to learners, I speak out aloud as I write an answer on the chalkboard, just so that I am writing something sensible…..especially when the answers are coming from my mind, and not written material (SBP3).*
>
> *….it helps for learners to see that I also question myself, think out aloud and correct myself so that they find the teacher is not all-knowing but there is always room for improvement. This encourages them to do the same and to build confidence in their abilities (SCP4).*
>
> *…..thinking out aloud during reading comprehension. Correcting verbally if I make an error while explaining. Re-writing sentences on the chalkboard with explanations (SDP3).*

Several participants highlighted that they showed learners how they thought when reading content material and questioning themselves, as well as correcting themselves when they made mistakes (*cf.2.1.1.6.2, Peel, 2017:72*) and (*cf.2.1.1.8.7, Pintrich & De Groot,1990:33*).

In the following paragraphs, teachers' perceptions on contextual factors in the development of self-regulated learning skills were explained.

4.1.1.5. Theme 4: Resources and the socio-economic status of learners at higher quintile schools

The questions posed to participants explored challenges they experienced in developing self-regulated learning skills. These challenges emanated from their teaching environments (*cf.2.1.1.5, Bandura,1986*). The context component of the Person-Process-Context model highlights environmental and socio-political aspects (Hiemstra & Brockett, 2012:159). As a result, I positioned these challenges under the theme resources and the socio-economic status of learners at higher quintile schools. The fourth theme of the study was resources and the socio-economic status of learners at higher quintile schools. This theme highlighted teachers' perceptions of learner variables in the development of self-regulated learning skills among their learners. The following sub-themes were highlighted: (i) learner variables that allow learners to learn or not from task strategies modelled to them, (ii) learner variables that simplify the teaching of SRL skills, and (iii) learner variables that make it challenging to teach SRL skills.

Figure 8 below illustrates the theme and sub-themes of teachers' perceptions on environmental challenges militating against developing self-regulated learning skills in their teaching praxis.

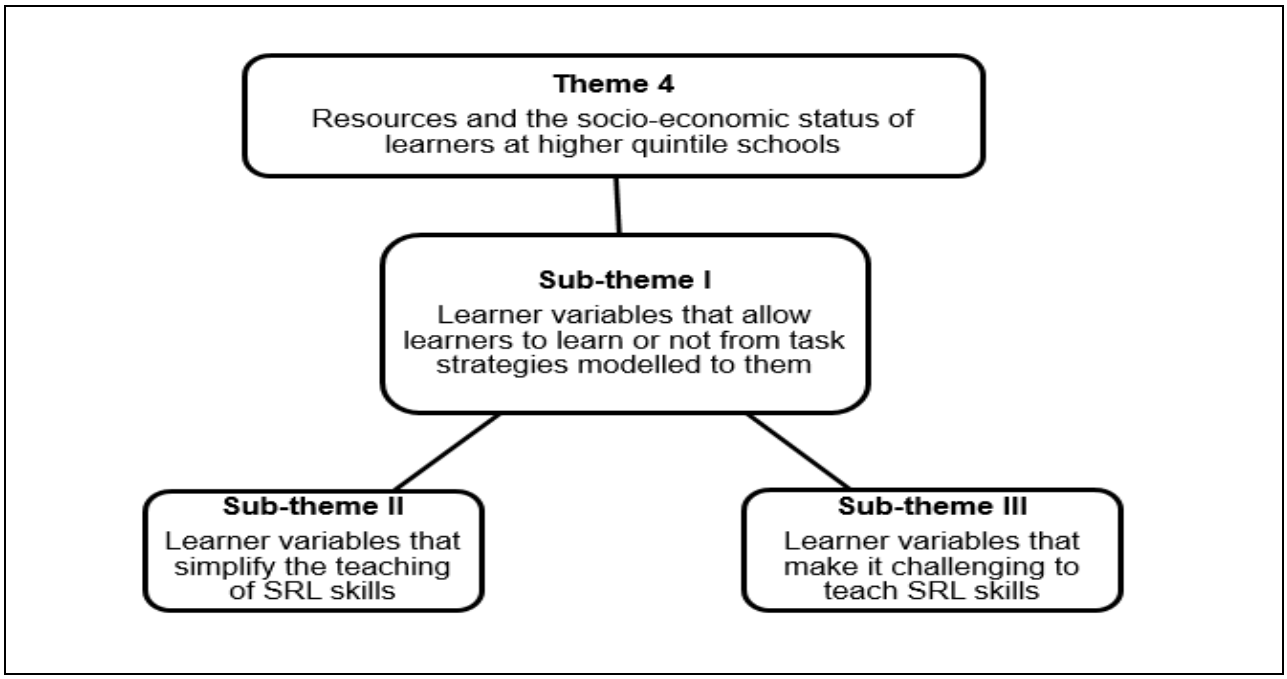


Figure 8: Resources and the socio-economic status of learners at high quintile schools

- **Sub-theme 1: learner variables that allow learners to learn or not from task strategies modelled to them**

Contextual factors entail learner variables or characteristics as well as social and economic factors that impact the development of self-regulated learning. Learner characteristics refer to variables within learners that allow them to learn or not from task strategies modelled to them. Furthermore, contextual factors encompass communities in which learners reside, the school and classroom environment, as well as how classroom teaching is conducted. Diversity is another contextual factor that impacts on a learner's ability to learn. The following responses from participants highlight learner variables that allowed or constrained learners from task strategies modelled to them: These factors point mainly to learner variables or characteristics within learners themselves.

> *Learners who do learn are self-motivated, always ready to engage in critical thinking, goal orientated. Learners who do not learn, show a lack of interest, language barrier, and poor self-esteem (SAP2).*
>
> *Some learners show a lack of interest when it comes to their school work. There are many reasons why learners are less interested in their work. One of them could be serious issues that they are facing at home example, poverty, sexual abuse, etc. Environments that children are coming from also has a huge impact on how they value education (SAP3).*
>
> *Poor reading and writing skills. Learner apathy. Lack of interest, poor parental supervision. Social media dominates their online activity (SAP4).*
>
> *Learners are interested in visually stimulated learning as opposed to talk and chalk methods….use of media, electronic, internet, animated presentations….power point lessons (SBP2).*

Social barriers entail social elements that can affect a learner's ability to learn. Economic barriers highlight factors such as poverty and unemployment. As evident from the aforementioned participants' responses, the following social and economic barriers were highlighted: language barriers, lack of parental supervision, social media influences, poverty, abuse, and family backgrounds. These are contextual factors that hamper learning among learners. These factors are also indicated in literature (*cf.2.1.1.6.2, Nunez, Suarez, Rosario, Vallejo, Valle & Epstein, 2015:394*). For instance, the lack of parental supervision is detrimental to learners' academic performance, since 'parents are motivational resources and should foster positive engagement' for learners to achieve academic success; (*cf. 2.1.1.6.2)* Malebese, (2013;26) concurs that, 'parental support and self-regulation contribute a great deal towards self-regulated learning behaviours'; (*cf. 2.1.1.6.2)* Geduld and Mdakane (2020:335) posit that, 'the lack of parental guidance and support in learners homework provides less opportunity for learners to develop self-regulated learning skills. (*cf.2.1.1.8.1)* Vandevelde, Van Keer, and Merchie, (2017:115) note that,

‘learners from low socio-economic backgrounds have more difficulty in engaging in self-regulated learning behaviours’ and (*cf. 2.1.1.8.1).* Bayat, Louw, and Rena (2014:183) posit that ‘in South Africa, poorer learners perform worse academically due to hunger, ill health, the lack of parental support, inadequate access to basic services and housing, and lack of classroom resources.’

Learners who are exposed to technology in well-resourced schools that have internet access and technological gadgets tend to learn from task strategies that are modelled to them because they have various resources that aid their SRL experiences. This is supported by literature (*cf.2.1)* Spaull (2013:6); Ogbonnaya and Awuah (2019:106); (*cf.2.1.1.6.2)* Eyyam and Yaratan (2014:31).

- **Sub-theme 2: learner variables that simplify the teaching of SRL skills**

The following contextual factors that simplify the teaching of self-regulated learning skills were evident in the participants’ responses below. The responses mainly referred to resources available at higher quintile schools and the socio-economic status of learners attending these schools.

> *There is a library at school available for learners to read and improve not only their reading skills but also their vocabulary. There is a reading period also created for learners (SAP3).*
>
> *Availability of diverse resources. Motivated learners. Participation of parents actively in learner’s approach (SAP4).*
>
> *We have an Information Technology room and a learning centre, library (SBP2).*
>
> *Some learners come from well, financially stable families. School library (SBP3).*
>
> *Age, older learners seem to be more mind-set with setting goals and achieving them (SCP1).*
>
> *Hosting online lessons which makes learners take the initiative to adapt to a new way of learning and to take charge of their learning by engaging with material on their own (SCP4).*
>
> *Learners engage with electronic devices (SDP1).*
>
> *Good family background is vital to teaching SRL. Learners who come from broken families or poor families find it difficult to learn because their mind is always pre-occupied by family problems (SDP2).*

As evident from participants' responses, the availability of diverse resources, technology, and libraries at their schools favoured the teaching of self-regulated learning skills among learners. It is much easier to teach self-regulated learning skills in higher quintile schools, which are well resourced. Parental support is another factor that plays a vital role in the development of self-regulated learning skills in learners. The responses of participants are supported by literature (*cf.2.1.1.6.2),* Xu (2008:82) shows that parents should set rules for their children, such as restricting television viewing, modelling good time management, and being approachable to their children when they need assistance. (*cf. 2.1.1.8.4)* Rajabi, (2012:374) promotes the use of technology in the classroom to enhance self-regulated learning skills; and literature also (*cf.2.1.1.8)* Beard (2016:46) posits that through interaction and negotiation with teachers, learners receive the kind of support they need for independent learning. Another factor evident in participants' responses, was age. Older learners (secondary school-going) seemed to be more focused on setting goals and working towards achieving them, as compared to younger learners. It can be concluded that, as some learners get older, they develop more self-regulated learning skills, as they become more focused on achieving their goals, and are self-motivated towards their academic achievements.

- **Sub-theme 3: learner variables that make it challenging to teach SRL skills**

The following responses from participants highlighted the contextual factors that made it challenging for them to teach self-regulated learning skills among their learners:

> *The environment the learner comes from background. The roles and responsibilities of the learner at home. Lack of parental guidance and support (SAP1).*
>
> *Language barriers. Social problems that our learners face. Discipline, poorly behaved learners make it difficult to assist all learners effectively (SAP2).*
>
> *Lack of parental involvement, poor attendance, learner absconding classes (SAP3).*
>
> *Lack of space, lack of access to internet, resources for underprivileged learners (SAP4).*
>
> *Lack of training, large class sizes, language (SBP1).*
>
> *Overcrowded classrooms (over 45 learners per class) some learners come from households that are not financially stable (SBP3).*
>
> *Language barrier, not all learners are English Home Language (EHL) learners. Understanding content becomes a problem, and in this way, learners do not feel secure*

enough to complete tasks. They are also afraid to take part in class discussions for the fear of getting the answer incorrect (SBP4).

Age, younger learners example, Grade 8 and 9 learners will not take this seriously. They will not see the importance of setting goals (SCP1).

Limited time, limited resources, almost no support from subject advisors. A department-wide fixation on matric results (SDP3).

As evident from participants' responses, several challenges make it difficult to teach self-regulated learning skills in their schools. Contextual factors that posed as challenges to teach self-regulated learning skills were learners' family backgrounds (poor learners/poverty), the lack of parental guidance and support, indiscipline, language barriers, learners absconding class, lack of access to technology and resources, overcrowded classrooms (lack of space), lack of training, age and lack of contact time with learners. Although quintile 4 and 5 schools are categorised as well-resourced schools, several learners that attend these schools come from poor financial backgrounds. Furthermore, there is very little parental involvement in these schools, as some parents struggle with personal challenges such as unemployment and poverty. These challenges are supported by literature (*cf. 2.1.1.8.9)* Spaull & Kotze (2015:3) observe that teachers are challenged with high enrolment of learners in many South African classrooms. Literature (Hiemstra, 2013:30) concurs that large classroom enrolment restricts the development of self-regulated learning. Boloyi (2020:26) highlights that, 'the English language poses a language barrier for the majority of South African learners,' as well as 'poverty, lack of resources, demotivated learners,' are all presented as socio-economic challenges that made it difficult to teach self-regulated learning skills (Baloyi, 2020:26).

4.2. Summary of chapter

This chapter presented the qualitative data collected from sixteen participants from four quintile 4 and 5 secondary schools in the iLembe district in the KZN province, through open-ended semi-structured questionnaires and two follow-up telephonic interviews (to gain clarity on two questions in the questionnaire). The data presented provided experience on the development of self-regulated learning in selected secondary school teachers in KZN. The research findings were presented thematically. The following chapter (chapter 5) presents the conclusions, recommendations, and limitations of my study.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS, AND LIMITATIONS

5. Introduction

This chapter presented the conclusions of the study, as well as the recommendations and limitations. The purpose of the study was to explore how quintile 4 and 5 secondary school teachers' self-directed learning influences the development of self-regulated learning in their learners. The presentation of the findings was guided by the research questions, the secondary research questions, and the aim of the study. I conclude the chapter by presenting the recommendations for future research.

5.1. Overview of chapters

Chapter 1 provided an overview of the study and the background of the study, as well as the rationale for conducting this research. The aim of the study, key concepts, research design, and methodology used in the study were outlined in this chapter. Data analysis and ethical considerations were also presented in the chapter. Chapter 2 explored existing literature on the development of self-regulated learning by secondary school teachers, and the experiences of quintile 4 and 5 secondary school teachers in developing self-regulated learning among their learners. The chapter also outlined the theoretical framework that guided the study. Chapter 3 discussed the methodology used in the study. The research paradigm, research design, and qualitative approach were elaborated on. The chapter also explained the sampling strategy and the data collection tools used.

The chapter concluded with the discussion on how data was analysed, the quality criteria used, and the ethical considerations that were upheld during the research. Chapter 4 presented the results and discussion of the study. The results were discussed in terms of themes and sub-themes identified during the data interpretation process. In this chapter (Chapter 5). I provide the answers to the key research question and the secondary research questions. This chapter also outlined the recommendations and limitations of the study.

5.1.1. Conclusion and summary of findings

In this section, I present both the conclusions drawn from the findings, as well as using themes that were identified in chapter 4, and show how these themes contributed to answering the research questions formulated in Chapter 1.

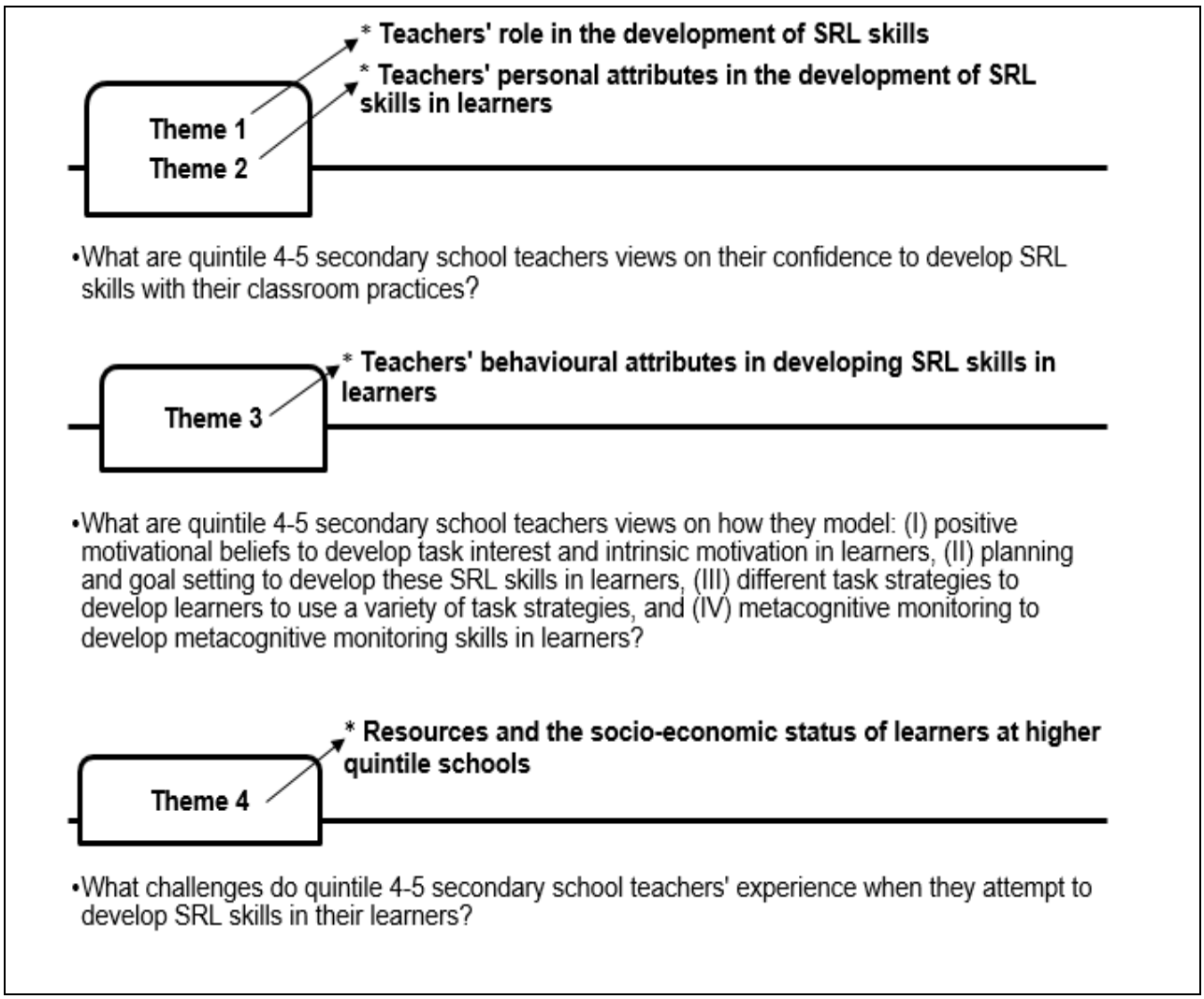


Figure 9 below depicts a visual presentation of the themes and related research questions of the study.

5.1.1.1. Secondary research questions

This section provides a summary of the findings of the study in order to answer the following secondary research questions:

What are quintile 4-5 secondary school teachers' views on their confidence to develop SRL skills with their classroom practices?

The study revealed that teachers' role in the development of self-regulated learning skills is linked to their level of confidence in developing self-regulated learning skills among their learners. This means that when teachers are aware of the roles they play in the development of self-regulated learning skills among their learners, they are more confident in the development of self-regulated learning skills. By contrast, when teachers are not made aware of the roles they play in the

development of self-regulated learning skills among their learners, during their training and Department workshops, then they tend to lack the confidence to develop and enhance self-regulated learning among learners.

Teachers play an extremely crucial role in the development of SRL among learners. For instance, teachers can guide learners through effective monitoring, self-motivation, setting goals, and assisting learners with contextual factors that may be presented in their social environments. A study conducted by Peeters, Backer, Reina, Kindekens, Buffel, and Lombaerts (2014:1963) revealed that 'teachers play a crucial role in promoting self-regulated learning.' Teachers are more confident in the development of self-regulated learning when they receive adequate training and support from the Department of Education.

For the majority of the teachers already employed in the South African education system, self-regulated learning practices among learners are rarely conducted, and in some cases, not at all. Many teachers already feel burdened with curriculum coverage and administrative work. However, if self-regulated learning practices are implemented in the curriculum, and taught to learners as an integrated aspect in their subjects and learning areas, their academic performance may improve. That would reduce the stresses placed on teachers as learners become more responsible for their learning.

Another crucial aspect in the development of self-regulated learning among learners is the promotion of self-regulated learning by the DoE. Currently, there is very little emphasis on self-regulated learning through the DoE. A study conducted by Delfino and Persico (2018:841) revealed a lack of teacher training workshops to raise awareness on the necessity of promoting self-regulated learning among learners and teachers, as a 21st century skill. As a result, many teachers do not know as much as they should, about the roles they can play in promoting self-regulated learning, among their learners.

What are quintile 4 and 5 secondary school teachers' views on their confidence to develop SRL skills with their classroom practices?

The study revealed that teachers need to possess a high amount of knowledge and display an array of skills in order to promote and enhance self-regulated learning skills among their learners. However, many teachers felt that they did not possess enough knowledge and skills on self-regulated learning, to develop self-regulated learning skills in their learners. This could demotivate teachers from further gaining knowledge on self-regulated learning and pursuing self-regulated learning behaviours in their lessons. Some participants still applied teacher-directed approaches to 'spoon-feed' learners which are detrimental for the development of self-regulated learning in their learners (Hiemstra, 2013:23).

Another observation was that some teachers lacked the confidence in developing self-regulated learning skills among learners, due to a lack of knowledge and skills on self-regulated learning. However, many teachers are confident in their pedagogical practices, particularly content delivery and provision of class tasks. Dignath (2016:83) revealed that teachers promote self-regulated learning through their own beliefs on self-regulated learning, and their personal beliefs relating to learning, which also includes their level of confidence in developing self-regulated learning skills.

Many teachers may lack the ability to teach learners how to learn their subject content, provide adequate feedback on class tasks and assessments, provide individual assistance to struggling learners and foster self-regulated learning during their lessons. This may be due to teachers not having enough time to concentrate on individual learners who may be struggling. Some teachers lack the patience to engage in tasks other than what is required by the department. As a result, their development of self-regulated learning skills in their learners is hampered. The study also revealed that some teachers lacked the confidence to develop self-regulated learning skills among their learners, as they felt that they had not been adequately trained to do so. This finding corresponds with the findings of Baloyi (2020:25) which revealed that some teachers are challenged to develop self-regulated learning skills among their learners, as they perceive that they have been trained in a different education system. Some of them struggle to adjust to different curriculum changes and new editions to teaching and learning. Furthermore, the study showed that some teachers lacked the confidence in developing self-regulated learning skills among their learners due to their extensive work-loads that compromised the ability of teachers to assist learners struggling with language barriers. Baloyi's (2020:26) study revealed that the English language as a medium of instruction is a barrier to teaching and learning. As a result, some teachers lack the confidence in promoting self-regulated learning among learners, because they feel that the majority of the learners may not be able to cope with self-regulated learning practices on their own.

What are quintile 4 and 5 secondary school teachers' views on how they model positive motivational beliefs to develop task interest and intrinsic motivation in learners?

The majority of participants in the study had been teaching for over ten years and their age groups were 35 years and over. Participants' age and teaching experience may be a factor in relation to their motivational beliefs. This means that older teachers, and teachers with many years of teaching experience, may be more motivated to develop task interest and intrinsic motivation in learners, because of their past practices during lessons. They are more aware about what works for their learners. The study revealed that the majority of the participants conducted activities that kept their learners motivated and interested in the task. A study by Sebotsa, Kriek, and De Beer (2019:354-355) revealed that teachers played a vital role in creating motivational spaces in their classrooms.

Teachers need to be highly self-efficacious, so that their learners may emulate similar traits. For instance, when teachers are self-motivated, self-determined, organised, and prepared for their lessons, arrive to class on time, and provide essential feedback of class assessments timeously; then learners will conduct themselves in similar appropriate manner.

What are quintile 4 and 5 secondary school teachers' views on how they model planning and goal setting to develop these SRL skills (planning and goal setting) in their learners?

Participants' responses revealed several strategies they used in assisting learners with planning and goal setting. For instance, most of the participants indicated that they assisted their learners to create an action plan and time frame to help them reach their proximal goals. Participants' responses were in line with literature which indicates, 'having learners set positive goals, prepares them for future self-regulating practices' (Nilson, 2013:17). Some participants also indicated that they showed learners their work, such as their lesson template, daily forecast, and copies of their lesson plans, in order to create awareness among their learners about the amount of planning that the teacher needs in order to be prepared to teach their daily lessons. The study by Geduld (2017:145) revealed that, in order to be successful in learning, one needs to plan appropriately and set goals that will guide them towards reaching academic excellence. By participants emulating effective ideas on planning and goal setting, academic excellence, is not only achieved by the learner but also achieved by the teacher who has modelled outstanding methods of planning and goal setting among their learners.

Teachers' behaviours that promote self-regulated learning skills in learners include goal setting and planning. While some teachers assisted learners in planning and goal setting others felt that they did not have the time to do so. In many schools, contact time with learners during lessons was often only an hour and the ATP provided to teachers by the DoE stipulates exactly what needs to be conducted during the allocated time with learners. Hence, many teachers felt that there was no time allocated to develop self-regulated learning skills during their class time. This finding was in line with the study conducted by Dignath (2016:84) which indicates that 'teachers spend very little time on promoting self-regulated learning strategy instruction,' which may be a result of their limited contact time with learners, which they focus on syllabus completion.

What are quintile 4 and 5 secondary school teachers' views on how they model different task strategies to develop learners' use of a variety of task strategies?

The study revealed that some participants conducted reflection activities on previous lessons to recap content that learners know. Other task strategies conducted by participants included using charts, and flow diagrams, encouraging learners to ask questions, using mnemonics to remember their work, instructing learners to use imagery to understand written work, and formulating a study

plan, and not indulging in rote learning and cramming before an examination. Some of the participants' responses on how they modelled task strategies among their learners, were in line with the study of Joseph-Edwards (2019:10) which indicates that effective task strategies may entail highlighting content material, summarising, and using mnemonics to remember their work and a better understanding of content.

Although many teachers used various task strategies to assist learners to understand their work, others conducted the same task strategies with all their learners, including both 'high flyers' and struggling learners. Although struggling learners may require different strategies and more assistance, many teachers did not take the initiative to do so. As a result, struggling learners did not progress to the next grade.

While some teachers assist learners to check their work, other teachers do not provide remedial work and conduct corrections of activities with learners. As a result, learners are unable to assess themselves and identify where they went wrong, and learn from their mistakes. Added to this, some teachers focused on learners getting the correct answer and did not emphasise the importance of learning. For many teachers, getting the correct answer means academic success and promotion to the next grade. However, many teachers emphasised the importance of learning from one's experiences in conducting a task and being self-regulated learners.

What are quintile 4 and 5 secondary school teachers' views on how they model metacognitive monitoring to develop metacognitive monitoring skills in learners?

Some participants revealed that they modelled metacognitive monitoring by encouraging their learners to ask themselves questions and answer their questions. Other responses indicated that providing learners with homework, encouraging peer work and critical reading, enhances metacognitive monitoring. A study conducted by Perry, Hutchinson, and Thauberger (2007:98) and Rajabi (2012:374) echoed the similar views that peer work, critical reading, and analysis, building on vocabulary, and reading aloud are crucial strategies in promoting self-regulated learning. The importance of critical thinking and learning with understanding was highlighted in the majority of the participants' responses. Similarly, a study conducted by Pintrich and De Groot (1990:33) explains the need for critical thinking and learning with understanding during self-regulated learning. Jossberger et al.'s (2010:23) study also highlight the importance of self-assessment as a pivotal aspect in metacognitive monitoring. Several participants in the study indicated that they promoted self-assessment, by allowing their learners to mark their class activities, doing peer marking, and learning from their own mistakes as well as from the mistakes of their peers.

Some participants indicated that they seldom modelled metacognitive monitoring to their learners. They did not assist learners to check their work as they perceived that learners should develop self-regulated learning skills on their own. Metacognitive monitoring seemed to be a new concept for many teachers. Most language teachers in my study engaged in metacognitive monitoring through poetry, literature, and comprehension. In my study, teachers from other learning areas and subjects rarely engaged in metacognitive monitoring during their lessons, and rarely showed learners how to go about doing so.

What challenges do quintile 4 and 5 secondary school teachers experience when they attempt to develop SRL skills in their learners?

There are several contextual factors that encourage the development of self-regulated learning skills in learners. For instance, higher quintile schools (quintiles 4 and 5) have access to libraries, technology, adequate classroom furniture, spacious classrooms, access to water and electricity, and learners from more affluent backgrounds. These factors make it easier to develop self-regulated learning skills among learners.

Although my research was conducted in four quintile 4 and 5 schools, some participants reported that self-regulated learning skills were difficult to promote among their learners due to language barriers. This finding is in line with the study of Baloyi (2020:26) which indicated that English medium of instruction was a barrier to teaching and learning. The majority of the learners who attend schools in KwaZulu-Natal (KZN) are not English Home Language (EHL) learners but attend EHL schools. They struggle to understand when being taught in English. The learners mainly came from surrounding rural areas, where they had problems such as financial instability occasioned by several factors (parents unemployed, parents deceased, unable to pay school fees, child-headed households, dependence on social grants). Many of these learners did not have proper housing, electricity, and water, and they travelled by public transport and buses for 10 to 25 kilometres to attend schools, as they resided in rural areas, with no secondary schools. Because of these factors, most of the time it was difficult for teachers to promote SRL skills among the learners, as they were burdened by personal contextual factors. This finding was in line with the study by Vandevelde, Van Keer, and Merchie (2017:115) showing that learners from low socio-economic backgrounds have more difficulty engaging in self-regulated learning behaviours.

5.1.1.2. Primary Research Question

In this section, the findings of the secondary research questions are combined and summarised to answer the primary research question posed in chapter 1

How do quintile 4 and 5 secondary school teachers' self-directed learning influence their classroom teaching to develop self-regulated learning skills in learners?

This study found that the self-directed learning of secondary school teachers in the iLembe District of KZN greatly influenced their classroom teaching practices in relation to developing self-regulated learning skills in their learners. The following are the key findings of the study:

- Majority (15 participants) indicated that they were aware of the concept of self-regulated learning, and they provided their understanding of self-regulated learning. Several participants indicated that they were made aware of the roles they play in the development of learners' self-regulated learning during their training. However, some participants were not made aware of self-regulated learning during their teacher training. Majority of the participants emphasised that there was a lack of insight by the DoE relating to teachers' roles in the development of self-regulated learning skills among their learners. This correlates with the results of a study conducted by Delfino and Persico (2018:841), which expressed that there was a lack of teacher training workshops to raise awareness on the necessity of promoting self-regulated learning skills among learners.

- Although several participants in the study indicated that they were equipped with enough knowledge and skills to develop self-regulated skills among their learners, some participants expressed that they had inadequate knowledge and skills to develop self-regulated learning skills in their learners. Participants indicated that they needed assistance from the DoE to be workshopped, in order to gain more awareness of self-regulated learning and how it should manifest in their daily teaching and classroom practices. Among the several participants that indicated they had enough knowledge and skills to develop self-regulated learning skills in learners, some participants attributed that to their several years of teaching experience.

- The study revealed that some of the participants possessed an adequate level of confidence in developing self-regulated learning skills among learners. However, some participants lacked the confidence to develop self-regulated learning skills among their learners due to inadequate training, contextual factors such as language barriers, extensive workloads, and reliance on teacher-directed approaches to learning. Participants indicated that there was much for them to do in their classrooms, which further lead to the decrease in their level of confidence to engage in alternate teaching strategies. Ogbonnaya and Awuah's (2019:113) study findings indicated that quintile 1 to 3 school teachers were pressured by extensive workloads due to the high enrolment of learners per class and shortage of resources pose a serious challenge. However, it was evident in this study on quintile 4 and 5 secondary schools that there were challenges with a high enrolment of learners, extensive workloads of teachers, and shortage of resources, which contributed to the lack of confidence of participants in developing self-regulated learning skills among learners.

- The majority of the study's participants displayed an optimistic view on their development of self-regulated learning skills among their learners when they were asked what personal characteristics they possessed that enabled them to develop self-regulated learning skills in their learners. Participants' responses also indicated their high degree of self-motivation; an integral aspect in the development of self-regulated learning skills. This finding is in line with a study conducted by Powers, Kaniuka, Phillips, and Cain (2016:1), which says that motivation, self-confidence, and optimism play a pivotal role in teachers' development of self-regulated learning skills because they contribute to their ability and willingness to develop self-regulated learning skills among their learners. In contrast, other participants indicated several factors that hampered their development of self-regulated learning skills among their learners. These factors highlighted participants' lack of patience, attributed to the insufficient time participants had because of the demanding curriculum that they need to complete within a short space of time. Some older participants (45 years and older) revealed their difficulties because of being inadequately trained in technology, which hampered their development of self-regulated learning skills, as they could not teach their learners skills in technological advancements. The importance of technology in the development of self-regulated learning skills is highlighted in the study of Rajabi (2012:374), which postulates that 'advances in educational technologies are pivotal in teachers' development of self-regulated learning skills in which learners are able to direct their learning.'

- Another factor that contributed to the difficulty in developing self-regulated learning skills among learners as indicated by several participants was that the majority of their learners were English second language learners, with their Home Language being isiZulu. Language barriers are an area of concern, especially considering that the majority of the secondary schools in the iLembe district were English Home Language (EHL) schools, where English is the language of instruction. That demotivated teachers from developing self-regulated learning skills among their learners, as they assumed their learners would be unable to cope on their own with the self-regulated learning processes.

- The participants in the study revealed that they kept learners motivated, interested, and excited in tasks by creating a positive learning environment, providing positive remarks in their notebooks, rewarding their learners with motivational stamps, including all learners during the class discussion by providing the opportunity to read and give their views, and engaging in class talks about career choices. Participants' responses were in line with the findings of the research study by Peel (2017:61), which expresses, the environmental influences derived from the physical design of the classroom, and the social interactions that occur with it, and their impact on learners' opportunities to engage purposefully in the social learning system.

- Several participants in the study indicated that they applied ideas of goal setting by providing their learners with their methods for setting attainable proximal goals. The study by Tigist (2013:27) suggests that proximal goals are more effective than distal goals since distal goals involve higher motivation of an individual, as well as better self-regulation over a long period. Most of the study participants indicated that they assisted their learners to work towards attaining their proximal goals such as gaining an A aggregate for a subject, or a passing grade; by encouraging their learners to draw up a study plan and period, as a step to attaining their proximal goals. Once their learners become familiar with self-regulatory behaviours in attaining proximal goals, they may be more equipped to be self-regulated to attain distal goals in the future, as they would have had much practice in being self-regulated learners over a long period.

- The majority of participants in this study applied task strategies to help learners understand their work. Some of the task strategies that were mentioned by participants were, gaining information from learners on what they already know, and building on their prior knowledge, the use of visual presentations such as charts, flow diagrams, encouraging learners to work with their peers, using mnemonics to remember content, and encouraging their learners to space out learning over time.

- Another crucial finding from this study was understanding the ways participants assisted their learners with metacognitive monitoring. Some participants indicated that they assisted their learners by teaching them how to create their questions and to answer their questions. These self-tests were promoted by teachers before, during, and after a topic has been discussed. Alvi, Iqbal, Masood, and Batool (2016:41) highlight that positive study habits are strategic actions for learners' knowledge, skills, and behaviours, which allow them to effectively and efficiently perform their tasks. Self-testing is a positive habit that enhances a learner's ability to develop effective self-regulated learning skills. Other participants indicated that they provided learners with homework daily, in order to assess the ability of their learners to work on their own, while at home. The importance of conducting homework is highlighted by Xu (2015:379) who notes that productive homework behaviours allow learners to be able to organise themselves within their study environment, manage their time to meet deadlines, and concentrate on tasks. Participants in the study also indicated that they taught learners metacognitive monitoring by teaching them to prepare for class beforehand at home. Before a lesson ends, some teachers provided their learners with questions related to the next lesson.

By so doing, learners are prompted to ascertain their prior knowledge on a topic before moving on to new content.

- When developing metacognitive monitoring, participants indicated that they encouraged learning with understanding through critical thinking, and not rote learning of content. Participants also indicated that they informed their learners that making mistakes whilst conducting tasks was common, and what was crucial was to learn and understand where they went wrong. Participants also indicated that they played a major role in showing their learners how they thought by correcting themselves whenever they made mistakes or talking to themselves through processes whilst they are teaching. 'Metacognitive monitoring is used to promote high-order thinking' (Collins, 2012:16). Some participants in the study indicated that they conducted metacognitive monitoring to enhance high-order thinking as a self-regulated learning skill among their learners. Few participants indicated that they engaged very little in assisting learners in planning, goal setting, and task strategies due to a demanding curriculum with prescriptive Annual Teaching Plan (ATP), Programme of Assessment (PoA), and lesson plans provided by the DoE. Moreover, some participants indicated that they did not assist learners to check their work as they expected their learners to raise their hands if they needed more clarity on content. In Martinez-Ponz's (2002:127) study, findings revealed that learners who lacked access to expert models of self-regulated learning were compelled to learn to self-regulate through discovery on their own. As evident from the literature, some participants in the study were of the view that their learners needed to develop self-regulated skills on their own.

- The majority of the participants in the study revealed that there were several environmental challenges that made it difficult for them to develop self-regulated learning skills among their learners. Some of the challenges included language barriers (Baloyi, 2020:26), parental support (Geduld & Mdakane, 2020:335-336), and socio-economic challenges (Spaull, 2013:6). Although quintile 4 and 5 schools are regarded as well-resourced schools (Ogbonnaya & Awuah, 2019:106), participants' responses revealed that several learners experienced socio-economic challenges and, as a result, it was difficult to develop self-regulated skills among them. In contrast, other participants revealed that having access to well-established school libraries, the internet and technology, and learners from financially stable backgrounds, all contributed to an easier process of developing self-regulated learning skills among their learners.

5.2. Limitations

Several limitations must be considered when reviewing the results of this study. The study was geographically restricted to the KwaDukuza circuit, iLembe district. Thus, it is not possible to generalise and apply the findings to the other geographic areas. The lack of prior research studies on the topic related to the KZN province iLembe District contributes to the difficulty of forming the basis of the literature review and understanding the research problem explored. The sample size was also limited in the study. The fact that only sixteen participants and four schools were used limited the findings of the study. Thus, it is also not possible to generalise the findings of this study to the other schools in the KwaDukuza circuit, or all other schools in the iLembe district of the province of KZN in South Africa.

Recommendation for training and practice

Higher Education Institutions (HEI) and teacher training colleges should emphasise the importance of teachers' roles in developing self-regulated learning skills among learners, by offering courses on self-regulated learning to individuals in teacher training institutions. Moreover, HEI should offer modules to currently employed teachers, pertaining to the development of self-regulated learning skills during their teacher training. This would create awareness among teachers who have been in the education system for several years, and who do not further their studies. These modules may assist currently employed teachers by generating new ideas for their teaching practices.

The DoE should offer informative workshops for teachers, in relation to self-regulated learning skills development. Self-regulated learning skills should be integrated into the curriculum where each subject and learning area provides ways in which self-regulated learning is promoted during teaching. Subject advisors should closely monitor the ways teachers attempt to develop self-regulated learning skills among their learners. School principals and School Management Teams (SMT) should conduct more class visits during teaching, to identify areas in which teachers could better equip their learners with self-regulated practices. Class visits by Heads of Department (HoDs) should be conducted on a weekly basis, and more meetings among teachers within the same department should take place, in order for teachers to brainstorm ideas and generate methods that will enhance the development of self-regulated learning skills among learners.

Through the ongoing involvement of HEI, DoE, school principals, and Heads of the Department in the promotion of self-regulated learning skills among learners in KZN schools, teachers will become more confident in developing self-regulated learning skills among their learners. There is a need to create awareness among teachers, that self-regulated learning skills development is not something that they should feel burdened about, or perceive as additional work, but rather as pivotal skills to be developed among their learners in order to achieve academic success. Keeping learners motivated, interested, and excited about tasks; emulating ideas of goal setting, planning

and assisting learners to achieve their goals; applying various task strategies to help learners understand their work, and assisting learners with metacognitive monitoring, are all crucial components that require the intervention from HEI, DoE, SMT and teachers, in order to develop self-regulated learning skills in learners.

Parental involvement is a crucial aspect in the development of self-regulated learning skills among learners. Parents need to liaise with teachers about their children's academic performance regularly, and monitor their homework. Parents need to be supportive and offer ongoing guidance to their children at home.

The DoE should consider re-evaluating the quintile categorisation of schools. The majority of the quintile 4 and 5 schools are perceived as well resourced schools due to their geographical location. However, for many quintiles 4 and 5 secondary schools in the iLembe district, this is not a true reflection, as the majority of the learners that attend these schools have socio-economic challenges that further disadvantage them.

5.3. Recommendations for future research

This research study was based on the development of self-regulated learning by selected secondary school teachers' in KZN. Based on the findings of this study, the following areas are recommended for future research:

- The roles of stakeholders in promoting SRL skills in KZN schools.
- The importance of teacher training in the development of SRL by secondary school teachers in KZN.
- An overview of SRL skills development by secondary school teachers in the iLembe district of the KZN province

5.4. Conclusion

In this chapter, the conclusion, limitations, and recommendations of the study were provided. The development of self-regulated learning skills by teachers is a crucial aspect that needs attention regularly in order for learners to attain academic excellence. Although several teachers tried to develop self-regulated learning skills among their learners, some teachers needed more assistance and training to do so. Assistance was required from HEI, DoE, SMT, and parents. Teachers' self-efficacy plays an important role in the development of self-regulated learning skills among their learners. This study showed that when teachers have a high degree of self-confidence, self-motivation, emulate effective planning, and goal-setting ideas, and adopt various task strategies and metacognitive monitoring among learners, then they are well-grounded in the

development of self-regulated learning skills during their teaching practices. Teachers capture their learners' attention when they display self-regulated learning behaviours among their learners. In this way, they gain learners' interest in conducting tasks and excitement to learn, which allows learners to gain academic success, and in the future, attain their distal goals.

BIBLIOGRAPHY

Ali, S.A. 2019. Impact on Student Academic Performance of a Self-Directed Primer E-Book in a Follow-On Organic Chemistry Course. Alabama: Auburn University. (Thesis-Ph.D).

Alvi, E., Iqbal, Z., Masood, F., & Batool, T. 2016. A qualitative account of the nature and use of self-regulated learning strategies employed by university students. Australian *Journal of Teacher Education,* 41 (8):40-59.

Baloyi, M.E. 2020. An analysis of how socioeconomic issues affect the performance of learners in rural schools: A case study of Ga-Sekgopo High schools Grade 8-10 learners. Durban: University of KwaZulu-Natal. (Dissertation-Ph.D).

Bandura, A. 1986. Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NS: Prentice Hall.

Bayat, A., Louw, W., & Rena, R. 2014. The Impact of Socio-economic Factors on the Performance of Selected High School Learners in the Western Cape Province, South Africa. *Journal of Human Ecology*, 45(2014): 183-196.

Beard, L.J. 2016. Self-directed learning: A potential predictor of technology integration confidence among preservice teachers. Ph.D. dissertation, University of Tennessee.

Bertram, C. 2010. Understanding Research. School of Education and Development. Scotsville: University of KwaZulu-Natal.

Boyatzis, R.E. 1998. Transforming qualitative information: Thematic analysis and code development. Thousand Oaks, CA: *SAGE publications.*

Brockett, R.G., & Hiemstra, R. 1991. Self-Direction in Adult Learning: Perspectives on Theory, Research, and Practice. London: Routledge.

Carson, E.H. 2012. Self-directed learning and academic achievement in secondary online students. The University of Tennessee at Chattanooga, Chattanooga, 176.

Creswell, J.W. 2009. Research designs: qualitative, quantitative, and mixed methods approaches. 2nd ed. Los Angeles: *SAGE publications*.

Creswell, J.W., & Creswell, J.D. 2018. Research design: qualitative, quantitative, and mixed methods approaches. 5th ed. Los Angeles: *SAGE.*

Creswell, J., & Plano Clark, V. 2007. Designing and Conducting Mixed Methods Research.

Thousand Oaks, *CA: SAGE Publications*, 12(4): 801-804.

Creswell, J.W., Ebersohn, L., Eloff, I., Ferreira, R., Ivankova, N.V., Jansen, J.D., Nieuwenhuis, J., Pietersen, J., & Plano. C. 2016. First steps in research.2nd ed. Pretoria: *Van Schaik Publishers*.

Creswell, J.W. 2013. Qualitative inquiry and research design. 3rd ed. Thousand Oaks *CA: SAGE publications.*

Cohen, L., Manion, L., & Morrison, K. 2000. Research methods in education. *Routledge Publishers*. Oxford: UK. ISBN 978-0-415-36878-0

Collins, G.W. 2012. Information Communication Technology as a cognitive tool to facilitate higher-order thinking. South Africa: University of Pretoria. (Dissertation: Ph.D.).

Curran, V., Gustafson, D.L., Simmons, K., Lannon, H., Wang, C., Garmsiri, M., Fleet, L., & Wetsch, L. 2019. Adult learners' perceptions of self-directed learning and digital technology usage in continuing professional education: An update for the digital age. *SAGE Journals*. https://doi.org/10.1177/1477971419827318.

Delfino, M. & Persico, D. 2009. Self-regulated learning: Issues and challenges for initial teacher training. *Research Gate*. https://www.researchgate.net/publication/286117097

Denscombe, M. 2010. The Good Research Guide: for small-scale social research projects.4th ed. Maidenhead: *McGraw-Hill Open University Press.*

Dignath Van, E. C. 2016. Which components of teacher competence determine whether teachers enhance self-regulated learning? Predicting teachers' self-reported promotion of self-regulated learning by means of teacher beliefs, knowledge, and self-efficacy*. Frontline Learning Research*, 4(5): 83-105.

Dignath Van, E. C., & Van der Werf. G. 2012. What teachers think about self-regulated learning: Investigating teacher's beliefs and teacher behaviour of enhancing student's self-regulation and how they predict teacher behaviour. *Education Research International*, 2012(4). doi.10.1155/2012/741713

Denzin, N.K., & Lincoln, Y.S. 2011. Introduction: the discipline and practice of qualitative research: In N.K Denzin & Y.S Lincoln (eds), *The Sage handbook of qualitative research.* 4th ed. 1-20. Thousand Oaks, CA: SAGE Publication.

Duby, D. 2006. How Leaders Support Teachers to Facilitate Self-Regulated Learning in Learning Organizations: A Multiple Case Study. Regent University (Dissertation: PhD). https://digitalcommons.liberty.edu/fac_dis/45.

Durrheim, K., & Wassennaar, D. 2002. Putting design into practice: writing and evaluating research proposals. In M. Terre Blanche & K. Durrheim (Eds), Research in practice: *Applied methods for the social sciences,* 51-54. Cape Town: University of Cape Town Press.

Eyyam, R., & Yaratan, H.S. 2014. Impact of use of technology in mathematics lessons on student achievement and attitudes. *Social Behavior and Personality: An International Journal*, 42(0): S31-S42.

Frederico, D., Ezequiel, M., & Lourenco, C. 2016. Self-regulated learning and training effectiveness. *ISCTE Business School.*

Gandomkar, R., & Sandars, J. 2018. Clearing the confusion about self-directed learning and self-regulated learning. Med Teach, 40(8):862-863.

Geduld, B. 2017. Teachers' perceptions on how they develop self-regulated learning. *Perspectives in Education*, 35(1):143-156.

Geduld, B. 2019. A snapshot of teachers' knowledge and teaching behaviour with regard to developing self-regulated learning. *Journal of Education.* 77(2019).

Geduld, B., & Mdakane, M. 2020. Self-directed learning research and its impact on educational practice. DOI:https://doi.org/10.4102/aosis.2020.BK206.10.

Guglielmino, L.M. 2013. The case for promoting self-directed learning in formal educational institutions. *SA- Educ JOURNAL*. 10 (2):1-18.

Hacker, J.D., Dunlosky, J.& Graesser, A.C. 2009. Handbook of Metacognition in Education.1st ed. Madison Ave, New York: Taylor R Francis.

Haibach, P.S., Reid, G. & Collier, D.H. 2011. Motor learning and development. *Chapaign, IL: Human Kinetics.*

Haines, F.L. 2012. Parental involvement in enhancing learner achievement: Case studies of three rural primary schools in KwaZulu-Natal. South Africa: UKZN. (Dissertation-PhD)

Harding, S., Nibali, N., English, N., Griffin., P. Graham, L., Alom, B.M., & Zhang, Z. 2018. Self-regulated learning in the classroom: Realising the potential for Australia's high capacity students. Assessment Research Centre. Melbourne Graduate School of Education

Hallinger, P., & Heck, R.H. 1996. Reassessing the principal's role in school effectiveness: A review of empirical research, 1980-1995. *Educational Administration Quarterly,* 3(21):5-44.

Hanks, P. 1979. Collins Dictionary of the English Language. London: Collins, 1979.

Heigham, J., & Croker, R.A. 2019. Qualitative Research in Applied Linguistics: A Pratical Introduction. *Palgrave Macmillan*. London. https://doi.org/10.1057/9780230239517.

Hennink, M., Hutter, I. & Bailey, A. 2020. Qualitative research method. London: Oliver Yard *SAGE publications.*

Hesse-Biber, S.N. & Leavy, P, 2011. The practice of qualitative research. 6th ed., Los Angeles *SAGE publications.*

Hiemstra, R., & Brockett, R.G. 2012. Reframing the meaning of self-directed learning: An updated model, *Proceedings of the Adult Education Research Conference*, Saratoga Springs, NY, 155-161.

Hiemstra, R. 2013. Self-directed learning: Why do most instructors still do it wrong. *International Journal of self-directed learning,* 10(1):23-34.

Holstein, J.A. & Gubrium, J.F. 2004. The active interview. In D. Silverman (ed), Qualitative research: Theory method and practice. 2 (140-160). London: UK: *SAGE publications.*

Hsieh, H., & Shannon, S.E. 2005. Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9):1277-1288.

Joseph-Edwards, A. 2019. The efforts of standardised learning diaries on self-regulated learning, calibration accuracy, and academic achievement. Trinidad and Tobago: University of West Indies (Dissertation-PhD).

Jossberger, H. Brand-Gruwel, S. Boshuizen, H. Van de Wiel, M. 2010. The challenge of self-directed and self-regulated learning in vocational education: A theoretical analysis and synthesis of requirements. *Journal of Vocational Education and training*, 62(4):415-440.

Kaushik, V., & Walsh, C.A. 2019. Pragmatism as a Research Paradigm and its Implications for Social Work Research. *Social Sciences*, 8(9):1-17.

Khodabandehlou, M., Jahandar, S., Seyedi, G. & Abadi, R.M.D. 2012. A gender-based approach to pronunciation accuracy of advanced EFL learners. *International Journal of Scientific & Engineering Research,* 3(5):1-9.

Kivunja. C. 2018. Distinguishing between theory, theoretical framework, and conceptual framework: A systematic review of lessons from the field. *International Journal of Higher Education*, 7(6):44-53.

Knowles, M.S. 1975. Self-directed learning. A guide for learners and teachers. Englewood Cliffs, N.J, *Cambridge Adult Education*.

KwaZulu-Natal (South Africa). 2018. Annual Performance Plan 2018-2019. (vote no 5). Provincial Gazette, ISBN: 978-0-621-46148-0, PR: 50/2018, 31 Mar.

LaBanca, F. 2010. Search of Scientific Creativity: Trustworthiness in Qualitative Research. http://problemfinding.labanca.net/2010/05/24/trustworthiness-in-qualitative-research/ Date of access: 24 May 2010.

Landry, C.C. 2003. Self-efficacy, motivation, and outcome expectation correlates of college students' intention certainty. Louisiana: Louisiana State University. (Dissertation-Ph.D).

Lear, E., Li, L., & Prentice, S. 2016. Developing academic literacy through self-regulated online learning. Student Success, 7(1):13-23. DOI: 10. 5204/ssj. v7i1.297

Long, H.B. 2000. Understanding Self-direction in Learning. In H.B.Long & Associates (Eds), *Practice and theory in self-directed learning*, 11-24. Schaumburg, IL: Motorola University Press.

Lincoln, Y.S., Lynham, S.A., & Guba, E.G. 2011. Paradigmatic controversies, contradictions, and emerging confluences, revisted. *The Sage Handbook of Qualitative Research*, 4(2):97-128.

Malebese, M.L. 2013. The relationship between parental support and self-regulated learning behaviour of Grade 12 learners in Lejweleputswa. South Africa: UFS. (Thesis-PhD).

Malison, K., & Thammakoranonta, N. 2018. An exploratory study of self-directed learning: The differences between IT and non-IT employees in Thailand. *Journal of Entrepreneurship Education*, 21(3):1-16.

Maree, K. 2016. First steps in research. 2nd ed, Pretoria, *Van Schaik publishers*.

Margolis, H., & McCabe, P.P. 2006. Improving Self-efficacy and Motivation: What to do, What to say. *SAGE Journals*. https://doi.org/10.1177/10534512060410040401

Martinez-Pons, M. 2002. Parental influences on children's academic self-regulatory development, Theory into Practice, 41(2):126-131, DOI: 10.1207/s 15430421tip4102 9

Martinez, M.E. 2006. What is metacognition? *Phi Delta Kappan International,* 87(9): 696-699.

Masondo, S. 2017. Education in South Africa: A system in crisis. News24, May 2016. https://www.com/amp/citypress/news/education-in-south-africa-a-system-in-crisis-20160531 Date of access 31 May 2016

McMillan, J.H. & Schumacher, S. 2001. Research in education: A conceptual introduction, 5th ed. New York: Addison- Wesley Longman.

Melzner, N. Greisel, M. Dresel, M. & Kollar, I. 2019. Effective regulation in collaborative learning: An attempt to determine the fit of regulation challenges and strategies. *CSCL Proceedings*. 312-319.

Mentz, E., De Beer, J., & Bailey, R. 2019. Self-directed learning for the 21st century. AOSIS (Pty) Ltd. Cape Town: South Africa

Mentz, E. & Bailey, R. 2020. Self-directed learning research and its impact on educational practice. Cape Town: *AOSIS Publishing.*

Merriam, S.B. 2009. Qualitative research: A guide to design and implementation. Revised and expanded from qualitative research and case study applications in education. San Francisco, *CA: Jossey-Bass.*

Mngadi, M. 2018. KZN Education MEC satisfied with 72,87% matric pass rate. news24: City Press,5 January. https://m.news24.com/SouthAfrica/News/Kzn-education-mec-satisfied- with-72,87-matric-pass-rate-20180105 Date of access: 15 May 2019

Mulube, S.M., & Jooste. K. 2014. First-year learner nurses' perceptions of learning motivation in self-directed learning in a stimulated skills laboratory at a Higher education institution. *South African Journal of Higher Education*,28(6): 1776-1794.

Naong, M., & Morolong, I. 2010. Challenges to parental involvement in school governance. Acta Academica, 43(2):236-263.

Neuendrorf, K.A. 2019. Content Analysis and thematic analysis. In P. Brough (ed.), *Research methods for applied psychologist:* Design, analysis, and reporting. 211-223. New York: Routledge.

Ngozo, T., & Mtantato, S. 2018. Basic education is failing the economy. *Mail & Guardian,* Nov 2018.https://mg.co.za/article/2018-11-23-00-basic-education-is-failing-the-economy.Date of access: 23 November 2018.

Nilson, B.L. 2013. Creating self-regulated learners: Strategies to strengthen students' self-awareness and learning skills. Sterling: Virginia*, Stylus Publishing LLC*.

Nowell. L.S., Norris. J.M., White. D.E., & Moules. N.J. 2017. Thematic Analysis: striving to meet and trustworthiness criteria. *International Journal of Qualitative Methods,* 16:1-13.

Nunez, J.C., Suarez, N., Rosario, P., Vallejo, G., Valle, A., & Epstein, J.L. 2015. Relationships between perceived parental involvement in homework, student homework behaviours, and academic achievement: differences among elementary, junior high, and high school students. Metacognition Learning, 10:375-406.

Ogbonnaya, U.I.& Awuah, F.K. 2019. Quintile ranking of schools in South Africa and learners' achievement in probability. *Statistics Education Research Journal*, 18(1):106-119.

Orange, C., & Hodges, T.L. 2015. Influence of self-regulated learning and parental education on post-secondary remediation*. Journal of Instructional Pedagogies*, 16:1-21.

Peel, K.L. 2017. Pedagogy beyond compliance: Teacher's providing opportunities for students to self-regulate their learning in the primary-secondary transition years of schooling. Australia: University of Southern Queensland. (Dissertation-PhD).

Peeters, J., Backer, F.D., Reina, V.R., Kindekens, A., Buffel, T., & Lombaerts, K. 2014. The role of teachers' self-regulatory capacities in the implementation of self-regulated learning practices. *Elsevier Ltd. Procedia. Social and Behavioural Sciences*, 116(2014):1963-1970.

Perry, N.E., Hutchinson, L., & Thauberger, C. 2007. Talking about teaching self-regulated learning: Scaffolding student teachers' development and use of practices that promote self-regulated learning. *International Journal of Educational Research*, 47(2008):97-108.

Pilling-Cormick, J., & Garrison, R. 2007. Self-Directed and Self-Regulated Learning: Conceptual Links. *Canadian Journal of University Continuing Education*, 33(2):13-33.

Pintrich, P.R. & De Groot, V. 1990. Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*,82 (1):33-40.

Powers, S., Kaniuka, T., Phillips, B. & Cain, B. 2016. The impact of teacher-led professional development programs on the self-efficacy of veteran teachers. *Journal of research initiatives*, 2(1):1-21.

Prabha, K. Jayawardena, R. Christina, E. van Kraayenoord, & Carroll, A. 2017. Promoting self-regulated learning in science: A case study of a Sri Lankan secondary school science teacher. *International Journal of information and education technology*, 7(3):195-198.

Rajabi, S. 2012. Towards self-regulated learning in school curriculum. *Social and Behavioral Sciences*, 47(2012): 344-350.

Ravitch, M. & Riggan, M. 2017. Reason and Rigor: How conceptual frameworks guide research. *SAGE publications*. https://doi.org/10.1080/07380577.2017.1360538

Saks, K. & Leijen. A. 2013. Distinguishing self-directed and self-regulated learning and measuring them in the E-learning context. *Social and Behavioural Sciences*, 112(2014):190-198.

Sawatsky, A.P., Ratelle, J.T., Bonnes, S.L.,Egginton, J.S., & Beckman, T.J. 2017. A model of self-directed learning in international medicine residency: a qualitative study using grounded theory. *National Center for Biotechnology Information*. doi:10.1186/s 1209-017-0869-4.

Saxena, A., & Yadav, R.D. 2013. Impact of mobile technology on libraries: A descriptive study. *International Journal of Digital Library Services*, 3(4):1-3.

Schweder, S. 2019. Mastery goals, positive emotions, and learning behaviour in self-directed vs teacher-directed learning. *European Journal of Psychology of Education*, 35(1):205-223.

Sebastian, J., & Allensworth, E. 2012. The influence of principal leadership on classroom instruction and student learning: A study of mediated pathways to learning. *SAGE: Educational Administration Quarterly,* 48(4):626-663.

Sebotsa, T., De Beer, J., & Kriek, J. 2019. Self-Directed Learning and Teacher Professional Development: An Adapted Profile of Implementation. 8th Teaching & Education Conference, Vienna.DOI:10.20472/TEC.2019.008.025

Shah, S.R., & Al-Bargi. A. 2013. Research Paradigms: Researchers worldviews, theoretical frameworks and study designs. *Arab World English Journal*, 4(4):252-264.

Smith, B.L., & McGregor, J. 1992. Collaborative Learning: A Sourcebook for Higher Education. *National Center on Postsecondary Teaching, Learning, and Assessment*. Washington: The Evergreen State College.

Sofie, M., Loyens, M., Magda, J., Remy, M.J., & Rikers, P. 2008. Self-Directed Learning in Problem-Based Learning and its Relationships with Self-Regulated Learning. *Educational Psychology Review*. 20, 411-427.

South Africa. 2011. National Development Plan 2030: Our Future-make it works. Government Gazette, ISBN: 978-0-621-41180-5

Spaull, N. 2017. South Africa's education crisis: The quality of education in South Africa 1994-2011. Johannesburg, South Africa*: Centre for Development & Enterprise.*

Spaull, N, & Kotze, J. 2015. Starting behind and staying behind in South Africa. The case of insurmountable learning deficits in mathematics. *International Journal of Educational Development,* 41(2015)13-24.

Stoeger, H., Sontag, C., & Ziegler, A. 2014. Impact of a Teacher-Led Intervention on Preference for Self-Regulated Learning, Finding Main Ideas in Expository Texts, and Reading Comprehension. *Journal of Educational Psychology*, 106(3): 799-814.

Stolley, G. 2017. 0% pass rate at KZN schools 'embarrassing'. IOL News, 5 January. https://www.iol.co.za/news/0-pass-rate-at-kzn-schools-embarassing-7334650 Date of access 15 May 2019.

South Africa. Department of Education. 2021. National Senior Certificate Results: School Subject Report. Pretoria.

Thomas, J. Dodd. 2003. A Guide to Research Ethics. Dodd Research Centre. USA: University of Minnesota: Centre for Bioethics. https://www.lib.uconn.edu/DoddCentre/ASC/dodhot1.htm

Thomson, P., & Walker, M. 2010. Doctoral education in context: The changing nature of doctorate and doctoral students. Abingdon: *Routledge*.

Tigist, M.T. 2013. The relationship between parenting style, self-regulated learning, and academic achievement in selected primary schools in Ethiopia. South Africa: UNISA. (Thesis-PhD).

Tough, A. 1971. The adult's learning projects: A fresh approach to theory and practice in adult education. Toronto: Ontario Institute for Studies in Education.

Vandevelde, S., Van Keer, H., & Merchie, E. 2017. The challenge of promoting self-regulated learning among primary school children with a low socioeconomic and immigrant background. *The Journal of Educational Research*, 110 (2): 113-139.

Van Wyk, M.M. 2017. An E-portfolio as empowering tool to enhance students' self-directed learning in a teacher education course: A case of a South African university. *South African Journal of Higher Education*, 31(3): 274-291.

Van Zyl, C.M. & Du Toit-Brits. C. 2017. Embedding motivation in the self-directedness of first year teacher students. *South African Journal of Higher Education*, 31(1): 50-65.

Wilbanks, B.A. 2013. An integrative literature review of contextual factors in perioperative information management systems. *National centre for Biotechnology Information*. DOI: 10.1097/CIN.0000000000000007.PMID:24145890.

Wolters, C.A. 2010. Self-directed learning and the 21st century competences. Retrieved from http://www7.nationalacademies- org/DBASSE/Wolters_self_regulated_learning_paper.pdf

Xu, M. 2008. The Relation Between Parental Involvement, Self-Regulated Learning, and Reading

Achievement of Fifth Graders: A path Analysis Using the ECLS-K Database. University of Akron (Dissertation: PhD).

Xu, M., Susan, N., Kushner, B., Camino, R. M., & Steiner, R.P. 2010. The relationship between parental involvement, self-regulated learning and reading achievement of fifth graders: A path analysis using the ECLS-K database. *Soc Psychol Educ*,13:237-269.

Yin, R.K. 2009. Case study research. Design and methods. 4th ed. Thousand Oaks, CA: *SAGE publications*.

Yin, R.K. 2014. Case study research: Design and methods. 5th ed. Thousand Oaks: CA: *SAGE publications.*

Ziegler, A., & Stoeger. H. 2005. Accompanying Manual for a training of self-regulated learning 1: Resources strategies for fourth-grade elementary school students to improve math skills. Lengerich, Germany-Pabst.

Zimmerman B.J. (1989) Models of Self-Regulated Learning and Academic Achievement. In: Zimmerman B.J., Schunk D.H. (eds) Self-Regulated Learning and Academic Achievement. Springer Series in Cognitive Development. Springer, New York, NY. https://doi.org/10.1007/978-1-4612-3618-4_1

Zimmerman, B.J. 1990. Self-regulated learning and academic achievement: An overview, Educational Psychologist, 25:1, 3-17, DOI: 10. 1207/s 15326985ep2.

Zimmerman, B.J. 2002. Becoming a Self-Regulated Learner: An Overview. Theory Into Practice, 41(2): 64-70, DOI: 10.1207/s15430421tip4102_2 .

Zimmerman, B.J. & Moylan, A.R. 2009. Self-regulation: where metacognition and motivation intersect. In D.J. Hacker, J. Dunlosky, & A.C. Graesser (eds), The educational psychology series. Handbook of metacognition in education 299-315. New York, NY. US: *Routledge/Taylor & Francis Group.*

Zimmerman, B.J. 2010.Self-regulated learning and academic achievement: An Overview. *Educational Psychology*, 25(1):3-17.

Zimmerman, B.J. & Schunk, D.H. 2007. Influencing children's self-efficacy and self-regulation of reading and writing through modelling. *Reading and writing quarterly*, 23(1):7-25.

Zumbrunn, S., Tadlock, J., & Roberts, E.D. 2011. Encouraging self-regulated learning in classroom: A review of the literature. Metropolitan Educational Research Consortium (MERC), Virginia Commonwealth University.

LIST OF ANNEXURES

Annexure A: Ethical Clearance letter

Annexure B: Permission letter to KwaZulu- Natal Department of Basic Education for permission to conduct the research in the selected schools

Annexure C: Approval letter from the KwaZulu Natal Department of Basic Education to conduct research in the selected schools

Annexure D: Letter to school principals requesting his/her permission to conduct the research at the school

Annexure E: Goodwill letter to the SGB chairperson

Annexure F: Letter to participants requesting them to participate in research

Annexure G: Research Tool (Questionnaire)

Annexure H: Certificate of language editing

Annexure A: Ethical Clearance letter

Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: http://www.nwu.ac.za

Senate Committee for Research Ethics
Tel: 018 299-4849
Email: nkosinathi.machine@nwu.ac.za

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Faculty of Education Research Ethics Committee (EduREC)** on 29 April 2021, this committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-SCRE) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: The development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal

Study Leader/Supervisor (Principal Investigator)/Researcher: Prof B Geduld

Student / Team: V Ragwan (MEd student – 28488212), Dr B Bunt

Ethics number:

N	W	U	-	0	1	2	8	0	-	2	0	-	A	2
Institution				Study Number						Year			Status	

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation

Application Type: Project

Commencement date: 29 April 2021 **Risk:** Low risk

Expiry date: 29 April 2022

Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.

Special in process conditions of the research for approval (if applicable):

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

- *The study leader/supervisor/principal investigator/researcher must report in the prescribed format to the EduREC:*
  - *annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and*
  - *without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.*
- *The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the EduREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.*
- *Annually a number of studies may be randomly selected for an external audit.*
- *The date of approval indicates the first date that the study may be started.*
- *In the interest of ethical responsibility, the NWU-SCRC and EduREC reserves the right to:*
  - *request access to any information or data at any time during the course or after completion of the study;*

- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
  - *any unethical principles or practices of the study are revealed or suspected;*
  - *it becomes apparent that any relevant information was withheld from the EduREC or that information has been false or misrepresented;*
  - *submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or*
  - *new institutional rules, national legislation or international conventions deem it necessary.*

The EduREC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the EduREC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely



Prof JAK Olivier
Chairperson NWU Faculty of Education Research Ethics Committee

Original details: (22001600) C:\Users\22001600\Desktop\ETHICS APPROVAL LETTER OF STUDY.docm
8 November 2018

Current details: (22001600) M:\22001600\Monitoring and Reporting Cluster\Ethical Certificates\Templates\Research Ethics Approval Letters\9.1.5.4.1 ES-REC Ethical Approval Letter.docm
5 December 2018

File reference: 9.1.5.4.2

Annexure B: Permission letter to KwaZulu-Natal Department of Basic Education



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Faculty of Education
SDL Research Unit

Tel: 0733822194
Email: vanishreeragvan@gmail.com
Date 6 April 2021

PERMISSION LETTER: HEAD OF DEPARTMENT (KZNDOE)

I herewith wish to request your permission for teachers to participate in this research, which involves answering an open ended questionnaire and telephonic interviews with teachers in quintile 4 to 5 secondary schools. I kindly request permission to do research in four secondary schools in the ILembe district. Prior to granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

The development of self-regulated learning by selected secondary school teachers in KwaZulu-Natal

ETHICS APPLICATION NUMBER

NWU-01280-20-A2

PROJECT SUPERVISOR: Prof B W. Geduld

SUPERVISOR'S ADDRESS:

Faculty of Education
School for Professional Studies in Education
Building B11
Potchefstroom
2531
CONTACT NUMBER: 018 299 4583

MEMBER OF PROJECT TEAM: Dr Byron Bunt
ADDRESS:
Building 11B Office 119
North-West University
1174 Hendrick Van Eck Boulevard
Vanderbijlpark
1900
CONTACT NUMBER: 0767513079

MEMBER OF PROJECT TEAM MEd-Student: Vanishree Ragvan
ADDRESS: 13 Keval Road Doctorskop
Stanger 4450

KwaZulu-Natal
CONTACT NUMBER: 073 382 2194

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

Contact person: Ms Erna Greyling, E-mail: Erna.Greyling@nwu.ac.za, Tel. (018) 299 4656
This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission will also be obtained from the provincial Department of Basic Education/other relevant body.

What is this research about?

The primary aim of this research is:

- To explore how quintile 4-5 secondary school teachers' self-directed learning influence the development of SRL skills in their learners.

Secondary aims

- To explore quintile 4-5 secondary school teachers' views on their confidence to develop SRL skills with their classroom practices;
- To explore quintile 4-5 secondary school teachers' views on how they model positive motivational beliefs to develop task interest and intrinsic motivation in learners;
- To explore quintile 4-5 secondary school teachers' views on how they model planning and goal setting to develop these skills in learners;
- To explore quintile 4-5 secondary school teachers' views on how they model different task strategies to encourage learners to use a variety of task strategies;
- To explore quintile 4-5 secondary school teachers' views on how they model metacognitive monitoring to develop metacognitive monitoring skills in learners; and
- To explore challenges quintile 4-5 secondary school teachers experience in their attempts to develop SRL skills in their learners.

Participants

- Secondary school teachers from quintile 4-5 schools (teaching Grade 8 to 11)

What is expected of the participants?

They will be expected to complete an online or paper based questionnaire that will take approximately one hour to complete. The open ended questionnaire will be followed up with a telephonic interview in cases where the researcher needs clarity on responses made in the questionnaire. The interviews will be audio recorded with their permission. They will participate on a voluntary basis. If they as participants at any stage, feel that they do not want to continue to participate (even after the data was collected) they are free to withdraw from the study without any penalisation or prejudice of any sort.

Benefits to the participants

There will be no direct benefit for participants. The indirect benefits of this research for participants are that they will become aware about their own perceptions of self-directed and self-regulated learning and its value for academic achievement. This research project also might stimulate

discussions with other teachers about the position, importance and usefulness of self-regulated learning to improve academic performance.

Risks involved for participants

There is no risk involved in this research. Should participants feel uncomfortable, they will be allowed to withdraw from participating in the research at any time.

Confidentiality and protection of identity

Everything participants say will remain confidential and their identity will be protected throughout the research process. The data will be disseminated anonymously. Pseudonyms will be used to store and discuss the information they provided.

Dissemination of findings

The findings of the research will be made available to the participating teachers and school principals on their request after the study has been completed.
If you have any further questions or enquiries regarding your participation in this research, please contact the researchers for more information.

DECLARATION BY Head of Department (KZN Education)/OTHER RELEVANT PERSON:

By signing below, I ……..…… agree to give permission for the research to take place with the identified participants in the study entitled:

The development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal

I declare that:

- I have read this information and consent form and understand what is expected of the participants in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and participants will not be pressurised to take part.
- Participants may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- Participants may be asked to leave the research process before it is completed, if the researcher feels it is in their best interests, or if they do not follow the research procedures, as agreed to.

Signed at (place)_____on (date) _____/_____/20____

_____

Signature of Head of Department: KZN Department of Education/Relevant person

Annexure C: Approval letter from KZN Department of Education

KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

OFFICE OF THE HEAD OF DEPARTMENT

Private Bag X9137, PIETERMARITZBURG, 3200
Anton Lembede Building, 247 Burger Street, Pietermaritzburg, 3201
Tel: 033 392 1053
Email: Phindile.duma@kzndoe.gov.za

Enquiries: Phindile Duma **Ref.:**2/4/8/1749

Miss V Ragvan
13 Keval Road
Doctorskop
STANGER
4450

Dear Miss Ragvan

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"THE DEVELOPMENT OF SELF-REGULATED LEARNING IN SELECTED SECONDARY SCHOOL TEACHERS IN KWAZULU-NATAL"**, in the KwaZulu-Natal Department of Education institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the Intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 31 May 2021 to 31 August 2023.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Phindile Duma at the contact numbers above.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report/dissertation/thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

ILEMBE DISTRICT

Dr. EV Nzama
Head of Department: Education
Date: 01 June 2021

Annexure D: Letter to school principals requesting permission to conduct research



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Faculty of Education

(Research entity details)

Tel: 018 111 1111
Email: Name.Surname@nwu.ac.za

(Recipient name)
(Recipient address)
(Recipient address)
(Recipient address)

Date

PERMISSION LETTER: SCHOOL PRINCIPAL/OTHER RELEVANT PERSON

I herewith wish to request your permission for teachers to participate in this research, which involves answering a questionnaire. Prior to granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

The development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal

ETHICS APPLICATION NUMBER

NWU-01280-20-A2

PROJECT SUPERVISOR: Prof B W. Geduld
ADDRESS: Faculty of Education
School for Professional Studies in Education
Building B11
Potchefstroom
2531
Contact Number: 018 299 4583

CO-SUPERVISOR: Dr Byron Bunt
ADDRESS:
Building 11B Office 119
North-West University
1174 Hendrick Van Eck Boulevard
Vanderbijlpark
1900
CONTACT NUMBER: 076 751 3079

MEMBER OF PROJECT TEAM MEd-Student: Vanishree Ragvan
ADDRESS: 13 Keval Road Doctorskop
Stanger
4450
CONTACT NUMBER: 073 382 2194

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

Contact person: Ms Erna Greyling, E-mail: Erna.Greyling@nwu.ac.za, Tel. (018) 299 4656
This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also obtained from the provincial Department of Basic Education/other relevant body.

What is this research about?
The aims of this research is:

- Is to explore how quintile 4-5 secondary school teachers' self-directed learning influence the development of SRL skills in their learners.

Secondary aims

- • To explore quintile 4-5 secondary school teachers' views on their confidence to develop SRL skills with their classroom practices;
- •To explore quintile 4-5 secondary school teachers' views on how they model positive motivational beliefs to develop task interest and intrinsic motivation in learners;
- To explore quintile 4-5 secondary school teachers' views on how they model planning and goal setting to develop these skills in learners;
- • To explore quintile 4-5 secondary school teachers' views on how they model different task strategies to encourage learners to use a variety of task strategies;
- • To explore quintile 4-5 secondary school teachers' views on how they model metacognitive monitoring to develop metacognitive monitoring skills in learners; and
- • To explore challenges quintile 4-5 secondary school teachers experience in their attempts to develop SRL skills in their learners.

Participants

- Secondary school teachers from quintile 4-5 schools (teaching Grade 8 to 11)

What is expected of the participants?

They will be expected to participate in answering a questionnaire, that will take approximately an hour to complete. They will participate on a voluntary basis. If they as a participant at any stage, feel that they do not want to continue to participate (even after the data was collected) they are free to withdraw from the study without any penalisation or prejudice of any sort.

Benefits to the participants

There are no direct benefits for participants. The indirect benefits of this research for participants is that they will become aware about their own perceptions of self-directed and self-regulated learning and its value for academic achievement. Teachers will be in a position to reflect on how they develop or enhance learners' use of self-regulation learning in the subjects they teach.

This study might also stimulate discussions with other teachers about the position, importance and usefulness of SRL to improve academic performance.

Risks involved for participants

There is no risk involved in this research. However, should participants feel uncomfortable, they will be allowed to withdraw from participating in the research at any time.

Confidentiality and protection of identity

The information collected from participants through the questionnaire will remain confidential and will only be used for research purposes. Everything that participants say will remain confidential and their identity will be protected throughout the research process. The data will be disseminated anonymously. Pseudonyms will be used to store and discuss the information that they have provided. All collected data will be stored on a password protected computer.

Dissemination of findings

The findings of the research will be made available to the participating teachers on their request after the study has been completed.

If you have any further questions or enquiries regarding your participation in this research, please contact the researchers for more information.

DECLARATION BY PRINCIPAL/OTHER RELEVANT PERSON:

By signing below, I …….……. agree to give permission for the research to take place with the identified participants in the study entitled:

The development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal

I declare that:

- I have read this information and consent form and understand what is expected of the participants in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and participants will not be pressurised to take part.
- Participants may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- Participants may be asked to leave the research process before it is completed, if the researcher feels it is in their best interests, or if they do not follow the research procedures, as agreed to.

Signed at (place)_____on (date) _____/_____/20____

_____

Signature of School Principal/Relevant person

Annexure E: Goodwill letter to SGB chairperson



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Faculty of Education

(Research entity details)

Tel: 018 111 1111
Email: Name.Surname@nwu.ac.za

(Recipient name)
(Recipient address)
(Recipient address)
(Recipient address)

Date

GOODWILL PERMISSION: SCHOOL GOVERNING BODY/OTHER RELEVANT BODY

I herewith wish to request your permission for teachers to participate in this research, which involves answering a questionnaire. Prior to granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

The development of self-regulated learning in selected secondary schools' teachers in KwaZulu-Natal

ETHICS APPLICATION NUMBER

NWU-01280-20-A2

PROJECT SUPERVISOR: Prof B W. Geduld
ADDRESS: Faculty of Education
School for Professional studies in Education
Building B11
Potchefstroom
2531
Contact Number: 018 299 4583

CO-SUPERVISOR: Prof Byron Bunt
ADDRESS: Building 11B Office 119
North-West University
1174 Hendrick Van Eck Boulevard
Vanderbijlpark
1900
Contact Number: 076 751 3079

MEMBER OF PROJECT TEAM MEd-Student: Vanishree Ragvan
ADDRESS: 13 Keval Road Doctorskop
Stanger
4450
CONTACT NUMBER: 073 382 2194

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE
Contact person: Ms Erna Greyling, E-mail: Erna.Greyling@nwu.ac.za, Tel. (018) 299 4656

This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also obtained from the provincial Department of Basic Education.

What is this research about?
The aims of this research is:

- to explore how quintile 4-5 secondary school teachers' self-directed learning influence the development of SRL skills in their learners.

Secondary aims

- • To explore quintile 4-5 secondary school teachers' views on their confidence to develop SRL skills with their classroom practices;
- •To explore quintile 4-5 secondary school teachers' views on how they model positive motivational beliefs to develop task interest and intrinsic motivation in learners;
- To explore quintile 4-5 secondary school teachers' views on how they model planning and goal setting to develop these skills in learners;
- • To explore quintile 4-5 secondary school teachers' views on how they model different task strategies to encourage learners to use a variety of task strategies;
- • To explore quintile 4-5 secondary school teachers' views on how they model metacognitive monitoring to develop metacognitive monitoring skills in learners; and
- • To explore challenges quintile 4-5 secondary school teachers experience in their attempts to develop SRL skills in their learners.

Participants

- Secondary school teachers from quintile 4-5 schools (teaching Grade 8 to 11)

What is expected of the participants?

Participants will be expected to participate in answering a questionnaire, that will take approximately an hour to complete. They will participate on a voluntary basis. If they as a participant at any stage, feel that they do not want to continue to participate (even after the data was collected) they are free to withdraw from the study without any penalisation or prejudice of any sort.

Benefits to the participants

There are no direct benefits for a participant. The indirect benefits of this research for participants is that they will become aware about their own perceptions of self-directed and self-regulated learning and its value for academic achievement. Teachers will be in a position to reflect on how they develop or enhance learners' use of self-regulation learning in the subjects they teach.

This study might also stimulate discussions with other teachers about the position, importance and usefulness of SRL to improve academic performance.

Risks involved for participants

There is no risk involved in this research. However, should participants feel uncomfortable, they will be allowed to withdraw from participating in the research at any time.

Confidentiality and protection of identity

The information collected from participants through the questionnaire will remain confidential and will only be used for research purposes. Everything that participants say will remain confidential and their identity will be protected throughout the research process. The data will be disseminated anonymously. Pseudonyms will be used to store and discuss the information they have provided. All collected data will be stored on a password protected computer.

Dissemination of findings

The findings of the research will be made available to the participating teachers on their request after the study has been completed

If you have any further questions or enquiries regarding your participation in this research, please contact the researchers for more information.

DECLARATION BY SGB CHAIRPERSON/RELEVANT RESPONSIBLE PERSON:

By signing below, I …….…… agree to give permission for the research to take place with the identified participants in the study entitled:

The development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal

I declare that:

- I have read this information and consent form and understand what is expected of the participants in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and participants will not be pressurised to take part.
- Participants may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- Participants may be asked to leave the research process before it is completed, if the researcher feels it is in their best interests, or if they do not follow the research procedures, as agreed to.

Signed at (place)_____on (date) _____/_____/20____

_____

Signature of SGB Chairperson/Relevant responsible person

Annexure F: Letter to participants requesting them to participate in research



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Faculty of Education

(Research entity details)

Tel: 018 111 1111
Email: Name.Surname@nwu.ac.za

Name:_____

Address:_____

_____

Date: _____

PARTICIPANT INFORMATION AND CONSENT FORM

I herewith wish to request your consent to participate in this research, which involves answering a questionnaire. Before you give consent, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

The development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal

ETHICS APPLICATION NUMBER

NWU-01280-20-A2

PROJECT SUPERVISOR: Prof B W Geduld
ADDRESS: Faculty of Education
School for Professional Studies in Education
Building B11
Potchefstroom
2531
Contact Number: 018 299 4583

CO-SUPERVISOR: Dr Byron Bunt
ADDRESS:
Building 11B Office 119
North-West University
1174 Hendrick Van Eck Boulevard
Vanderbijlpark
1900

MEMBER OF PROJECT TEAM MEd-Student: Vanishree Ragvan
ADDRESS: 13 Keval Road Doctorskop
Stanger
4450

CONTACT NUMBER: 0733822194

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE
Contact person: Ms Erna Greyling, E-mail: Erna.Greyling@nwu.ac.za, Tel. (018) 299 4656
This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also asked from the provincial Department of Basic Education as well as the school principal and the School Governing Body (SGB).

What is this research about?
The primary aim of this research is

- to explore how quintile 4-5 secondary school teachers' self-directed learning influence the development of SRL skills in their learners.

Secondary aims

- • To explore quintile 4-5 secondary school teachers' views on their confidence to develop SRL skills with their classroom practices;
- •To explore quintile 4-5 secondary school teachers' views on how they model positive motivational beliefs to develop task interest and intrinsic motivation in learners;
- To explore quintile 4-5 secondary school teachers' views on how they model planning and goal setting to develop these skills in learners;
- • To explore quintile 4-5 secondary school teachers' views on how they model different task strategies to encourage learners to use a variety of task strategies;
- • To explore quintile 4-5 secondary school teachers' views on how they model metacognitive monitoring to develop metacognitive monitoring skills in learners; and
- • To explore challenges quintile 4-5 secondary school teachers experience in their attempts to develop SRL skills in their learners.

Participants

- Secondary school teachers from quintile 4-5 schools (teaching Grade 8 to 11)

What is expected of you as participant?

You will be expected to participate in answering a questionnaire, that will take approximately an hour to complete. You will participate on a voluntary basis. If you as a participant at any stage, feel that you do not want to continue to participate (even after the data was collected) you are free to withdraw from the study without any penalisation or prejudice of any sort.

Benefits to you as participant

There are no direct benefits for you as a participant. The indirect benefits of this research for participants are that they will become aware about their own perceptions of self-directed and self-regulated learning and its value for academic achievement. Teachers will be in a position to reflect on how they develop or enhance learners' use of self-regulation learning in the subjects they teach.

This study might also stimulate discussions with other teachers about the position, importance and usefulness of SRL to improve academic performance.

Risks involved for participants

There is no risk involved in this research. However, should you feel uncomfortable, you will be allowed to withdraw from participating in the research at any time.

Confidentiality and protection of identity

The information collected from you through the questionnaire will remain confidential and will only be used for research purposes. Everything you say will remain confidential and your identity will be protected throughout the research process. The data will be disseminated anonymously. Pseudonyms will be used to store and discuss the information you have provided. All collected data will be stored on a password protected computer.

Dissemination of findings

The findings of the research will be made available to the participating teachers on their request after the study has been completed. If you have any further questions or enquiries regarding your participation in this research, please contact the researchers for more information.

Yours sincerely
Vanishree Ragvan

DECLARATION BY PARTICIPANT:

By signing below, I ……..……. agree to take part in a research study entitled:

The development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal

I declare that:

- I have read this information and consent form and understand what is expected of me in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the research process before it has finished, if the researcher feels it is in my best interests, or if I do not follow the research procedures, as agreed to.

Signed at (place)_____on (date) _____/_____/20____

_____ _____

Signature of participant **Researcher**

Annexure G: Research Tools (Questionnaire)

V.RAGVAN: 28499212

Research Questionnaire

Dear Sir/Madam

You are hereby invited to take part in the research conducted and are requested to fill in the questionnaire. Taking part is not compulsory and you may withdraw at any stage. The research questions will be answered anonymously and your privacy will therefore be protected. The first few questions in Section A will deal with biographical information and the questions in Section B are related to research questions.

This study will explore the development of self-regulated learning in selected secondary school teachers in KwaZulu-Natal. For the purpose of this questionnaire, it is important to know that self-regulated learning refers to the ability of a learner to take responsibility for his or her own learning, by own learning through planning and setting goals. Self-regulated learners have the ability to learn independently through active engagement with the learning process, and by managing cognitive activities, like reflecting on their work while they are personally motivated and responsible for working towards achieving their goals. Self-regulated learners as ones who demonstrate motivation for learning, who focus on progress, and who strive to gain deep understanding. They regulate their cognition by planning, organising, and evaluating their learning process. They also control their behaviours by selecting, structuring and creating environments to learn.

In this study, your perceptions of how your own self-directed learning skills enable you to develop learner's self-regulated skills, will also be explored. Self-directed learning is explained as a process in which individuals take the initiative, with or without the help of others to; diagnose their learning needs, set their own learning goals, identify human and material resources they will need to achieve their goals, decide on suitable learning strategies to achieve their goals and evaluate the success of their learning outcomes (Knowles, 1985).

Please complete the questionnaire by giving honest answers/opinions, and elaborate on your views and the reasons as to why you hold certain views. Please sign the designated form to indicate that you are completing the questionnaire, and that you will freely participate in a follow up telephonic interview, thus giving your informed consent to participate in the research.

I hereby declare that I am willingly taking part in the research questionnaire and telephonic interview, I understand that information will be dealt with confidentially and professionally and that

my participation will be anonymous. I also understand that I have the right to withdraw from the research and that there are no obligations placed on me.

Signed at _____on this _____day of_____

_____ _____

Participant Researcher

Section A

Biographical Details

Please tick the appropriate box

1. Gender:

   Male ☐

   Female ☐
2. Age:

   25-35 ☐

   36-45 ☐

   46-55 ☐

   56-65 ☐
3. Teaching Experience:

   1-9 years ☐

   10 -20 years ☐

   20 – 30 years ☐

   30 + years ☐

4. Type of School:

   Quintile 4 ☐

   Quintile 5 ☐

5. Grade and subject/s you are teaching:

   Grade 8 ☐ ……...

   Grade 9 ☐ ……

   Grade10 ☐ ……...

   Grade 11 ☐ ……..

QUESTIONNAIRE

Please complete the questionnaire by giving honest answers/opinions and elaborate on your views and the reasons as to why you hold certain views.

1. Have you ever heard of the concept self-regulated learning?

   .....

2. What is your understanding of the concept self-regulated learning?

   ……
   ……
   ……
   ……
   ……
   ……
   ……
   ……
   ……

3. Were you ever made aware of teachers' roles in the development of self-regulated learning in your initial teacher training and/or in the current workshops offered by the Department of Education? Please give reasons for your answer.

   ……
   ……
   ……
   ……
   ……
   ……
   ……
   ……

4. Why do you think teachers have a role to play or not in the development of learners' self-regulated learning?

……
……
……
……
……
……
……
……
……

5. If you look at the description of self-regulated learners given above, do you think you have enough knowledge and skills to develop self-regulated learning skills in your learners? Please give reasons for your answers.

……
……
……
……
……
……
……
……
……
……

6. Please explain why do you feel you have enough confidence to develop SRL skills in learners?

……
……
……
……
……
……
……
……

……
……..

7. Please explain why do you feel you do not have enough confidence to develop SRL skills in your learners?

……
……
……
……
……
……
……
……
……
……

8. What do you do to keep your learners motivated, interested and excited about tasks that they must complete? Please provide a few examples.

……
……
……
……
……
……
……
……
……

9. What do you do to teach or show your learners to set goals for themselves? Please explain your answer.

……
……
……
……
……
……
……
……

……
……..

10. What do you do to teach or show your learners to make plans to achieve the goals they set for themselves? Please explain your answer.

……
……
……
……
……
……
……
……
……
……

11. Which learning strategies do you use to help learners understand their work? Please provide a few examples of the learning strategies you use.

……
……
……
……
……
……
……
……
……..

12. Explain when and why do you use these strategies mentioned in number 11?

……
……
……
……
……
……
……
……
……

……

……..

13. Why do you think your learners learn or do not learn from these task strategies you model to them?

……

……

……

……

……

……

……

……

……

……..

14. What do you do to teach learners how to check their own understanding of work?

……

……

……

……

……

……

……

……

……

……

15. How do you teach self-questioning methods to your learners?

……

……

……

……

……

……

……

……

……
……

16. How do you, prompt learners to think about how they prepare for class?

……
……
……
……
……
……
……
……
……

17. How do you emphasize the importance of learning versus getting the correct answer?

……
……
……
……
……
……
……
……
……
……

18. How do you encourage self-assessment among your learners? Please provide a few examples.

……
……
……
……
……
……
……
……
……

19. Do you show learners how you think by asking yourself questions when you teach? For instance, by thinking aloud, by talking to yourself through processes, and correcting yourself when you explain something. Please provide examples.

……
……
……
……
……
……
……
……
……
……

20. Which contextual factors make it easy to teach self-regulated learning skills at your school?

……
……
……
……
……
……
……
……
……..

21. Which contextual factors make it challenging or difficult to teach self-regulated learning skills at your school?

……
……
……
……
……
……
……
……
……..

22. What personal characteristics of you enable you to develop self-regulated learning skills in your learners?

    ……
    ……
    ……
    ……
    ……
    ……
    ……
    ……
    ……
    ……
    ……

23. What personal characteristics of you hamper you to develop self-regulated learning skills in your learners?

    ……
    ……
    ……
    ……
    ……
    ……
    ……
    ……
    ……

Thank you for taking the time to complete the questionnaire.

Vanishree Ragvan

Annexure H: Certificate of Language editing

Dr Jabulani Sibanda
Senior Lecturer: English Education
School of Education
Tel: (053) 491-0142
Email:Jabulani.Sibanda@spu.ac.za
Alternate e-mail: jabusbnd@gmail.com
Website: www.spu.ac.za
Cell: 0845282087

17 November 2021

RE: CERTIFICATE OF LANGUAGE EDITING

To whom it may concern

I hereby confirm that I have proof read and edited the following DISSERTATION using Windows 'Tracking' System to reflect my comments and suggested corrections for the author(s) to action:

The development of self-regulated learning by selected secondary school teachers in KwaZulu-Natal

Reference

- Author(s): V.RAGVAN
- Student No: 28499212
- Affiliation: North West University

Although the greatest care was taken in the editing of this document, the final responsibility for the product rests with the author(s).

Sincerely



03.11.2021

SIGNATURE

This certificate confirms the language editing I have done in my personal capacity and not on behalf of SPU