

Primary school teachers' teaching strategies that develop and enhance self-regulated learning

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DECLARATION

I Keneilwe Bridgette Agbenyegah the undersigned, hereby declare that the work contained in this dissertation is my own work and I have not previously in its entirety or in part submitted it at any university for another degree.



SIGNATURE

ABSTRACT

Title: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

Over the past two decades, many researchers have warned that the South African education crisis would result in high failure and dropout rates among learners in primary, secondary and higher education institutions. Researchers ascribe the dismal matric results to the education crisis in primary schools, where about 90% of learners in grades 3, 6 and 9 achieved less than 50% in the second Annual National Assessments in literacy, maths and science. In the summary report of the National Education Evaluation and Development Unit (NEEDU 2018), the South African school education crisis and underperformance in schools are ascribed to primary schools that have not received much attention during the education crisis in keeping up with education which is suitable for the twenty-first century and the Fourth Industrial Revolution.

Many researchers believe that self-regulated learning (SRL) is fundamental in the development of lifelong learning, and as such it has developed globally into a vital role in academic learning. SRL in school environments increases success in problem-solving, academic achievement, intrinsic motivation, and task interest. Applying SRL strategies impacts a learner's academic achievement in addition to increasing their capacity to develop lifelong learning skills. SRL refers to one's ability to understand and control one's learning environment, and it includes goal setting, self-monitoring, self-instruction, and self-evaluation. The main purpose of this study was to explore what teaching strategies intermediate phase teachers use that develop and enhance SRL. This study further explored intermediate phase teachers' knowledge and beliefs about SRL as well as how the school management team (SMT) supports primary teachers in their attempts to develop and enhance SRL.

For the purpose of this study, a literature review was conducted to find relevant literature about the problem investigated, and therefore social cognitive self-regulation theorists were reviewed. Zimmerman and Moylan's (2009) model of SRL was used to highlight SRL skills teachers use to develop learners' SRL skills.

The study is located within an interpretivist philosophical orientation. The empirical inquiry was approached with a qualitative research design in the form of a phenomenological study to explore what teaching strategies teachers use to develop SRL. The phenomenological study enabled the researcher to explore a real-life situation and the experiences teachers encounter in their daily teaching and learning in the classroom and to develop a composite description of the essence of the individuals' experiences. Data was collected through semi-structured interviews. Three

primary schools and 15 teachers were conveniently and purposely sampled to participate in the study. Data was analysed through a thematic approach.

The findings of this research revealed that even though participants do not seem to have theoretical knowledge of the concept SRL, their beliefs about teaching and their attitudes about what the aim of teaching should be, as well as their knowledge and practical implementation of the Curriculum and Assessment Policy Statements (CAPS), contributes to the positive beliefs they have about the value of SRL skills. The SRL strategies that are mostly used by the participants are task strategies, time management, goal-setting, group work, self-observation, help-seeking, and environmental structuring. However, the participants did not suggest methods for how to develop imagery to intensify learning and improve memorisation skills and metacognitive self-monitoring, where learners can self-monitor and track their progress and learning outcomes, how to deal with learners that display adaptive or defensive behaviour, or how to teach learners to set short and long-term goals. The participants also revealed that they experience challenges such as overcrowding, time management, insufficient teaching and learning resources, lack of parental involvement, and not being trained and developed on SRL by the SMT and the Department of Basic Education (DBE).

It is recommended that teachers should be trained on a regular basis on SRL, and furthermore, the schools should design a learning, teaching and support materials (LTSM) retrieval policy that is functional to ensure that the learning resources are monitored and controlled effectively. The Department of Education (DoE) must also reassess the time allocated to the topics in subjects to ensure that teachers have time available to cover all the requirements of the National Curriculum Statement curriculum. Furthermore, teachers need to be trained on how to support progressed learners and ensure that they achieve their goals. SRL skills of particular importance for teachers to develop are how to develop metacognitive self-monitoring, how to develop metacognitive modelling, how to deal with learners that display adaptive or defensive behaviour, and how to teach learners to set short and long-term goals.

Keywords: intermediate phase, learning and teaching resources, school management team, self-directed learning, self-regulated learning, support, teachers, teaching strategies

OPSOMMING

Die Suid-Afrikaanse Kurrikulum- en assesseringsbeleidsverklaring (KABV) beoog lewenslange leer waar leerders die vaardighede ontwikkel om beheer oor hul eie leer te neem met minimale bystand van die onderwyser. Vorige navorsing het aangedui dat baie laerskole swak presteer het in die Jaarlikse Assesseringsgeleentheid en dat een van die grondoorsake van genoemde onderprestasie is dat laerskole nie voldoende aandag van die Departement van Onderwys (DBO) geniet nie. Een van die bevindinge wat uit navorsing deur die Nasionale Onderwysevaluering en -Ontwikkelingseenheid (NEEDU) spruit oor laerskole is dat laerskole onderrigstrategieë moet implementeer wat leerders sal aanmoedig om verantwoordelikheid vir hul eie leer te neem; met ander woorde om leerders te help om selfgerigte en selfgereguleerde individue te word. Die verslag deur NEEDU het ook beklemtoon dat hoewel vakadviseurs en besoekende distriksamptenare se aanbevelings aangeteken word vir wat onderwysers moet doen om te verbeter, word daar nêrens genoem watter onderrigstrategieë hulle moet implementeer om leerders se selfgereguleerde leervaardighede te ontwikkel en te verbeter nie. Selfgereguleerde en selfgerigte leer is strategieë wat gebruik kan word om leerders toe te rus met lewensveranderende kennis en vaardighede wat akademiese prestasie kan verbeter. Selfgereguleerde leer verwys na 'n individu se vermoë om hul leeromgewing te verstaan en te beheer, en dit sluit in doelwitstelling, selfmonitering, selfonderrig en selfevaluering.

Die hoofdoel van hierdie studie is om die onderrigstrategieë wat deur intermediêre fase-opvoeders gebruik word om selfgereguleerde leervaardighede te ontwikkel en te verbeter, te verken. Vir die doel van hierdie studie is 'n literatuuroorsig gedoen om relevante literatuur te vind oor die probleem wat ondersoek is, waartydens sosiaal-kognitiewe selfreguleringssteoretici besigtig is. Zimmerman en Moylan (2009) se model van selfgereguleerde leer is gebruik om die selfgereguleerde leervaardighede wat onderwysers gebruik om leerders se selfgereguleerde leer te ontwikkel, uit te lig. 'n Kwalitatiewe navorsingsontwerp is gevolg en data is deur semi-gestruktureerde onderhoude ingesamel. Drie laerskole en 15 onderwysers is gerieflik en doelbewus gesteekproef om aan die studie deel te neem. Die data is deur semi-gestruktureerde onderhoude ingesamel en met deur middel van 'n tematiese benadering ontleed.

Die bevindinge van hierdie navorsing het aan die lig gebring dat al het die onderwysers nie noodwendig kennis van die konsep van selfgereguleerde leer nie, die onderrigstrategieë wat hulle in die klas gebruik sekere kenmerke van selfgereguleerde leer het. Selfgereguleerde leervaardighede speel 'n belangrike rol in die doel van die Suid-Afrikaanse Kurrikulum om te verseker dat kinders kennis en vaardighede verwerf en toepas op 'n betekenisvolle wyse vir die voordeel van hulle eie lewens. Onderwysers pas selfgereguleerde leervaardighede toe soos

strategiese beplanning, doelwitstelling, motivering, tydsbestuur, en groepwerk. Algemene uitdagings wat onderwysers in die gesig staar wat hindernisse is vir selfgereguleerde leer sluit in oorbevolking, tydsbestuur, onvoldoende onderrig- en leerhulpbronne, 'n gebrek aan ouerbetrokkenheid en 'n tekort aan opleiding en ontwikkeling in selfgereguleerde leer wat deur die skoolbestuurspan en die Departement van Onderwys aangebied word.

Daar word aanbeveel dat onderwysers op 'n gereelde basis opgelei moet word in selfgereguleerde leer-onderrigstrategieë, en die skole moet herwinningsbeleide op leer-, onderrig- en ondersteuningsmateriaal (LOOM) ontwerp wat funksioneel is om te verseker dat leerhulpbronne doeltreffend gemonitor en beheer word. Die Departement van Onderwys moet ook die tyd wat aan die onderwerpe in die vakke toegedeel is, hersien om te verseker dat onderwysers genoeg tyd het om leerders se selfgereguleerde leervaardighede te ontwikkel eerder as om op die voltooiing van die kurrikulum te fokus. Onderwysers moet opgelei word oor hoe om gevorderde leerders te ondersteun en te verseker dat leerders hul doelwitte bereik.

Sleuteltermes: selfgereguleerde leer, selfgerigte leer, onderrigstrategieë, ondersteuning, Nasionale Kurrikulumverklaring, skoolbestuurspan, onderwysers, intermediêre fase, leer- en onderrighulpbronne

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DEDICATION

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TABLE OF CONTENTS

DECLARATION	I
ABSTRACT	II
OPSOMMING	IV
ACKNOWLEDGEMENTS	VI
DEDICATION.....	VII
CHAPTER 1 ORIENTATION.....	1
1.1 INTRODUCTION AND CLARIFICATION	Error! Bookmark not defined.
1.2 Introduction and problem statement.....	2
1.3 Motivation for study	7
1.4 Preliminary literature review and theoretical perspectives	7
1.4.1 Theoretical perspectives.....	Error! Bookmark not defined.
1.5 AIMS OF THE STUDY	Error! Bookmark not defined.
1.6 RESEARCH QUESTIONS.....	Error! Bookmark not defined.
1.6.1 Secondary questions	8
1.7 Research design and methodology	Error! Bookmark not defined.
1.7.1 Research design.....	Error! Bookmark not defined.
1.7.2 Philosophical orientation.....	Error! Bookmark not defined.
1.7.3 Research methodology	Error! Bookmark not defined.
1.7.3.1 Target population and sampling.....	Error! Bookmark not defined.
1.7.3.2 Method of data collection.....	Error! Bookmark not defined.
1.7.3.2.1 Individual, semi-structured interviews	Error! Bookmark not defined.

1.7.3.3	Procedure for collecting data	13
1.7.3.4	Data analysis.....	13
1.7.4	Validity, reliability and trustworthiness	14
1.7.4.1	Validity.....	14
1.7.4.2	Reliability	15
1.7.4.3	Trustworthiness	15
1.8	Ethical Considerations.....	16
1.9	PROPOSED CHAPTERS.....	17
1.10	CONTRIBUTION OF THE STUDY	17
1.11	CONTRIBUTION TO RESEARCH IN THE RESEARCH FOCUS AREA.....	18
CHAPTER 2	SELF-REGULATED LEARNING	19
2.1	INTRODUCTION	19
2.2	TOWARDS A DEFINITION OF SELF-REGULATED LEARNING	20
2.3	TOWARDS A DEFINITION OF SELF-DIRECTED LEARNING	22
2.4	THE LINK BETWEEN SELF-REGULATED LEARNING AND SELF-DIRECTED LEARNING.....	22
2.5	THEORETICAL PERSPECTIVES OF SELF-REGULATED LEARNING.....	23
2.5.1	Behaviourist theory or operant theory of self-regulated learning	24
2.5.2	Phenomenological theoretical perspective of self-regulated learning	25
2.5.3	Information processing theoretical perspective of self-regulated learning	26
2.5.4	Volitional theoretical perspective of self-regulated learning.....	27
2.5.5	Cognitive constructivist perspective	29
2.5.6	Vygotskian or sociocultural theoretical perspective	30

2.5.7	Social cognitive theoretical perspective of self-regulated learning.....	31
2.6	MODELS OF SELF-REGULATED LEARNING.....	32
2.6.1	Boekaerts' model (1999).....	32
2.6.2	Borkowski's process-oriented model of metacognition.....	33
2.6.3	Pintrich's general framework for self-regulated learning.....	34
2.6.4	Winne and Hadwin's (1998) model of self-regulated learning	35
2.7	ZIMMERMAN AND MOYLAN'S (2009) CYCLICAL PHASES MODEL.....	36
2.7.1	Forethought phase	36
2.7.2	Performance or volitional control phase	37
2.7.2.1	Self-control	37
2.7.2.2	Self-instruction.....	38
2.7.2.3	Self-observation.....	39
2.7.3	Self-reflection phase	40
2.7.3.1	Self-judgement	40
2.8	CONSTRUCTIVIST TEACHING APPROACHES THAT CAN AID IN THE DEVELOPMENT OF SELF-REGULATED LEARNING SKILLS	42
2.9	THE LINK BETWEEN CONSTRUCTIVIST TEACHING APPROACHES AND SELF-REGULATED LEARNING	43
2.10	THE ROLE OF TEACHERS' BELIEFS AND KNOWLEDGE IN THE DEVELOPMENT OF SELF-REGULATED LEARNING.....	45
2.11	TEACHERS' ROLE in SUPPORTING AND PROMOTING SELF- REGULATED TEACHING STRATEGIES	46
2.12	CHALLENGES TEACHERS EXPERIENCE WHEN THEY ARE NOT SELF-DIRECTED THEMSELVES AND HAVE TO MODEL SELF- REGULATED LEARNING SKILLS TO LEARNERS	47

2.13	CHALLENGES TEACHERS EXPERIENCE WITH THE DEVELOPMENT OF SELF-REGULATED LEARNING.....	49
2.13.1	Changing teaching and learning environment.....	49
2.13.2	Teachers' lack of knowledge of self-regulated learning.....	49
2.13.3	Workload, time, and overcrowding.....	50
2.13.4	Teachers' lack of self-efficacy beliefs.....	50
2.13.5	Collaboration between learners, teachers, and parents	50
2.14	TEACHING STRATEGIES PRIMARY SCHOOL TEACHERS CAN USE IN GENERAL TO DEVELOP AND ENHANCE SELF-REGULATED LEARNING.....	51
2.15	THE ROLE OF LIFE SKILLS TEACHERS IN PROMOTING SRL IN THE INTERMEDIATE PHASE.....	55
2.16	THE ROLES AND RESPONSIBILITIES OF THE SCHOOL MANAGEMENT TEAM IN PROMOTING SRL.....	56
2.15	SUMMARY	56
CHAPTER 3	RESEARCH DESIGN AND METHODOLOGY	57
3.1	INTRODUCTION	57
3.2	RESEARCH DESIGN AND METHODOLOGY	57
3.3	RESEARCH PARADIGM	58
3.4	QUALITATIVE RESEARCH APPROACH.....	61
3.5	STRATEGY OF INQUIRY	62
3.6	POPULATION AND SAMPLING.....	62
3.6.1	Sampling	63
3.6.2	Participants' biographical information	64

3.6.3	Contextual information about the research site	66
3.7	THE ROLE OF THE RESEARCHER.....	67
3.8	DATA COLLECTION	68
3.8.1	Individual semi-structured interviews	68
3.8.2	Procedures to collect data	69
3.9	DATA ANALYSIS	69
3.10	TRUSTWORTHINESS	71
3.10.1	Validity.....	72
3.10.2	Reliability	72
3.10.3	Credibility.....	72
3.10.4	Transferability.....	73
3.10.5	Confirmability.....	73
3.11	ETHICAL CONSIDERATIONS.....	73
3.12	SUMMARY	75
CHAPTER 4	DATA ANALYSIS AND INTERPRETATION.....	76
4.1	INTRODUCTION	76
4.2	Analysis PROCESS OF QUALITATIVE DATA	76
4.2.1	Data analysis of the semi-structured interviews	77
4.3	DISCUSSION AND ANALYSIS OF QUALITATIVE DATA.....	80
4.3.1	Theme 1 – Knowledge and beliefs of SRL	81
4.3.1.1	Sub-theme 1: Familiarity with concept self-regulated learning	81
4.3.1.2	Sub-theme 2: Participants’ comprehension of the concept self-regulated learning.....	82

4.3.1.3	Sub-theme 3: Value of SRL for academic learning	83
4.3.1.4	Sub-theme 4: Instruction to utilise and develop self-regulated learning.....	84
4.3.1.5	Sub-theme 5: The roles of teachers to develop and enhance self-regulated learning.....	85
4.3.2	Theme 2: Knowledge and beliefs of how self-regulated learning is developed before task completion	86
4.3.2.1	Sub-theme 1: SRL development before task completion in the forethought phase	86
4.3.2.2	Sub-theme 2: Self-regulated learning development in volitional or performance phase.....	91
4.3.2.3	Sub-theme 3: Self-regulated learning development in self-reflection.....	96
4.3.3	Theme 3: Challenges teachers experience with developing self-regulated learning.....	100
4.3.4	Theme 4: The support teachers get from the school management team and the Department of Basic Education.....	101
4.4	SUMMARY	103
CHAPTER 5 FINDINGS AND RECOMMENDATIONS.....		105
5.1	INTRODUCTION	105
5.2	SUMMARY OF THE RESEARCH	105
5.3	FINDINGS OF THE RESEARCH.....	106
5.3.1	Findings concerning the first sub-question (cf. 1.6).....	107
5.3.2	Findings concerning the second sub-question (cf 1.6)	109
5.3.3	Findings concerning the third sub-question (cf. 1.6).....	114
5.3.4	Findings concerning the fourth sub-question (cf. 1.6).....	116
5.4	RECOMMENDATIONS	117

5.4.1	Training on how to develop and improve teachers' self-regulated learning skills	117
5.4.2	Curriculum and policy reviews	118
5.5	CONTRIBUTIONS TO THE STUDY	119
5.5.1	Contribution to the research focus area	119
5.6	LIMITATIONS TO THE STUDY	119
5.7	RECOMMENDATION FOR FURTHER STUDY	120
5.8	CONCLUSION	120
	REFERENCE LIST	122
	ADDENDUM A ETHICS APPROVAL LETTER.....	140
	ADDENDUM B FREE STATE PROVINCIAL DOE PERMISSION	142
	ADDENDUM C PERMISSION FROM SCHOOLS	144
	ADDENDUM D GOODWILL PERMISSION FROM SCHOOL GOVERNING BODY	148
	ADDENDUM E LETTER FROM ETHICS COMMITTEE TO PARTICIPANTS	151
	ADDENDUM F SEMI-STRUCTURED INDIVIDUAL INTERVIEW QUESTIONS.....	155
	ADDENDUM G LANGUAGE EDITOR'S CERTIFICATE	159

LIST OF TABLES

Table 1-1: Intermediate Phase (Grades 4-6) 2016 and 2017 results.....	5
Table 3-1: Biographical information of participants	64
Table 4-1: Themes and sub-themes generated from semi-structured interviews	79

CHAPTER 1 ORIENTATION

1.1 CONCEPT CLARIFICATION

Below is a discussion of the concepts that are used throughout the study.

Learning

The South African Schools Act (84 of 1996) defines learning as an activity or process of gaining knowledge or skill by studying, practising, being taught, or experiencing something. Learning is about what learners do; not what teachers do.

Learning strategies

Learning strategies refer to intentional behaviour and thoughts that learners use during learning to help them understand, learn, or remember new information better (Solak, 2015:2).

Self-directed learning

Self-Directed Learning (SDL) has been defined in a variety of ways: Kidane, Roebertsen and Van der Vleuten (2020:7) describe SDL as a process where individuals, with or without the help of others, take the initiative to identify their learning needs, formulate their learning goals, identify human and material resources for learning, choose and implement appropriate learning strategies, and evaluate their learning outcomes. Loeng (2020:2) also adds that SDL entails learners taking charge and responsibility of their own learning. SDL gives learners freedom to set their own goals and decide what and how they should learn. In this study, SDL is viewed as an umbrella or broader concept that encompasses SRL (Jossberger et al, 2010:423).

Self-regulated learning

Learners can be described as self-regulated to the extent that they are metacognitively, motivationally, and behaviourally active in their own learning processes. In this study self-regulated learning (SRL) is viewed as the first step to self-direct one's learning (Jossberger *et al.*, 2010:423).

Teaching strategy

The South African Schools Act (84 of 1996) teaching strategies refer to the “structure, system, methods, techniques, procedures, and processes that a teacher uses in instruction”. The teacher uses teaching strategies to assist learners with learning.

Quintile

A quintile is a framework used to categorise schools in terms of the level of education and the level of unemployment in the communities around the schools. Schools are classified according to the level of poverty in the surrounding area. Schools are then ranked between quintiles 1 up to 5 with quintile 1 being schools in very poor areas and quintile 5 being schools in wealthier areas. (Dass & Rinquist, 2017:142)

1.2 INTRODUCTION AND PROBLEM STATEMENT

The development of SRL to enhance SDL is a valuable strategy to equip learners with life-changing knowledge and skills that can improve academic achievement. SRL refers to one's ability to understand and control one's learning environment. SRL abilities include goal setting, self-monitoring, self-instruction, and self-reinforcement. Zimmerman (2002:14) defines self-regulation as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals". Paris and Paris (2001: 89) explain that SRL, "as the three words imply, emphasizes autonomy and control by the individual who monitors, directs, and regulates actions toward goals of information acquisition, expanding expertise, and self-improvement".

Schunk (2008:464) contends that total reliance on SRL for improving learner achievement may not be the only answer to improving learner performance. They emphasise that there are still many unanswered questions about how learners could become self-regulated to improve their academic achievement. However, many researchers are convinced that SRL is imperative for the development of life-long learning. As such, SRL has been regarded globally as a vital role player in academic learning (Alharbi, Paul, Henskens & Hannaford, and 2011:2). SRL in school environments increases success in problem-solving, academic achievement, intrinsic motivation and task interest (Perry, Phillips & Hutchinson, 2006: 256). Applying SRL strategies impacts a learner's academic achievement and increases their capacity to develop life-long learning skills (Bandura, 2015:1031). From this point of view, SRL appears to be the foundation for SDL. When learners are skilled enough to regulate their learning on task level, they will have acquired important skills that function as the foundation from which they can proceed to self-direct their learning (Jossberger et al., 2010:420).

SRL can help learners to develop knowledge and as well as skills more effectively; however, using self-regulatory processes will not automatically produce high levels of performance. Both external support and self-directed practice are needed for optimal learning. Therefore, teachers are instrumental in developing learners' SRL and giving them practice in SDL (Zimmerman 2006,

cited in Jossberger et al., 2010:424). The first step in the development of SDL is to develop learners' SRL, because self-directed learners must have the ability to regulate their own learning (Jossberger et al., 2010:423).

Over the past two decades, many researchers have warned that the South African education crisis would result in high failure and dropout rates among learners in primary and secondary schools as well as higher education institutions (Chisholm, 2011:50; Spaull, 2013:1). Nkosi (2016:1) ascribes the dismal matric results to the education crisis in primary schools, given that about 90% of learners in Grades 3, 6 and 9 achieved less than 50% in the second Annual National Assessment in literacy, maths and science (Badat & Sayed, 2014:135). Nkosi (2016:1) blames the poor performance of primary schools in the annual national assessments on the persistent overinvestment in Grade 12 when the largest education investment should really be in the early school grades, with which the minister of Education, Angie Motshekga, agrees. In the summary report of the National Education Evaluation and Development Unit (NEEDU, 2018:4), the minister admits the South African school education crisis and that the root cause of the underperformance is primary schools that have not been given much attention to the education crisis. Motshekga emphasises that whether schools cater for learners in the foundation phase, intermediate phase, senior phase or further education and training (FET) phase, the principles of running functional schools are the same and that teaching and learning should be taken seriously from primary school up to secondary school (NEEDU, 2018:4). Therefore, the Department of Education (DoE) intends to place a greater focus on primary schools, as they are the foundation for all other levels that build up to the national senior certificate (NCS).

As another strategy to improve performance in schools, the Minister of Education would task NEEDU in the Department of Basic Education (DBE) to conduct a study on primary and secondary schools that do perform well to determine the reasons for their success and share their strategies with the underperforming schools. The findings of the NEEDU report (2018:30) emphasise that all schools should implement teaching strategies that encourage learners to take responsibility for their own learning; in other words, develop learners to become self-regulated and self-directed.

National Policy Pertaining to the Promotion and Progression Requirements of National Curriculum Statement Grades R-12 (2015), states that learners in the foundation (Grades 1-3), intermediate (Grades 4-6), and senior phases (Grades 7-9) and further education and the FET phase (Grades 10-12) cannot fail more than twice in a particular phase. The DoE's rationale for the Policy Pertaining Promotion and Progression is to ensure that most learners in a particular phase are approximately in the same age bracket. However, many teachers are dissatisfied with learner progress because they believe the DoE puts through non-performing learners even if they are not ready for the next grade Pretorius (2014:348). On the other hand, Minister Motshekga argues that

progressing learners allow such learners to stay in the education system instead of driving them to drop out of school through constant failure. However, Pretorius (2014:384) argue that progressed learners have accumulated knowledge gaps over the years irrespective of their ages, and teachers should support them in this regard.

The researcher is a Head of the Department of Mathematics, Natural Science and Technology at a quintile-two primary school in the Thabong Township in the Free State province. This primary school and other primary schools in the Lejweleputswa District experience the problem of poor-performing learners, especially in the intermediate (Grades 4-6) and senior phases (Grade 7). The School Management Team's (SMT) summary of the intermediate phase's (Grades 4-6) year-end results of 2019 and 2020 shows that in 2019, out of the total number of 125 Grade 6 learners, only 51 qualified to be promoted to Grade 7 (See Table 1.1). The remaining 74 learners did not qualify, because 48 learners were progressed and 28 learners were retained in Grade 6. The statistics in Table 1.1 indicate that the learners in Grades 4, 5 and 6 who qualified to be promoted to the next grade in the school are less than those who are retained. These pass rates are an indication that the academic achievement of intermediate phase learners is sub-standard. Therefore, the school was labelled as an underperforming school. The researcher argues that the causes of underperformance in the intermediate phase should be explored, and intervention strategies need to be implemented in an effort to improve the academic achievement of the intermediate phase learners at these particular and other primary schools.

Table 1-1: Intermediate Phase (Grades 4-6) 2019 and 2020 results

YEAR	GRADE	TOTAL NUMBER OF LEARNERS	PROMOTED	PROGRESSED	RETAINED
2019	4	164	83	46	35
	5	128	85	23	20
	6	125	51	48	26
2020	4	194	82	29	83
	5	108	46	31	31
	6	142	69	34	49

As the Head of Department (HOD) of Mathematics, Natural Science and Technology at the school, the researcher observed that teachers are behind with curriculum coverage most of the time. Their daily lesson plans do not clearly indicate how they will teach, what activities they will give learners, or how they encourage learners to take responsibility for their own learning. The researcher also found that teachers tend to rely more on textbooks as their main teaching resource and no evidence shows how they utilise and adapt their teaching strategies for all learners to benefit academically. I furthermore observed that learners are not given enough written and practical work to do in class and at home. To gain more insight into factors that might contribute to the problem of poor academic performance at the school, I did an analysis of the log book the Subject Advisors use during their visits to this particular primary school. The subject

advisors' reports from 2019 to date suspect similar problems as the researcher in terms of the cause of the primary school's poor academic performance. Teachers are behind with their curriculum coverage, assessment plans are not available, a high level of teacher absenteeism and learners who are given insufficient written work in class – these are what the researcher considers as the primary causes of the school's poor academic performance. The subject advisors' reports also state that the academic performance in fundamental subjects such as English, Sesotho, IsiXhosa and Mathematics from Grades 4 to 7 is not satisfactory. Furthermore, there is no teamwork among teachers, the catch-up programme for content is not addressed, and the lesson plans are not detailed enough to indicate what will transpire during teaching and learning. The school is well equipped with learning and teaching materials (science and maths equipment, maths laboratory and computer room), but they are not used effectively, as some of the teachers still need training on how to use technological equipment. The school library is not used effectively, as books given by the DoE are still unpacked in the library. The subject advisors recommend that teachers should manage their planning and time effectively to complete the curriculum, and learners should be given more classwork and homework for independent practice. Notwithstanding the above, the recommendations focus mainly on what teachers should do to improve results and not on what learners can do to improve their learning. There is no mention of what teachers can do to develop and teach learners to take responsibility for their own learning and to improve learners' self-regulated learning (SRL) skills as highlighted in the NEEDU report (2018).

The researcher also observed that, during the curriculum meetings with DoE officials, SMTs and teachers at school, finding ways to improve results to reduce learner underperformance is always a point of discussion. In these discussions, the responses always involve action from teachers (e.g. giving learners more classwork, homework and extra classes). Yet, developing learners' SRL skills to enhance self-directed learning (SDL) is never mentioned as a strategy to improve academic achievement and pass rates.

The overarching aim of this study was thus to contribute to promoting SRL as a vital prerequisite for SDL in schools. SMTs have an impact on teacher control, power and educational initiatives and innovations. Therefore, support from school power structures such as principals and heads of departments in the development of SDL and SRL needs to be explored. Specifically, a school-wide and departmental approach to SRL is needed, which implies that SMTs will need to, for example, take responsibility for creating teaching and learning environments that are conducive to learning and provide resources and professional development opportunities for teachers.

Against this background, the researcher decided to explore the knowledge and beliefs of intermediate phase primary school teachers about SRL, the teaching strategies they use to

develop and enhance SRL and SDL in their learners, as well as how the SMT supports primary teachers in their attempts to develop and enhance SRL and SDL.

1.3 MOTIVATION FOR STUDY

The need for this study stems from the fact that limited research has been done to explore teaching strategies primary school teachers' use to develop and promote SRL and enhance SDL in the South African context. There are even fewer studies on SRL in South Africa than the current international focus on SRL (Alharbi, Paul, Henskens & Hannaford, (2011:2); Zimmerman (2013). Schulze & Van Heerden (2015:1) state that local and international studies on SRL tend to focus mainly on higher education and not on primary and secondary education. The investigation in this study may add to the limited knowledge on SRL in the South African basic education context.

Fayombo (2015:48) suggests that learners of all ages can successfully apply self-regulated learning strategies when offered the opportunity to do so. Primary school teachers should move away from allowing learners to be dependent on them for knowledge and toward encouraging them to find ways to make learning meaningful on their own. The researcher believes that unless teachers and the whole school participate effectively in developing SRL and SDL skills from the primary school level, learners will continue to struggle throughout their schooling and will not be able to reach the demands and challenges of the ever-changing world. Therefore, the researcher intends to explore what strategies teachers in primary schools use to encourage and develop SRL skills among their learners and make recommendations as to how SRL can be developed in lower quintile, underperforming primary schools. The following research aims and research questions guided this study.

1.4 PRELIMINARY LITERATURE REVIEW AND THEORETICAL PERSPECTIVES

A preliminary literature review has been undertaken with a view to writing this proposal. An extended literature review will be conducted to find relevant literature about the problem being investigated. The following resources will be used: journals, articles, books, relevant policies from the Department of Education, internet and database. The following key concepts will be used: self-directed learning, self-regulation, self-regulated learning, development of self-regulated learning, teaching strategies that develop self-regulated learning, challenges to develop self-regulated learning, management support for self-regulated learning, role of teachers.

develop self-regulated learning, management support for self-regulated learning, role of teachers.

1.4.1 Theoretical perspectives

Self-regulated learning can be viewed from different theoretical lenses. For the purpose of this study, self-regulated learning was viewed from the social cognitive theory. Social cognitive self-regulation theorists view learning as a multidimensional process involving personal environmental and behavioural determinants. Zimmerman and Moylan's (2009) cyclical model of SRL will be used because it highlights the self-regulated learning skills self-regulated learners demonstrate and the skills teachers should develop.

1.5 AIMS OF THE STUDY

The primary aim of this phenomenological study was to explore what teaching strategies primary school teachers use to develop and encourage SRL in their learners.

Secondary aims of this study are to:

- explore what teachers know and believe about SRL.
- determine what teaching strategies primary school teachers use to develop their learners' SRL in the intermediate phase.
- ascertain what challenges teachers in the intermediate phase in primary schools encounter to develop SRL skills.
- investigate what kind of support, if any, teachers in the intermediate phase receive from the school management team (SMT) to develop SRL skills.

1.6 RESEARCH QUESTIONS

The primary question is: What teaching strategies do primary school teachers use to develop and encourage SRL in learners?

1.6.1 Secondary questions

- What do teachers know and believe about SRL?
- What teaching strategies do primary school teachers in the intermediate phase use to develop their learners' SRL?
- What challenges do primary school teachers in the intermediate phase face to develop SRL?
- What support, if any, do teachers receive from the SMT to develop SRL?
- What challenges do primary school teachers in the intermediate phase face to develop SRL?

- What support, if any, do intermediate phase teachers receive from the SMT to develop SRL?

1.1 RESEARCH DESIGN AND METHODOLOGY

1.1.1 Research design

Regoniel (2017:1) states that research literally means to search again. It means that the researcher has to look at existing information to explain a subject or topic of interest. Regoniel (2017:1) further defines a research design as: “a plan that details the procedure and instruments for the data collection, how the variables associated with the phenomenon should be measured and the statistical analysis to be applied to the data obtained”. A research design should systematically answer the problem statement or research questions.

A qualitative research design was followed in this study. Mohajan (2018:24) define qualitative research as a situated activity that locates the observer to the world. It involves an interpretative, naturalistic approach to the world. This implies that the researcher studies things in their natural setting and tries to make sense of or interpret phenomena in terms of meanings people bring to them. With a qualitative research design, the researcher will study and work with participants in their specific areas of expertise in order to make sense of and interpret issues accordingly. The benefit of the qualitative approach is that the information is richer and provides a deeper insight into the phenomenon under study.

Mohajan (2018:24) further state that qualitative research is a form of a social action that emphasizes the way people interpret and make sense of their experiences to understand the social reality of people. The qualitative approach is appropriate to this study because the researcher is interested in the participants’ own understanding of SRL and their subjective experiences of how they develop and enhance SRL skills in their teaching. The researcher intended to interact directly with the participants who were primary school intermediate phase teachers and explore their lived experiences of developing and enhancing SRL in their classrooms, with the classrooms being the natural settings.

I decided to use a pseudo-phenomenological study to explore the teaching strategies used by teachers to develop self-regulated learning. Maree (2016:77) explains phenomenological studies as “explorations into the structures of the human life-world, the lived world as experienced in everyday situations and relations. For a phenomenological study to be considered as a qualitative study, the researcher must be interested in the meaning of experiences to the subjects themselves, rather than generalising results to other groups of people (Lewis, 2015:178). Phenomenology is a branch of philosophy aiming at describing and analysing the phenomena,

the way things appear or look like. The basic purpose of phenomenology is thus to reduce individual experiences with a phenomenon to a description of the very nature of the thing. This study has some elements of a phenomenological study that enabled the researcher to explore a real-life situation, namely the daily experiences of teachers in their classrooms, and to develop a composite description of the essence of the individuals' experiences (Emiliussen, Engelsen, Christiansen & Klausen, 2021:1).

1.1.2 Philosophical orientation

A research paradigm is defined as a "set of common beliefs and agreements" shared by researchers regarding "how problems should be understood and addressed". Therefore, this is a specific way of perceiving the world (a worldview) that shapes how we seek answers to research questions. Interpretivists believe the reality is multiple and relative (Lincoln & Guba, 1985:15 cited in Maree 2016:52). Therefore, the aim of interpretivist research is to understand and interpret the meanings of human behaviour rather than generalise and predict causes and effects (Neuman, 2000:7). For an interpretivist researcher, it is important to understand motives, meanings, reasons and other subjective experiences which are time- and context-bound (Maree, 2016:52).

According to Denzil and Giardina (2016:5), "researchers who agree with this paradigm are interested in the social construction of meaning. People have free will, purposes, goals and intentions, so people should be studied as active agents. People make decisions and act in accordance with the subjective understandings of the situations in which they find themselves. People's actions are based on their interpretations in which the relevant object and action in the situation are taken into account and defined." The study is located within an interpretivist philosophical paradigm. The interpretivist paradigm supports the belief that reality is constructed by subjective perceptions and that predictions cannot be made. Rahl (2017:1) also explains that a supporter of the interpretive paradigm believes in the deep understanding of the world in which he or she lives. He or she develops subjective meanings of their experiences or of objects.

Maree (2016:60) argues that a study that deals with views and opinions of individuals and groups about a particular phenomenon has its basis in the interpretivist paradigm. This study is suitable for an interpretivist worldview because it explores lived experiences, views and opinions of individual primary school intermediate phase teachers and their knowledge of SRL, perceptions of the teaching strategies they use to develop their learners' SRL, challenges they encounter, and the support they receive from SMTs.

1.1.3 Research methodology

1.1.3.1 Target population and sampling

Gentles, Charles, Ploeg and McKibbon (2015:1) define a population as individuals or objects on which the researcher wants to base a study. They normally have the same characteristics and are found in the same area of the research. The population is the group from which a researcher would like the results to be generalised. It includes all the individuals with certain specified characteristics.

Sampling is a means of selecting a subset of units from a target population for the purpose of collecting information. This information is used to draw inferences about a population as a whole. The subset of units that are selected is called sample. The sample of a study simply refers to the participants of the study (Mohsin, 2016:11).

In this study, the population was all the primary school teachers in the Lejweleputswa district. The Lejweleputswa district consists of 213 schools and 4 528 teachers. Three primary schools were identified as research sites in this study. The Free State Provincial Department of Education is divided into five districts namely: Motheo, Thabo Mofutsanyane, Fezile Dabi, Xariep and Lejweleputswa district. On average, the primary school enrolls 1200 learners every year and starts from Grade R up to Grade 7.

This study used convenience and purposive sampling. Maree (2016:197) describes convenience sampling as quick, inexpensive and useful in exploratory research. . Maree (2016:197) explains that convenience sampling means that the participants in the study will be chosen because they are readily available. Convenience sampling was used in this study because the chosen primary schools were easily accessible by the researcher and participants were conveniently available.

Purposive sampling involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with the phenomenon of interest (Maree, 2016:198). In addition to knowledge and experience, they should also be willing to participate and have the ability to communicate experiences and opinions in an articulate, expressive and reflective manner (Setia, 2016:506).

Purposive sampling allowed the researcher to select five participants from each of the three schools. In total, 15 participants from three primary schools participated in the study. This means that five teachers were selected (one from Grade 4, two from Grade 5 and two from Grade 6) from each school. The following criteria were used for participant selection:

- Participants must be qualified teachers.

- Participants at each school must be teaching different subjects in the Intermediate Phase.
- Participants should be permanent employees of the selected schools.
- Participants must be willing to participate voluntarily.

1.1.3.2 Method of data collection

Data collection is a systematic approach to gathering and measuring information using different sources to get a complete and precise picture of an area of interest. Data collection enables a person or organisation to answer relevant questions, evaluate outcomes and make predictions about future probabilities and trends (Taylor, Bogdan & De Vault, 2015:51). The data collection method that was used in this study is semi-structured interviews.

1.1.3.2.1 Individual, semi-structured interviews

Alsaawi (2014:151) describes a semi-structured interview as a meeting in which the interviewer does not strictly follow the order from a formalised list of questions. In the semi-structured interviews, the participants are asked open-ended questions, allowing for a discussion with the interviewee rather than a straightforward question-and-answer format. Semi-structured interviews encourage two-way communication because both the interviewer and the interviewee can ask questions, which allows for a comprehensive discussion of the topic. The interviewer gives the interviewee the chance to elaborate and explain particular issues through the use of open-ended questions (Taylor *et al.*, 2015:52).

Maree (2016:93) states that there are many advantages to using semi-structured interviews. Interviews are believed to provide a 'deeper' understanding of social phenomena than what would be obtained from purely quantitative methods such as questionnaires. Interviews are therefore most appropriate where little is already known about the phenomenon, or where detailed insights are required from individual participants (for example, few studies have focussed on primary school teachers' knowledge of SRL and teaching strategies they use to develop SRL in learners). Semi-structured individual interviews are also particularly appropriate for exploring sensitive topics, where participants may not want to talk about such issues in a group environment. The semi-structured interview seldom spans a long period and usually requires the participant to answer a set of predetermined questions. This allows for the probing and clarification of answers. Semi-structured interview schedules define the line of inquiry (Maree 2016:93).

In this study, the researcher utilised semi-structured, individual interviews to collect data from 15 intermediate phase teachers. The aim of the individual semi-structured interviews was to explore intermediate phase teachers' knowledge of SRL, the strategies they use to develop and enhance

learners' SRL, the challenges they encounter to develop and enhance SRL, and the support they receive from the SMT to develop SRL.

The semi-structured interviews allowed the researcher to prepare ahead of time and not be side-tracked by trivial aspects that are not related to the study (Maree, 2016:93). It also offered the participants the opportunity to express their own views of the phenomenon under study freely. Another reason for interviewing participants individually and not in groups was that teachers have different curricular and extracurricular activities, which makes it difficult to get them all together for a focus group interview.

During the individual, semi-structured interviews, the researcher took notes and audio-recorded the participants' responses with their permission. The place, time and dates for the semi-structured interviews were arranged with the participants.

1.1.3.3 Procedure for collecting data

After obtaining ethical clearance from the North-West University, the researcher obtained permission from the District Director of the Lejweleputswa Education District to conduct this research study. Thereafter, the researcher wrote letters to the principals and school governing bodies of each of the three primary schools where the research would take place, requesting their written permission to conduct the research. An independent person travelled around the schools in Welkom to recruit the participants to take part in the study.

1.1.3.4 Data analysis

Flick (2013:3) defines qualitative data analysis as the classification and interpretation of linguistic (or visual) material to make statements about implicit or explicit dimensions and structures of meaning-making in the material and what is represented in it. The aim of data analysis is to describe a phenomenon in detail. Qualitative data analysis is one of the important steps in the qualitative research process, since it assists researchers to make sense of the collected data. Data analysis is concerned with transforming raw data by searching, evaluating, reorganising, coding, mapping, exploring and describing patterns, trends, themes and categories into information in order to interpret and provide the underlying meaning (Ngulube, 2015:1).

Data interpretation is the process of making sense of the data that has been collected, analysed and presented. It is the act of identifying and explaining the core meaning of data, organising and connecting emerging themes, subthemes and contradictions to get the bigger picture of what it all means (Noble & Smith, 2015:18).

In the first step of the process of analysis, the researcher listened to the interviews' audio recordings. The audiotapes from the interviews were then transcribed. Maree (2016:115) defines transcription as the process of converting audiotape recordings or notes into text data. The transcriptions helped the researcher to generate a clear understanding of the information gathered concerning the teaching strategies primary school teachers use that develop and promote SRL. Data was analysed using the Atlantis TI computer system program. Data obtained through interviewing participants were converted to a computer file for analysis. Maree (2013:249) states that a qualitative data analysis computer program is a program that stores and organises data and allows the user to assign labels or codes to the data. As such, it facilitates searching through data and locating specific texts or words.

After the data had been organised and transcribed, the researcher began with the coding process. According to Maree (2016:119), after collecting data, the researcher needs to first read through the data to obtain a general sense of the material. The researcher then codes the data by locating text segments and assigning a code label to them.

Saldana (2016:43) defines coding as the process of segmenting and labelling texts to form descriptions and broad themes in the data. Coding enabled the researcher to quickly obtain or retrieve and gather the whole text and other information related to the thematic idea being examined. Categories of information were identified, whereby the relationships of the collected data were examined for contradictions and similarities. The researcher looked at one category at a time and focussed on the content of each category. In order to interpret the results and draw meaning from it, the researcher noted, compared and contrasted, patterns and themes and clustered them (Theron, 2015:8). Maree (2016:119-120) suggests that researchers pay attention to elements such as noticing, collecting and reflecting on the information gathered from the participants. The researcher intended to identify patterns that emerge from the responses regarding the primary and secondary research questions of the study.

1.1.4 Validity, reliability and trustworthiness

1.1.4.1 Validity

Validity is an indication of how sound research is. It applies to both design and the methods of research. Validity of data collection means that the findings truly represent the phenomenon that is being studied. (Leung, 2014:1)

The following strategies, as described by Noble and Smith (2015:18), were used to ensure validity in this study:

- Data collection through interviews was done over an extended period of time to ensure that the participants had sufficient opportunity to contribute to the study.
- To prevent an artificial setting, the interviews were, as far as possible, conducted at the schools where the participants worked, as it is their natural setting.
- The other strategy included a rich, thick, verbatim description of participants' accounts to support findings.
- The participants were invited to comment on the interview transcript and whether the final themes and concepts created adequately reflected the phenomena being investigated.

1.1.4.2 Reliability

Reliability is a way of assessing the quality of the measurement procedure used to collect data in the research. In order for the results from a study to be considered valid, the measurement procedure must first be reliable (Ary, Jacobs & Sorensen, 2014:103, Leung (2014:1) further defines reliability as the degree to which assessment tools produce stable and consistent results.

The following measures were taken to ensure reliability:

- The researcher was aware of her own biases that may have influenced the findings of the research.
- The aims and objectives of the study were explained clearly to the participants.
- The participants were consulted in time to discuss the dates and times for the lesson observations and interviews.
- The researcher ensured that respondent validation, which allowed participants to comment on the interview transcript and whether the final themes and concepts created adequately reflected the phenomena being investigated.
- Multiple codes were used with the data analysis. The researcher engaged with other knowledgeable and experienced researchers to reduce research bias.

1.1.4.3 Trustworthiness

The concept "trustworthiness" refers to how the inquirer can persuade the audience that the findings in the study are worth paying attention to and that the research is of high quality (Lincoln & Guba, 1985 as cited in Maree, 2016). In this study, trustworthiness involves the appropriateness, meaningfulness, correctness, and usefulness of the researcher's inferences based on the collected data. Trustworthiness was ensured in this study through the following guidelines of Fraenkael, Wallen & Hyun (2012 23):

- The researcher in this study constructed interview questions that generated meaningful responses from the participants of this study in order to answer the research questions.
- The responses were audio recorded during the interview using an audio recording instrument.
- The researcher used interview schedules containing the questions to save time and not repeat questions.
- An independent person verified the codes and analysis of the data.
- Other respondents than those originally involved in the study reviewed the accuracy of the research report (member checking).
- Verbatim quotes were used in the findings to serve as confirmation.

1.2 ETHICAL CONSIDERATIONS

Ethics can be thought of as the study of good conduct and the grounds for making judgements about what is a good conduct. The dignity, rights, safety, and wellbeing of participants must be the primary consideration in any research study (Stevens, 2013:20).

The following measures were considered in the planning and conducting of the research to ensure that the rights and welfare of each participant were protected (Ritchie, Lewis, Nicholls & Ormston, 2014:84; Flick, 2014:49):

Ethical clearance and permission to conduct the research was obtained from the Ethics Committee of the Faculty of Education, North-West University, and Potchefstroom campus.

Permission to conduct the research was obtained from the Education District Office (Lejweleputswa District, Welkom in the Free State Province) and the principals of the three primary schools. Goodwill permission was obtained from the school governing bodies as the representatives of the parents and the community in which the research took place. The researcher's colleague personally informed the chairpersons of the primary schools during a meeting arranged once final permission had been obtained.

Participants were asked to participate voluntarily in the semi-structured individual interviews and classroom observations. The participants were issued a letter from the Ethics Committee of the Faculty of Education of the North-West University, Potchefstroom campus wherein the aim of the study was explained.

Informed consent was obtained from all participants with the understanding that they would be treated with the appropriate confidentiality and anonymity. Participants were informed that they had the right to withdraw at any stage in the research without any consequences.

Written permission was obtained from participants to audio record the semi-structured individual interviews.

The researcher monitored the collected data to ensure the safety of participants. This includes the ethical issues of privacy, confidentiality and anonymity, whereby the researcher ensured that any and all information obtained during the study would not be revealed to any individual who was not part of the research.

The names of participants and schools will not be revealed in the results and findings of the study. Furthermore, participants will not be identified by their names during data capturing and dissemination; rather, pseudonyms and codes have been used to ensure that no link can be made between their person and what has been said. The captured data is password-protected in electronic storage and locked in a safe in hard copy to ensure privacy, confidentiality and anonymity. All data has been kept safe according to the North-West University policy.

1.3 PROPOSED CHAPTERS

Chapter 1: Orientation

Chapter 2: Self-regulated learning

Chapter 3: Research design and methodology

Chapter 4: Data analysis and interpretation

Chapter 5: Summary, findings, and recommendations

1.4 CONTRIBUTION OF THE STUDY

The main aim of this study was to explore the teaching strategies primary school teachers use to develop and encourage SRL in learners. The study provided data on primary school teachers' knowledge about SRL. The research offers an opportunity for professionals in education to understand the challenges primary school teachers encounter in their efforts to develop SRL. Data was collected on the support primary school teachers receive from the school management team (SMT) to develop SRL. In light of hierarchical nature of schooling and the fact that success and access to higher education are built on the foundations laid in primary school and high

school (Spaull, 2018) the development of SRL and self-directed learning (SDL) in primary school and high school learners is vital for the achievement of academic goals and improving pass rates.

1.5 CONTRIBUTION TO RESEARCH IN THE RESEARCH FOCUS AREA

The aims of this study are in line with the mission of the research focus area 'self-directed learning because the findings of this study will contribute to knowledge and understanding of the development of SRL and SDL in different educational contexts, such as quintiles 1 and 2 schools. Findings from this research can contribute to the knowledge of factors that promote or inhibit the development of SRL and SDL, which in turn broadens knowledge about SDL theories and praxis in the South African education landscape.

CHAPTER 2 SELF-REGULATED LEARNING

2.1 INTRODUCTION

SRL is the control that students have over their cognition, behaviour, emotions, and motivation through the use of personal strategies to achieve the goals they have established (Panadero & Alonso-Tapia, 2014:450). Learners who possess SRL skills have positive emotions and they have acquired hope, pleasure and fulfilment in their learning (Cho & Heron, 2015:81)

The term (SRL) became popular in the 1980's (Paris & Winograd, 1990:4). Research on SRL then focussed on addressing cognitive strategies, metacognition, and motivation in one unifying theory, which emphasised in the first part of this chapter on the literature about SRL and the theoretical perspectives of SRL. This part of the chapter provides different definitions of (SDL) and the relationship between SRL and SDL from different authors, the characteristics of a self-regulated learner, and various models of SRL (§2.3). Next, it explores the theoretical perspectives of SRL (§2.5), behaviourist or operant theoretical perspectives of SRL (§2.5.1), phenomenological theoretical perspective of SRL (§2.5.2), the information processing theoretical perspective (§2.5.3), the volitional theoretical perspective of SRL (§2.5.4), the cognitive constructivist theoretical perspective of SRL (§2.5.5) the Vygotskian or social cognitive theoretical perspective of SRL (§2.5.6), and social cognitive theoretical perspective of SRL (§2.5.7). For the purposes of this study, the following models of SRL (§2.6) are discussed: Boekaerts' Model (§2.6.1), Borkowski's (1996) process-oriented model of metacognition (§2.6.2), Pintrich's (2000) general framework for SRL, Winne and Hadwin's (1998) four-stage model of SRL (§2.6.4). Lastly, Zimmermann and Moylan's (2009) social cognitive model of SRL (§2.7) is discussed, as it forms the framework on which the study is based.

The second part of this chapter discusses the constructivist teaching approaches (§2.8), the link between constructivist teaching and SRL development (§2.9), teachers' beliefs, perceptions and knowledge of SRL (§2.10) and the importance of supporting teachers in developing SRL (§2.11). Then, the chapter discusses the challenges teachers experience when they are not self-directed themselves and have to model the SRL skills to learners (§2.10), teaching strategies primary school teachers can use in general to develop and enhance SRL (§2.12), general challenges teachers experience with the development of SRL (§2.13), challenges teachers experience with the development of self-regulated learning and (§2.14), teaching strategies primary school teachers can use in general to develop and enhance self-regulated learning.

2.2 TOWARDS A DEFINITION OF SELF-REGULATED LEARNING

In this section, a few definitions for SRL from different theoretical perspectives are presented. Zimmerman (2015: 541) defines SRL as a process in which learners are self-regulated when they are active in their own learning on a metacognitive, motivational and behavioural level. Such learners are the ones who initiate their own learning and use their own efforts to acquire knowledge and skills rather than relying on teachers and parents. Learning should involve various strategies to achieve academic goals for learners to qualify as self-regulated learners.

Zimmerman (2015:541) further says that SRL is a multidimensional process involving personal (cognitive and emotional) behavioural and conception components. In order for learners to master an academic skill, they must be actively involved in the task and use all the learning strategies and tools to achieve it. Self-regulated learners should also be intrinsically motivated, be willing to accomplish their objectives and never give up when they encounter obstacles during the learning process. Xiao & Yang (2019:5) emphasises that self-regulated learners are self-motivated, can search for information and advice on their own, and focus on the task until they complete it without seeking much help from the teacher.

SRL also includes the behaviour of control, emotional control and motivation control. Behaviour of control is when students control what they are doing to achieve the goals, emotion control is when students experience emotions while performing an academic task. Controlling emotions is essential, especially when the task is challenging and makes it difficult for students to achieve the expected results. Students can also experience positive emotions, such as pride and happiness, when performing the task. Motivation of control is about being aware of one's motivations, maintaining interest and attention during the task (Pandero & Alonso-Tapia, 2014:451).

Self-regulated learners are aware when they know a fact or possess a skill and when they do not. They are able to know when they should look for information when they need it and take the necessary steps to master something. Self-regulated learners can know how they can overcome such as poor study habits or learning conditions, obstacles to learning teachers or textbooks they find confusing, or teachers that do not help them. They know that they should be responsible and take charge of their own learning in order to succeed.

Effeney, Carroll and Bahr (2013:59) further explain that self-regulated learners have intrinsic motivation and execute their tasks without being forced by a teacher. They do things willingly, derived from their own desires to achieve a goal and are motivated to succeed. In this complex and rapidly changing world, there is a need for self-initiated and self-managed learning, and this should happen not only during formal schooling for academic achievement but should also be a

life-long practice. Even if they do not perform well in the task, self-regulated learners do not give up, continue and strive to succeed, and do not view themselves as failures (Effenney *et al.*, 2013:59).

Cho and Heron (2015:81) states that SRL has emerged as an essential new skill in education. SRL has been informed by three schools of thought, namely: research on learning styles, research on metacognition and regulation styles, and theories on the self, including goal-directed behaviour. SRL can also be defined in terms of intuitive thinking, feelings, and actions that are systematically aligned towards achieving the student's own goals. The key matter of SRL is that students are able to choose, combine and interrelate cognitive strategies effectively (as cited from Zimmerman & Schunk, 1989).

Nejabati (2015:2) defines SRL as a process requiring learners to monitor their own learning independently and correct their mistakes. When learners monitor their own work, it means they check the content of the lesson, find out where they experienced learning difficulties, and assess whether they are progressing and achieving the outcomes. In an analysis of the definition of Nejabati (2015:2), one of the main goals of education is to enhance learners' capability of learning how to learn. This can only be possible if learners are taught the required knowledge, skills, and strategies. Learners should have the ability to reserve the language and skills being taught to assist them in becoming life-long learners.

Mega, Ranconi & De Beni (2014:122) states that SRL is more focussed on learners being able to make independent decisions and take charge of their own learning. Learners are able to monitor, direct and regulate their actions towards achieving their goals and becoming experts of what they are learning and improve in areas that are lacking.

Clark and Zimmerman (2014:486) say that to develop SRL one needs to observe social models that display self-observation, judgemental processes and self-reactions and try actively to master these functions. Once acquired, the self-regulatory process will not be continued unless they produce perceived benefits.

Pandero and Alonso-Tapia (2014:451) on the other hand mention that self-regulation has been conceptualised as a process in which students use several positive strategies oriented towards learning. However, with this approach, students can avoid goals and create several strategies that can affect their learning, like pretending they are sick or cheating on exams. It is therefore essential to, in addition, promote learning environments in which students feel safe and can activate learning goals. SRL requires students to choose appropriate goals at which to direct their effort, and for that, teachers are key in creating a motivating and positive classroom environment.

2.3 TOWARDS A DEFINITION OF SELF-DIRECTED LEARNING

With self-directed learning (SDL), on the other hand, according to Mamun, Lawrie & Wright (2020:2) individuals take initiative – with or without others' help – in setting goals, attaining various resources for learning, choosing, and implementing appropriate learning strategies, and evaluating the outcomes. SDL was first introduced in adult education, although it does not exclusively apply to adults. When students see themselves as adults who are responsible for their own future, they are motivated and self-directed and can make independent decisions.

Anuroofa (2017:1850), on the other hand, defines SDL as the process in which individuals take initiative, with or without the help of others, in setting goals, identifying human and material resources for learning, choosing, and implementing appropriate learning strategies, and evaluating the outcomes. Van Woezik, Reuzel & Koskama (2019:3) explain that SDL is an approach in which learners slowly take personal responsibility and control of their cognitive and contextual processes so that they can construct and evaluate meaningful learning outcomes. Learners, in this instance, take charge of their own learning and they are able to make meaning of what they are learning about with minimal assistance from the teacher.

2.4 THE LINK BETWEEN SELF-REGULATED LEARNING AND SELF-DIRECTED LEARNING

Van Woezik *et al.* (2019:3) further say that SDL is related to SRL because they both encourage learners to monitor their own progress. They emphasise internal and external feedback as essential for learners to evaluate their progress focus on their goals. SDL is also encouraging learners to interact collaboratively with their peers and teachers, and it involves both to take responsibility and having control over the learning process and conditions.

Monkaresi, Abbasi & Razyani (2015:2) mention that SDL considers human and material resources that learners are familiar with, their learning needs, setting goals and learning strategies, and evaluating the learning process results. SDL encourages learners to tally their own efforts and initiatives to focus on their learning tasks for which they should be responsible from the design, implementation, and evaluation of their learning experience.

Jossberger *et al.*, (2010:10) emphasise that the first step in developing SDL skills is mastering the skill of SRL activities and task performances. SDL and SRL are similar because they allow learners to decide what needs to be learned next and how best to accomplish their learning. Learners who are self-directed and self-regulated are able to diagnose learning needs, formulate learning goals, and identify and choose human and material resources for learning. SDL and SRL

learners are able, willing, and ready to plan their task, go about doing it, and complete it independently.

SDL deals with the successive steps in the learning process and helping learners to acquire opportunities for SDL that can help them to improve their self-regulation (Zimmerman, 1998; Schunk, 2004). Learners need to be supported as they learn vocational competencies and develop SRL and SDL skills by the environment and their teachers. Learners reach their highest level of performance when they interact with the teachers and when their tasks are structured and planned appropriately, which exposes learners to higher opportunities. Teachers should also help learners to correct errors (Jossberger *et al.*, 2010:11).

Hadwin and Oshige (2016:243) mention that the term SRL emerged largely from social cognitive schools of thought. Accordingly, SRL refers to the strategic and metacognitive behaviour, motivation and cognition aimed toward achieving a goal. “Students can be described as self-regulated to the degree that they are metacognitive, motivationally and behaviourally active participants in their own learning process” (Zimmerman, 1989:329).

To summarise the definitions above, both SRL and SDL are guided by metacognition, planning, monitoring, evaluating one’s personal progress against a standard, and motivation to learn. SRL and SDL describe the process of taking control of and evaluating one’s own learning and behaviour. SDL and SRL furthermore emphasise independent decision making and control by the students, who can monitor, direct, and regulate their actions towards achieving the goals of acquiring information, increasing their knowledge, and self-improvement (Jossberger *et al.*, 2010:12).

2.5 THEORETICAL PERSPECTIVES OF SELF-REGULATED LEARNING

A theoretical perspective can be explained as what individuals perceive when they focus their minds on the phenomenon they are thinking about and make sure that their minds are not distracted or changed. A theoretical perspective is a way of thinking that mainly concerns what individuals believe in and what they do not believe in from their point of view about certain things (Alexander, 2014:22).

Most researchers in various theoretical perspectives concerning SRL have focussed on the following basic issues or questions: (1) How does SRL improve learners’ performance? (2) What do teachers think about SRL? (3) How are teachers supported to improve their SRL skills? (4) How do teachers encourage SRL and promote SRL teaching skills in the classroom? (5) How does the social and physical environment influence learners’ self-regulation? (Dignath & Van der Werf, 2016:4, Harding, 2018:6; Bembenuitty, 2015:14; Zimmerman, 1989:2).

The following paragraph gives a detailed definition and discussion of different theoretical perspectives of SRL. For the purpose of this study, the social cognitive view of SRL is discussed in more detail than other theoretical views because forms the premise of the study.

2.5.1 Behaviourist theory or operant theory of self-regulated learning

The pioneers in the development of these theories include Ivan Pavlov, John B. Watson and B.F. Skinner. Behaviourist learning theory is psychology underscored by the pedagogical reasoning that behaviour can be researched scientifically without considering cognitive states. According to the behaviourist theory, the primary hypothesis is that learning is only influenced by physical variables, such as environmental or material reinforcement. Person's behaviour can be changed by their environment or their own volition. The operant psychologists believe that the environment controls the way the person behaves. Behaviourists, dismissing the influence of mental variables, propose that free will is an illusion and that responses can be determined and conditioned.

Zhou and Brown (2015:6) explain that the term "operant conditioning" originated from the behaviourists B.F. Skinner believed that one should focus on the external, observable causes of behaviour rather than trying to unpack the internal thoughts and motivation. While operant behaviourists agree that behaviour may in part be hereditary, they believe that the behaviour of individuals is mainly influenced by the things and people they come into contact with within their daily lives.

Weiss (2014:418) distinguishes between two forms of reinforcement: positive reinforcement and negative reinforcement. Positive reinforcement is favourable events or outcomes the individual experiences following a certain behaviour and may come in the form of praise or rewards. Negative reinforcement on the other hand is characterised by undesired or unpleasant outcomes intended to discourage certain behaviour. Both positive and negative reinforcement are used to influence behaviour.

Therefore, teachers with a behaviourist perspective of SRL will enforce a lot of practice, repetition, praise, and reinforcement in the classroom to develop SRL. Kaplan (2018:572) explains that the behaviourist teacher believes that "practice makes perfect" and "learning is by doing". Learners will be given a lot of exercises to practice in and out of the classroom. Learners who are not able to achieve high scores will be asked to redo the exercises until they do it right.

According to behaviourist theorists, the two factors that play a role in developing and shaping learners' self-regulation are the modelling and reinforcing of learners in their social and physical environments (Zimmerman, 2001:9, Zhou & Brown, 2016:7). Teachers can improve the behaviour of learners by using reinforcement when learners are doing classroom activities until they master

what they are learning. Behaviourist learning gives learners confidence and the ability to achieve their learning outcomes. In order for the learners to become self-regulated, they must be taught how to be in control of their own learning, and they must be devoted, stay focussed and take charge of their own learning so that they will be able to attain their learning outcomes and goals.

In summary, behaviourists regard factors such as rewards, praise, practice and reinforcement, and the motivational and emotional well-being of learners as key considerations when developing SRL. It is further crucial to take the cognitive and affective processes of SRL into cognisance.

2.5.2 Phenomenological theoretical perspective of self-regulated learning

Phenomenological theorists declare that a “learner’s” self-concept is at the heart of their motivation to be self-regulated (Zimmerman & Schunk, 2001:292; Zimmerman, 1990:5, Dorfler & Stierand, 2020:2). The fundamental role of the self-concept in the process of learning is to promote motivation and perseverance and attempt to achieve the desired learning goals during the process of learning. A positive self-concept thus produces positive experiences and feelings that contribute directly to be the motivation to learn and attain self-regulation.

SRL is thus, according to the phenomenological theorists, when individual learners assess the way they view the relevance of the learning task they are performing by using their distinctive capabilities, self-regard, self-identity and goals so that they can attain their learning outcomes . SRL is further influenced by learners’ needs to assess the personal meaning and relevance of the learning tasks by using their strengths, self-esteem, self-identity, and goals in order to attain the desired results (Sadrudin, 2019:216).

The global self-concept of a learner rests on the assumption that they can use their own abilities to regulate their cognition and affect and stay motivated during learning. Learners with a global self-concept in SRL have the necessary knowledge and skills in SRL. Lastly, learners’ perceptions of their personal characteristics, self-esteem, the setting of their personal goals and their methods of achieving their future domains are what shape their global self-concept. On the other hand, a domain self-concept is viewed as learners’ general beliefs about their ability to control their cognition, affect, and motivation in particular learning contents, contexts, or subjects.

The phenomenological view of SRL involves the following three steps: setting goals, planning and selecting strategies, and implementing and evaluating the learning tasks. By knowing what they like, learners can, through self-awareness and self-acceptance, develop interests, needs and values towards achieving and making their personal goals relevant. In planning and selecting strategies, the learners have the opportunity to implement actions by assessing their personal plans and selecting the right strategies to achieve their goals. The learners’ metacognitive skills,

such as self-knowledge, self-monitoring, self-reflection, and self-evaluation, are developed and used to execute the personal planning and selection of the appropriate strategies (Sadrudin, 2019:216).

During the last step, development of self-monitoring, self-reflection and self-evaluation requires a learner to take action in order to achieve the desired goals and control their effects". Further proposed by phenomenologists is that SRL develops as a learner develops their self-concepts and processes such as self-awareness, self-monitoring, and self-evaluation. Learners who possess a global self-concept in SRL take possession of the necessary knowledge and skills required for SRL (Emiliussen, Engelsen, Christiansen & Klausen, 2021:3).

In summary, in the phenomenological view of SRL, learners are aware of the relevance of learning tasks and can set realistic goals to improve their learning (Zimmerman, 1989:9; Zimmerman & Schunk, 1989:9, Sadrudin, 2019:217).

2.5.3 Information processing theoretical perspective of self-regulated learning

Brown (2015:19) defines the information processing perspective theory as a cognitive theory of learning that describes the mind's processing, storage, and retrieval of knowledge. It is the systematic way in which we learn where a learner is likened to a computer that puts information in, saves it and outputs it.

The information processing theory focuses more on the fact that self-regulation entails metacognitive awareness. According to this perspective, learners need to understand what they are required to do, their individual capabilities, and what steps to follow when they are doing the task. Metacognitive awareness also encompasses procedural knowledge. SRL places more emphasis on a problem-solving system whereby the problem is set to reach a goal, and the progress is monitored and checked to find out whether learning is taking place.

According to Schunk (2012:416), the information processing model of SRL consists of four phases, namely the definition of tasks, goals, studying tactics, and adaptations. The first phase necessitates learners to process the information on what they are required to do for the task. This includes the two sources of information, namely task condition and cognitive condition. This means that learners should have the information about the task and their interpretation based on the external environment, and their apprehension will be based on what they recoup from the long-term memory. In the second phase, learners determine the goal and plan to accomplish the task. The third phase involves the relevant learning strategies that learners will use to achieve the outcomes of the task. In the last phase, learners assess their performance and find ways to improve their learning strategies so that they can achieve higher results in the future. Learners

may decide to change their goals or plan; they may also prefer not to attempt that specific task again (Schunk, 2012:416).

In summary, according to Khaled, Riyad and Omar (2016:29), the information processing theory is characterised by processing information and constructing new products or information. Information processing theory addresses how learners “process information they receive using a set of cognitive functions such as perceiving, monitoring, rehearsing and transformation of information. Learners should be able to understand what the task is all about, have the aims and objectives on how they will execute the task, which strategies they will apply, and they should also be able to assess their work. To achieve the aforementioned, learners should have a high degree of perseverance, exhibit purposeful and strategic behaviour, think about their thinking (metacognition), and plan and monitor their personal progress. They should also have a high degree of self-efficacy and be able to control their learning environment.

2.5.4 Volitional theoretical perspective of self-regulated learning

Dorrebacher and Peris (2018:15) define volition as the ability to discourage unacceptable and distracting behaviour so that learners can focus on the learning content and work confidently to achieve their goals. Dorrebacher and Perls (2018:15) state that various models of learning characterise a learner as an individual who is self-determined and can actively create their own learning process. A self-regulated learner is able to set goals and accomplish those goals by monitoring, controlling and altering their behaviour, motivation and cognition accordingly in response to changing environmental actors.

Del Socorro and Rodriguez, (2020:212) states that with SRL, learners put much effort into understanding, manipulating, and making sense of the tasks they are given in class and also monitoring their progress and improving the areas that are lacking. It means that self-regulated learners are volitional in nature, as they commit to their classroom activities willingly without being coerced. Del Socorro and Rodriguez, (2020:212) further explains that the volitional aspect of SRL is those mechanisms that learners implement to focus their full attention and aid progress in the face of environmental and personal obstacles to academic learning. Carmo (1989:112) states that volition is seen as a necessary condition for SRL because it enables learners to protect and control the psychological states such as meta-cognitive, meta-motivational and meta-effective processes.

Carmo (1989:112), however, maintains that students differ in their SRL skills and also in their needs and desire to use SRL. Therefore, SRL is determined by a number of personal and environmental factors, including cognitive ability and environmental conditioning. The same

author further says that SRL should not be regarded as equal to either acquired or natural intelligence or as merely the results of instrumental conditioning or internal motivators such as perceived efficacy. Instead, self-regulation occurs when learners internalise the learning task. For learners to learn in the classroom setting, they should have good concentration when focusing on the academic task and overcome many potential distractors. Distractors in the classroom can be environmental factors such as: a learning task that is not appropriate for the learners, distractions by fellow classmates, personal factors such as confusion, losing interest in the task, and changing goals (Duckworth & Seligman, 2006:5).

Baez-Estradas and Alonso-Tapia (2017:29) add that students' effort to learn does not only depend on their motivation but also on the way they self-regulate their own activities when approaching a learning task. This means that in the development of SRL, according to Baez-Estradas and Alonso-Tapia (2017:29), learners should know which strategies they should apply, how to control and regulate their own motivation by focusing on what they are trying to learn and be able to cope with negative emotions that may arise when facing challenging tasks that might prevent them from reaching their goals.

Duckworth and Seligman (2006:5) believe that self-regulated teaching strategies according to volitional theory should include strategies that allow for the self-regulation of emotions, which can help students to conquer their fear of making mistakes control their emotional states, anxiety and annoyances, and generate positive thoughts. If learners focus their persistent attention, interest and effort on the task, their performance will improve.

Even though Zimmerman (2008:167) writes from a social cognitive perspective of SRL, in his definition of self-regulated learners as metacognitive, motivationally and behaviourally active participants in their own learning process, he considers volitional aspects, stating that SRL research has not emphasised the volitional abilities that can also contribute to academic achievement.

In summary, when learners have the motivation required to carry out specific tasks, volitional processes will work to sustain their functions. The way learners do the task in class is supported and encouraged by motivational factors, and volition intensifies the intention to learn. Volition theorists have identified the key process in self-regulation as volitional strategies aimed at self-control. Volitional theory is classified into six categories, of which three are grouped under the name 'cognition of control' namely, attention control, codification control, and information elaboration control. The last three categories are motivational control, emotional control, and environmental control (Zimmerman, 1989:112).

2.5.5 Cognitive constructivist perspective

Schunk (2012:430) and Shah, (2019:5) states that the cognitive theory of self-regulation in constructivist theory is more focused on the way learners take charge of their own learning by using their cognitive skills and motivation. Teachers should be able to develop the learners' thinking and cognitive skills by exposing them to activities that reflect the real-life situations and that they are familiar with from their environments before introducing new concepts. Learners should be given a chance to express their views and display their capabilities so that learning can be meaningful and interesting in the classroom.

According to Khan (2019:12456), the constructivist theory of SRL involves being able to correlate the thinking, cognitive, and memory skills of the learners. The knowledge that learners bring from home like their language and culture also play an important role in enhancing their SRL skills because they serve as a foundation for what they learn in the classroom. Learners use their prior knowledge from their environment as the basis of acquiring their personal self-regulatory systems. The important motivational variables that affect self-regulation are goal setting, self-efficacy, and outcome expectations, and as such these variables are related. SRL plays a crucial role in motivating learners to set new goals and continue learning in order to achieve the results that they desire. Values, goal orientations, self-schemas and seeking help are other motivational variables that are involved in SRL. All these variables collectively help to determine how achievement motivated behaviour is instilled and maintained, as learners are actively involved in choosing the content, location, timing, and learning outcomes.

Olusegun (2015:67) explains that the constructivist's view of learning can point towards several different teaching practices in the classroom. In the most general sense, it means encouraging learners to use active techniques like experiments, real-world problem solving to create more knowledge, and then to reflect on and talk about what they are doing and how their understanding is changing.

In summary, constructivism, a classroom environment created to promote collaboration and exchange ideas, promotes social and communication skills. Learners must develop the ability to negotiate with others and evaluate their contributions in a way that is socially acceptable. SRL skills are one of the characteristics required for learners who will take part in constructive practices. A SRL concept can be defined as an efficient and constructivist process in which learners take part in their own learning motivationally, cognitively, and meta-cognitively by setting targets, monitoring their learning, and controlling their motivation and cognition (Erdem, Ozgur, Oskay & Sen, 2014:2).

2.5.6 Vygotskian or sociocultural theoretical perspective

Newman, (2018:6) explains that the Vygotskian theory of development gives a detailed explanation of self-regulation and that Vygotsky constructivist theory of human development is much related to self-regulation given their common premises that people and their cultural environments form an interrelating social system.

Woolfolk (2016:384) also mentions that socialisation and, cultural tools and activities shape the development and learning of individuals. The interaction between people and their environments enables children to learn from them; as such learning is made possible when children learn the essential tools of communication, which are language, symbols, and signs, through which children acquire competence. Self-regulation is achieved by using the tools of communication (language, symbols, and signs) in the social environment; this further leads to learners developing higher levels of cognition functions such as self-regulation and problem solving.

According to Schunk (2012:428) and Newman, (2018:6), the Vygotskian perspective of SRL involves the coordination of mental processes such as memory, planning, synthesis, and evaluation. These mental processes do not function apart from the context in which they are formed. The development of learners' SRL skills is thus also reflected by the values that learners developed from their cultures, homes, communities, and the environment at school. Again, learners learn to self-regulate by controlling their own actions. Woolfolk (2016:384) adds that learners can reason, act, and participate using cultural tools when taking part in a range of activities within and around the school. Learners can hereby learn new strategies and gain new knowledge. Woolfolk (2016:348) emphasises that self-regulation involves the progression from responding to the commands of others to the use of speech and other tools to plan, monitor and direct one's activities.

Mutekwe (2018:61) further says that when learners engage with other people in what is referred to as the zone of proximal development (ZPD), they progress from behaviour that is regulated by others to being able to regulate their own behaviour, which is essentially SRL. Mutekwe (2018:61) explains that learners' cognitive skills are developed in part by their cultures; that is, using values, tools and practices gained from their cultures (e.g., language, maps, computers, or music) to attain their goals. Cultural activities can include reading, writing, weaving, dancing, and other engagements that learners learn from the generation before them, enabling them to generate new practices, solve problems, and enhance their cognitive skills.

2.5.7 Social cognitive theoretical perspective of self-regulated learning

Schunk and De Benedetto (2019:2) and Woolfolk (2013:424) discuss that the social cognitive theory began with the social learning theory, from which the theory was extended by including cognitive factors such as beliefs, expectations, and perceptions of the self. Jerkins, Hall & Raeside (2018:3) state that human behaviour is determined by the interaction of the three influences: personal, behavioural, and environmental factors. Personal factors include cognitive and affective factors such as memory, attention, anxiety, and self-esteem. Behavioural factors govern in individual's actions driven by unique elements such as values and personality. Environmental factors include both social and physical factors such as culture and gender. All three factors influence an individual's attempts to reach goals in a self-regulated manner.

Self-regulation as a concept emerged from Bandura's (1986) initial work on self-control (Zhou & Brown, 2015:32). In this early research, three classes of covert cognitive consequences emerged that sustained self-control. These were intrinsic, sensory, and evaluative consequences. For example, a student may be motivated to practise a skill in drawing during an art lesson (sensory consequence) by the hope of pursuing a professional art career (an anticipatory consequence) or by self-praise or critique (evaluative consequence).

Zhou and Brown, (2015:32) explain that evaluative consequences were the biggest sustaining factors of self-control because they do stem from the reactions of external agents but rather one's own standards of conduct. According to social cognitive theory, young children learn regulation through external means, such as parental modelling or assistance, and gradually assume the personal control and regulation of these functions.

Jerkins, Hall and Raeside, (2018:3) also agree with Zhou and Brown, (2015:32) when discussing Bandura's social cognitive theory (1986; 1997). The theory is based on the assumption that people are purposeful, goal directed beings who are primarily motivated through their beliefs or self-efficacy and outcome expectations stemming from the actions within a specific social context. Jerkins, Hall and Raeside, (2018:3) believe that the adequate use of SRL strategies help learners to achieve the goals they have set.

Social cognitive theory places emphasis on individuals' motivation, self-efficacy beliefs and responsibility in learning. Self-efficacy is a distinctive cognitive process in human motivation and is a person's purposive response to the prospect of their own possible behaviour. Moreover, it involves estimating success when performing a particular task. One's motivation to reach their goal is sustained by perpetual beliefs in self-efficacy, an ever-present in decision making as one develops and employs a learning strategy (Sasai, 2017:57).

In summary, the social cognitive theoretical perspective of SRL emphasises modelling and prompting as the feature tool in instruction to promote SRL. Social context is central in framing and influencing students' or learners' self-regulation skills, and the underlying goal is the individual's self-regulation of cognition, metacognition, behaviour, and motivation. Social and the self are viewed as distinct entities whereby social influences shape the development of SRL by defining the conditions for tasks and providing standards, feedback, and modelling. From the social cognitive perspective, self-regulation refers to a process, in which the contextual and interpersonal feedback the individual receives affects their acquisition of skills, and how an individual's efficacy influences their motivation to achieve goals. Learners interpret and reorganise ideas actively while opportunities for learning are arranged by an instructor or present themselves through social influences. In this instance, learners are active participants who strive to take control of their learning while being influenced by their own idiosyncrasies as well as social factors (Hadwin & Oshige, 2016:243-244).

2.6 MODELS OF SELF-REGULATED LEARNING

Models of SRL explain the attempts used to understand how learners can perform so that they become actively involved in managing their own academic performance. In this chapter, the models that are presented are Boekaerts' model, Borkowski's (1996) process-oriented model of metacognition, Winne and Hadwin's (1998) four-stage model of SRL, and Zimmerman and Moylan's (2009) social cognitive model of SRL. The social cognitive model of SRL is discussed in greater detail than the other models because it forms the theoretical framework of this research study and aided the researcher with data collection and analysis.

2.6.1 Boekaerts' model (1999)

Boekaerts two models of SRL. The first model is the structural model, which is divided into six components (Boekaerts, 1999): "domain-specific knowledge and skills, cognitive strategies, cognitive self-regulatory strategies, motivational beliefs and theory of mind, motivation strategies, and motivational self-regulatory strategies". These six components are organised around what Boekaerts (1999) considered the two basic mechanisms: cognitive and affective (motivational self-regulation). The structural model has been used to acquire a better understanding of the domain-specific components of SRL, train teachers to construct new measurement tools for research, and design intervention programmes (Panadero, 2017:422).

Boekaerts' second model of SRL is the adaptable learning model. (Panadero, 2017:422), granted a theoretical setting for understanding the findings from diverse psychological frameworks that include motivation, emotion, metacognition, self-concept, and learning. The model describes two

parallel processing modes: a mastery or learning mode and a coping or well-being mode. Bembenuddy (2015:9) also mentions that Boekaerts presented an extended version of this model that pointed out the different functions of self-regulation during the learning process namely increasing one's knowledge and skills to protect oneself during engagement in the activity and preventing one from self-endangerment and harm. Evidently, positive, and negative emotions play a key role in SRL.

Boekaerts' dual processing SRL model encourages learners to focus on their learning content so that they can achieve their goals. Boekaerts' model of SRL focuses on a good setting where learners should complete their learning task by paying specific attention to the goals they have set and wanted to achieve (Bembenuddy, 2015:9).

Boekaerts (1999:410-411) states that in the dual processing model, the learners' appraisals are crucial in determining which pathway the students will activate toward their goal. Goals are viewed as knowledge structures that guide behaviour; for example, a task that is perceived as a threat to their well-being will trigger, negative cognition and emotions in learners. In response, they will build strategies to protect the ego from harm and thereby learners move to a pathway to restore well-being instead of being on a pathway of mastery and growth. On the other hand, if the task is consistent with the learners' goals and needs, they will be interested in expanding their capabilities and, generating positive cognitions and emotions, thereby moving on to a pathway of mastery or growth.

According to Boekaerts (1999), self-regulation has three purposes, namely expanding knowledge and skills; protecting the self against threats and preventing a loss of resources that will affect one's well-being outside of reasonable bounds; and protecting one's commitments by using activities that re-route one's attention from a pathway of wellbeing to a pathway of mastery and growth. Learners who have begun a task in the mastery or growth pathway may revert to a pathway of restoring well-being if they suspect that they might not be successful in a task because of uncertainties (Panadero, 2017:422).

2.6.2 Borkowski's process-oriented model of metacognition

Borkowski, Chan and Mothukrishna (2000:3) propose that the process-oriented model of metacognition is very useful for understanding the ways in which strategies develop and the reasons why their uses are generalised over time and in a setting. Strategy-based learning produces a high level of performance in learners and is an integral aspect of information processing. A good information processing model is successful when integrated with the

metacognitive system's main components, namely cognitive, motivational, personal, and situational characteristics.

Borkowski *et al.* (2000:4) further suggest that the major components of metacognition are developed through a well-planned classroom environment and learners' positive experiences in their homes and communities, which continue to have an effect throughout their lifetime. The characteristic of a good information processor includes knowledge of a large variety of useful strategies, understanding why, where and when those strategies are important, and selecting and monitoring strategies wisely. It is essential that learners understand how to analyse a task, monitor the progress of the task, and apply more strategies where necessary. Equally important is that learners work hard when analysing a task to select strategies for completing the task at hand rather than being distracted by their peers. This is regarded as an important motivational process in enhancing self-regulation processes.

Metacognition plays an important role in education because with it learners develop, plan, monitor, and evaluate their progress and are more involved in the learning process. Learners with effective metacognitive skills are more strategic and likely to use problem-solving strategies and perform well academically. Learners with high academic achievement usually demonstrate a high level of metacognitive awareness when compared to students with poor metacognitive skills (Puustinen & Pulkkinen, 2001:561).

2.6.3 Pintrich's general framework for self-regulated learning

Pintrich (2000:466) and Peel, (2019:26) discuss three key characteristics or components of SRL. The first of which is when students are able to monitor their own behaviour, motivation and cognition and then regulate and adjust their behaviour to meet the demands of the situation. The second important component of SRL is that learners identify the goal they are attempting to accomplish, for which they provide the standard by which they can monitor and judge their performance and make adjustments to their behaviour, motivation, affect, and cognition. The third important characteristic of SRL is that individual learners, without the help of teachers or parents, must be in control of their actions, or become self-regulators. This is when students control various cognitive strategies for learning, such as the use of deep processing strategies, which results in better learning and improved performance.

Pintrich's (2000) model for SRL comprises four phases: the forethought, planning and activation phase, the monitoring, control and reaction phase, and the reflection phase. Each of the phases has different areas for regulation, i.e. that of cognition, motivation/affect, behaviour, and context. According to Jakesova and Kalenda (2015:179), during the forethought, planning and activation

phase, learners target setting goals and are motivated by goal-oriented adaptation. The learners use their prior knowledge to activate their metacognitive knowledge, and their motivation is developed when they can easily focus on the learning activity and evaluate their progress.

During the monitoring phase, learners are aware of their metacognition and when to monitor their efforts and allocate time for a task. They are also able to know when they need assistance and are able to monitor the complexity of a task and identify what strategies to use to complete the task. In the control phase, learners select and adapt to the cognitive strategies for learning and thinking. Learners also select and adapt their strategies for managing motivation and affect. In the reaction and reflection phase, learners evaluate the task they have been completing, check their strengths and weaknesses, and come up with strategies on how they can improve (Jakesova & Kalenda, 2015:179).

Pintrich believed that self-regulatory activities reconcile relations between learners and their environment and influence learner achievement. Although Pintrich's model specifies the possible range of possibilities, none of these is mandatory. The four phases of Pintrich's model does not occur in a specific order but rather at any time during the time that students are engaged in a task. There are situations where learners can be engaged in all the phases but at times not all of them (Schunk, 2005:86).

According to Puustinen and Pulkkinen (2001:275), when learners control their own learning activities, they select and adapt strategies so that they can manage learning, thinking, motivation, and affect for regulation of effort and task negotiation. When learners reflect on the task, it involves cognitive judgements, affective reactions, decision making, and task and context evaluation. The self-reflection phase involves the processes of self-satisfaction and adaptive inference. Self-satisfaction is the result of learners being satisfied with their performance, which in turn influences self-motivation. Adaptive inferences, on the other hand, are based on what learners decide to do to change their self-regulatory strategies, which may include changing their goals and using different approaches towards the task.

2.6.4 Winne and Hadwin's (1998) model of self-regulated learning

The information processing theory heavily influenced Winne and Hadwin's model, which investigates, the cognitive and metacognitive aspects of SRL in greater detail than the other SRL models. It has a strong metacognitive perspective that recognises self-regulated learners as active and managing their own learning by means of monitoring and the use of, mainly metacognitive strategies. The model affirms the goal-driven nature of SRL and the effects of self-regulation on motivation. The concept of internal feedback also has a major role in SRL.

According to the model, studying is influenced by SRL across four interconnected phases, namely the task definition phase, whereby learners generate an understanding of the task to be performed; the goal-setting and planning phase, where learners generate goals and devise plans to achieve them; the phase of accomplishing study methods and strategies, which entails taking the actions that are to reach those goals; and the phase of metacognitive acclimating studying, which occurs once the main processes are completed and the learner decides to make long-term changes in the future. Winne and Hadwin add that mistakes can be detected in the last phase with the objective of correcting them.

SRL expands five different features of tasks that can take place in four phases. These five features are analysed using COPES, which was used for the first time in Winne (1998:289). COPES stands for Conditions: resources available to a person and the constraints inherent to a task or environment (e.g. context, time); Operations: the cognitive process, tactics and strategies used by learners that are referred to as SMART goals (searching, monitoring, assembling, rehearsing and translating) (Winne,1996) (e.g. explain how to perform a task); Products: the information created by operations (e.g. new knowledge); Evaluations: feedback about the fit between products and standards that are either generated internally by the learner or provided by external sources (e.g. teacher or peer feedback); and Standards: criteria against which product are monitored (e.g. assessment criteria).

Winne's (1996) model explains in detail how learners' cognitive processing functions while planning, performing, and evaluating a task. An essential aspect in this regard is the use of criteria and standards to set goals, monitor, and evaluate progress, aspects which are coordinated and indicate that SRL is goal-driven in nature, a point shared by the research of Pintrich (2003) and Wolters (2003) concerning the regulation of motivation (Panadero, 2017:1).

2.7 ZIMMERMAN AND MOYLAN'S (2009) CYCLICAL PHASES MODEL

This section focuses on the SRL model considered as the most influential for this study, namely that by Zimmerman and Moylan (2009), which states that there are three cyclical phases to SRL. These phases are the forethought phase, the performance or volitional control phase, and the self-reflection phase. The use of adequate SRL strategies is a fundamental aspect that will assist primary school teachers to develop and encourage SRL in learners.

2.7.1 Forethought phase

Panadero (2017:2) and Zimmerman and Moylan (2009) explain that the forethought phase is the phase where learners approach the task, plan and set goals on what they are expected to do and come up with strategies that they will use to reach the goal. It is also in this phase where learners

build motivation and confidence in approaching the task and overcoming all the obstacles they might encounter. Sasai (2017:56) mentions that the forethought phase precedes a learning process, and it is regarded as a powerful aspect of learning because it involves learners' beliefs and motivations to learn and set goals for their own learning. The important elements of the forethought phase are goal setting, strategic planning, self-efficacy, and outcome expectation and task-value or interest.

Zimmerman and Moylan (2009:299) also point out that during the forethought phase, students analyse, plan and become actively involved in learning, are self-aware, and can control their underlying motivations. Learners in this phase examine all the requirements of the task, assess the level of difficulty and the effort required, and decide on what steps to follow to reach the outcomes. Moreover, when learners are highly self-regulated, they are able to set small proximal goals that lead to larger, more distant goals. Furthermore, learners are motivated intrinsically and can plan and approach learning by selecting suitable learning strategies that are in line with the task. If they see that their selected learning strategies are not working, they adapt and choose new learning strategies.

2.7.2 Performance or volitional control phase

The performance or volitional control phase involves processes of self-control and metacognition. This is the phase where students carry out the task while keeping track of their progress, and they use a number of control strategies to assist them in being cognitively involved and motivated to complete the task (Zimmerman & Moylan).2009:300).

Besides control strategies, (Zimmerman & Moylan, 2009:300) and Joseph- Edwards, (2019:7) add that in the performance or volitional control phase, learners also make use of numerous learning strategies to complete their learning tasks, keep track of the effectiveness of the teaching strategies, and sustain motivation so that they can reach their goals. Self-regulated learners tend to focus on the outcomes set and draw their attention to the task at hand and self-observation.

The performance phase consists of three sub-phases self-control and self-instruction and C) self-observation. The sub-phases are discussed below:

2.7.2.1 Self-control

In the first sub-phase, self-control, paying attention, and learning strategies are self-control processes that assist learners in staying focussed on the task at hand (Schunk & Zimmerman, 2007:10). When learners apply study methods or strategies and adapt them depending on the outcomes of the task, they become successful (Zimmerman & Moylan, 2009:302, Joseph-

Edwards, 2019:8). Self-regulated learners should demonstrate the following sub-processes of self-control in a learning task:

(i) Task strategies

Zimmerman (2015:92, Nilson, 2013:3) defines task strategies as systematic processes where specific task components are addressed. This is related to solving problems such as those in mathematics, where different steps are used to find a solution. Learners should have the ability to use different strategies and follow certain steps in order to complete the task. For example, when learners are conducting a scientific experiment, they start with a plan on how they will conduct an investigation, list the materials and resources to use, and use practical methods and observation skills to conduct an investigation so that they can reach a conclusion/ get the results of the experiment.

(ii) Imagery

Imagery is a process where learners use mental pictures or images to assist in organising information, and this intensifies learning and improves memorisation skills (Harding, Nibali, English, Griffin, Graham & Zhang 2018:8).

2.7.2.2 Self-instruction

With the second sub-phase, self-instruction, learners stay on track of what they are learning, stay focussed and pay attention to their plan to perform the task (Zimmerman, 1990:12, Lear, Li & Prentice 2016:21). For example, when performing a technological process, learners follow the technological process steps of investigating, designing, making, evaluating and communicating. This helps them stay focused because they know that to achieve the outcomes of the learning task, they need to follow those steps. Self-regulated learners should demonstrate the following sub-processes of self-instruction:

(i) Time management

Zimmerman and Moylan (2011:142) declare that time management is the most important step toward ensuring that learners complete a given task. Learners should be skilled in time management strategies, setting specific task goals and, time to spend on tasks and monitoring the progress so that they can accomplish those goals. Harding *et al.* (2018:9) emphasise that learners who manage their time effectively by spending more time on studying and using their self-regulatory processes effectively will experience positive outcomes and achieve their goals.

Xu, (2010:39) state that learners who spend most of the time studying and using their self-regulatory skills effectively can produce good results when performing a task. On the other hand, those who do not manage their time effectively do not perform well in a learning task, negatively affecting their outcome expectations and motivation because they may feel capable.

(ii) Environmental structuring

Harding *et al.* (2018:9) explain that if learners who are self-regulated can easily adapt to the environment of teaching and learning and maintain complete concentration. Moreover, self-regulated learners are disciplined and are able to monitor their performance and do away with all the internal and external factors that may distract them. They know how to choose adequate learning environments where they can feel comfortable and are able to concentrate on the learning task.

(iii) Help-seeking

Thomas and Tagler (2019:2) state that seeking help when confronted with academic difficulties is an adaptive SRL strategy that brings about positive academic outcomes. Learners who are self-regulated are confident and they accept the responsibility when they do not understand to ask for help or advice when deemed necessary. In their study, Thomas and Tagler (2019:2) conclude that when learners seek help or are provided with access to extra help, their attitudes improve, and this leads to increased academic performance and development of important academic skills.

Seeking help also leads to improvement of learners' self-regulation skills and are always eager to learn and ask for help from their peers who are competent and their teachers. Learners who are reluctant to seek help perform low and fail to admit their weaknesses, which lower their self-esteem (Zimmerman, 2002:65).

2.7.2.3 Self-observation

A learner who is self-observant focuses mainly on his/her behaviour and how it influences learning. For example, a learner can focus on the content of the task so that they can gain an understanding of the task rather than only knowing how long or short the task is. Self-observation is characterised by two key processes: self-monitoring (metacognition) and self-recording (Schunk & Zimmerman, 2007:10, Tigist, 2013:37). These processes are explained below.

(i) Metacognitive self-monitoring

When students use metacognition, they think about their thinking as they learn. This is a very important skill because it enables students to self-monitor and track their performance and learning outcomes (Schunk & Zimmerman, 2007:10, Tigist, 2013:37). During self-monitoring learners make observations about their own progress, reflect on how they have progressed, evaluate their strengths and weaknesses, and decide on what teaching strategies they need to follow to accomplish the outcomes of the task. Observation occurs once learners have fully gained their cognitive, motivational and; time management goals and determined; the learning context and how learning should take place (Zimmerman, 2011:42).

(ii) Self-recording

Zimmerman (2011:42) and Frederico, Ezequiel and Lourenco, (2016:17) state that self-recording is when a learner has acquired the skill of recording the outcomes of their learning progress; successes and failures. This enables learners to be informed about how their performance and how they can improve. Self-recording also accelerates and enhances self-control, because they give full details on how learning is taking place, where and with whom the learning is taking place.

In the next section, the third phase of Zimmerman and Moylan's (2009) cyclical model is discussed.

2.7.3 Self-reflection phase

Zimmerman (2011:42) describes self-reflection as the way in which learners respond to the outcomes of the task, and it involves self-judgement and adaptive self-reactions. Panadero (2017:12) also defines the self-reflection phase as the stage where students assess the outcomes of the task, how they performed, and whether they have succeeded or failed. The outcomes can also affect their emotions positively or negatively, depending on how they have performed in the learning task. According to Zimmerman (2011:142, Joseph –Edwards, 2019:8), the self-reflection phase includes the following sub-processes:

2.7.3.1 Self-judgement

According to Harding *et al.* (2018:10), self-judgement is about what individuals think about themselves and the meaning they attach to those thoughts. Zimmerman (2011:143, Alvi, Iqbal, Masood & Batool 2016:43) describes self-judgement as one's ability to use personal levels one has set according to which to assess their performance. In the self-reflection phase, self-regulated learners possess the skill to accept whether they have succeeded or failed and gather information and the motivation to correct their errors. Self-judgement includes the following processes:

(i) Self-evaluation

Zimmerman (2013:140) explains that self-evaluation is when the information that is self-monitored is compared to the goal that one wants to achieve. Students focus on the following aspects when they are doing self-evaluation: the criteria they use to master concepts, their previous performance, normative standards and collaborative criteria. (Zimmerman, 2013:141, Tigist, 2013:39) further points out that during the self-evaluation phase, learners assess how they have performed academically, monitor their strengths and weaknesses and find strategies on how they can improve. Their planning and the goals they have set in the forethought phase determine how they assess themselves. Harding *et al.* (2018:11) also emphasise that skilful self-regulated learners are willing to seek feedback and self-evaluate, can make an outcome of their performance, they can accept failure and find ways of correcting their mistakes. Learners make casual attributions using their self-evaluation of a task as a base.

(ii) Causal attribution

Casual attributions as a learner's ability to explain the possible cause (s) of their failure or success in a task. As such casual attribution can impact learners' motivation and how they will respond to the next task they must perform (Panadero (2017:2, Zimmerman & Moylan, 2009:304).

(iii) Self-reaction

Self-reaction as the feelings of satisfaction or dissatisfaction stemming from the evaluative judgement of one's performance. It thus encompasses how learners react after having evaluated the outcomes of the learning process (Zimmerman (2011:143, Alvi *et al.* .2016:43).

(iv) Self-satisfaction or effect

Zimmerman (2011:144) define self-satisfaction as the positive emotional and cognitive responses of learners to self-judgement when they feel gratified because of what they have achieved in the learning task. Harding *et al.* (2018:10) explain that satisfaction is determined by the extent to which learners have motivated themselves intrinsically, which in effect also leads to self-respect and self-confidence because of their excellent performance in the learning task. Harding *et al.* (2018:10) state that skilful self-regulated learners are intrinsically motivated, which is more beneficial and important (extrinsic motivation).

(v) Adaptive or defensive behaviour

Panadero (2017:2) explains that some learners who do not perform well in a task, may start to develop feelings of dissatisfaction, and end up displaying adaptive or defensive behaviour. Adaptive inferences will cause learners to find a new way or strategy that will help them improve their self-regulatory skills (Harding *et al.*, 2018:10). Panadero (2017:3) also stresses that learners

choose adaptive behaviour to improve and repeat the task using different learning strategies to attain the learning outcomes.

Defensive behaviour involves ways in which learners justify their poor performance in the learning task so that they can achieve a sense of self-justification, although this strategy only helps the learner to “hide behind their problems” (Harding *et al.*, 2018:10). Learners with defensive self-reactions make an effort to “protect” themselves and avoid repeating a task. Defensive self-reactions typically stem from feelings of helplessness, procrastination, or task avoidance by making excuses (Zimmerman & Moylan, 2009:304, Joseph-Edwards, 2019:9).

In summary, Zimmerman and Moylan’s cyclical model (2009) of SRL covers cognitive, behavioural and motivational aspects and explain in detail the relationship between motivation and self-regulation. The three phases of SRL are very important in a learning situation because they affect students’ behaviour and play a crucial role in academic achievement. Students with high levels of self-efficacy and motivation and who take their tasks seriously can improve their success in attaining learning outcomes because they adapt their learning strategies (Panadero & Alonso-Tapia, 2014:458; Sasai, 2017:57).

The following paragraph gives a detailed discussion of the constructivist teaching approaches that can also aid in the development of SRL skills.

2.8 CONSTRUCTIVIST TEACHING APPROACHES THAT CAN AID IN THE DEVELOPMENT OF SELF-REGULATED LEARNING SKILLS

Constructivist teaching, according to Wong and Kerr (2009:40), is underpinned by the belief that learning occurs when learners are actively involved in a process of the construction of meaning and knowledge construction instead of passively receiving information from the teacher (*ibid.*). Learners are thus the creators of meaning and knowledge. Wong and Kerr’s (2009:40) theory also avers that, just as they have different personalities, learners also have different learning styles, and therefore they cannot be treated the same. This means that, since learners learn through observation and human interaction, they should be allowed to learn with peers and engage in group work. Social learning assists learners in developing ideas and skills that can best be developed through interaction with others (Wong & Kerr, 2009:40).

Wong and Kerr (2009:40) further explain that constructivism acknowledges the importance of social and cultural influences on intellectual development. This, in turn, affects how children learn from each other. Each learner brings with them their knowledge, opinions and experiences from their individual, social and cultural backgrounds, which will have an influence what the group brings as a whole. In addition, Bansode and Bantankar (2016:56) maintain that people learn only

when they construct meaning for themselves, which is a constructivist teaching approach that is learner-centred in teaching. Learning is as much a social process as it is an individual process; an individual's learning does not occur in a vacuum. Learning involves the personal, mental construction of knowledge by individuals who subscribe to the structures they have conceptualised because these are viable to them as individuals based on their experiences with various domains of life and people. Therefore, knowledge construction is a social and cultural process that is mediated by language.

Bansode and Bantankar (2016:56) further point out that the primary goal of the constructivist approach to learning is to facilitate new ways of attaining and retaining knowledge. Constructivist teaching provides learning environments that are more effective than traditional instruction and it provides instruction that promotes academic achievement because it increases learners' conceptual understanding, develops their thinking skills, and enhances their interest in the subjects they are studying at school. Constructivist teaching is based on cognitive learning, and it is the result of the mental construction of situation (Bansode & Bantankar, 2016:56).

Schunk and Zimmerman (2003:63) maintain that learners are the ones who decide on how to learn and they actually need to take responsibility for their own learning so that they can become effective learners. Constructivism views learners as active agents in the process of knowledge acquisition. Constructivism shares the views of four core features of constructs namely, knowledge construction, cooperative learning, SRL and use of meaningful, authentic problems in education.

Knowledge construct refers to the use of prior knowledge when interpreting new information. Cooperative learning is when learners interact and work together as a team when they are busy trying to acquire meaning out of what they are learning about. SRL involves aspects like goal setting, metacognition, and self-assessment and it is regarded as the key to successful learning. A meaningful problem is one that is complex, meaningful and makes learning situations more similar to real life and professional situations, which promote transfer of knowledge (Wong and Kerr, 2009:40).

2.9 THE LINK BETWEEN CONSTRUCTIVIST TEACHING APPROACHES AND SELF-REGULATED LEARNING

Wong and Kerr (2009:41) point out that constructivist theory involves the fact that teaching and learning environment should begin with knowledge, attitudes and interests that learners possess, and that teaching should be designed in a way that allows students, using their own experiences, to interact with learning material in order to construct their own understanding. Constructivism is

the process whereby learners create new information and meanings within the context of their prior or existing knowledge.

Wong and Kerr (2000:41 in Paris & Byrnes, 1989) state that six principles of learning that people have as intrinsic motivation to seek information, an urge to have an understanding that goes beyond the information given, mental representations that change with a person's development, levels of understanding that are progressively refined as time goes by, developmental constraints on learning and reflection and reconstruction to stimulate learning. These principles provide a framework for SRL skills mentioned by Zimmerman and Moylan theory (2009) namely, self-evaluation, organising and transforming, goal setting and planning, seeking information, keeping records and monitoring, environmental structuring, self-consequence, rehearsing and memorising, seeking social assistance and reviewing records (Effeney *et al.*, 2013:62).

SRL is a proactive process where individuals are expected to organise and manage their thoughts, emotions, behaviours, and environment to achieve the learning objectives. SRL is an active and constructive process where learners set their learning goals and then strive to monitor, regulate, and control their cognition, motivation and behaviour according to the goals they have set and contextual factors of the environment. SRL promotes learners to be competent and construct their own knowledge and it promotes motivation and achievement. The constructivist theory of SRL encourages learners to develop knowledge, skills, and attitudes that can be transferred from one learning situation where information has been acquired to leisure and work-related context (Cetin, 2017:30).

Erdem, Ozgur, Oskay & Sen (2014:26) explain that constructivist learning theory encourages active learner participation and learners to take responsibility for their own learning by participating actively in the learning process. Likewise, SRL emphasises the importance of learners taking responsibility for their own learning by participating in their own learning cognitively and metacognitively, by setting goals or targets, monitoring their learning and maintaining their motivation to complete academic tasks (Erdem *et al.*, 2014:26).

In summary, SRL should not be regarded as only a cognitive skill like intelligence or an academic skill like proficiency or studying, it is a process where individuals manage themselves by turning intellectual skills into academic skills. It is a process where learners set targets for their learning, attempting to control, regulate, and observe their cognitions, behaviours, and motivations to reach their goals.

2.10 THE ROLE OF TEACHERS' BELIEFS AND KNOWLEDGE IN THE DEVELOPMENT OF SELF-REGULATED LEARNING

Dignath and Van der Werf (2016:2) state that the role of teachers is to support and teach learners to acquire SRL skills and to have the confidence to apply those SRL skills in their daily activities. Teachers should structure the learning situation in a way that students have an opportunity to discover their potential and the strategic procedures themselves. This implies that teachers play a crucial role in developing SRL skills in the classroom.

According to Dignath et al. (2016:3), beliefs define attitudes and subjective norms, which make it difficult to drawback teachers' independent chance from their perspective on how teaching and learning, should occur. Knowledge is based on unbiased facts, while beliefs are emotional and include certain kind of judgement or evaluation. This means that teachers can acquire new knowledge on the subject matter they are teaching, but their beliefs about education and life generally will influence whether they will apply and practise the new knowledge they have gained.

Ganada & Boruchovitch (2018:2) and Dignath *et al.* (2016:3) agree that defining teachers' beliefs on SRL is a complex construction of knowledge that involves some attitudes of teacher beliefs. On the one hand, this includes how teachers think about learning in general. Teaching practice has taught teachers that learning can either be the process of transmission of knowledge or the process of constructing knowledge. Beliefs on fostering self-regulation also include beliefs on how to instruct and how to foster strategy use that goes beyond general pedagogical beliefs, for example, in terms of beliefs of how many strategies to instruct at a time, or how to integrate instruction of a certain strategy into the content of the lesson as well as measures taken to support the transfer of strategy use to another context (Ganada & Boruchovitch, 2018:2).

Teachers who believe that learning is a process of the transmission of knowledge always believe that all knowledge that learners require should be taught by the teachers and learners should absorb the learning content as it is. Learners are passively involved in the process of learning. Those teachers regard learners as empty vessels and everything in class should come from the teacher. Hardey (2018:6) maintains that traditionally and individualised teaching and learning has been the main strategy that teachers use where they plan and implement classroom strategies that students need to implement.

Hardey (2018:6) says further that SRL shifts the traditional method of teaching because it requires the learner to be active participants in learning. That is, learners become responsible for negotiating outcomes, approaches, and strategies for achieving these outcomes. The only way that learners can acquire the skills required for responsible active learning is through teacher

instruction and encouragement, as well as instilling the practices of self-regulation. SRL is regarded as life-long learning; it is a constant goal for both teachers and learners. Teachers who believe that learning is a process of constructing knowledge believe that learning occurs as learners are actively involved in a process of meaning and construction of knowledge as opposed to passively receiving information.

Geduld (2019:61) states that knowledge of SRL, as well as their perceptions and beliefs about, and their teaching behaviour in relation to developing SRL, indicates that the concepts of SRL are vague and unclear for many of them, despite their positive beliefs regarding SRL, teachers especially the inexperienced ones, do not have a broad knowledge of how to foster SRL. Teachers generally accept the important role they play in learners' self-regulatory activities; they often do not know how to teach self-regulatory skills or how to enhance learners' use of self-regulation principles in the classroom. Nilson (2013:9) also explains that lack of knowledge of self-regulatory skills is caused by factors like teachers' educational beliefs as well as their educational programme that focuses more on content-area knowledge and mastery of pedagogical methods, less focus is placed on principles of learning, developmental and motivation.

"Teachers should give learners choices, opportunities to control challenges and to evaluate their own and peers' learning, along with instrumental support, scaffolding, feedback and evaluation that is nonthreatening and mastery oriented" (Geduld, 2019:72 as cited in Schunk, 2014).

2.11 TEACHERS' ROLE IN SUPPORTING AND PROMOTING SELF-REGULATED TEACHING STRATEGIES

Teachers need to support and promote teaching strategies that will support SRL in learners. Buzza and Alinotte (2013:61) state that teachers need to apply scientific external events such as opportunities for choice, self-direction and optimal levels of challenge to enhance learners' intrinsic motivation and support their sense of autonomy and competence. This means that teachers should encourage learners to work independently, bring their own thoughts and ideas to the lesson, and have the freedom to find ways to enhance their understanding of the lesson. For example, when presenting a lesson in class, teachers can challenge learners' thinking by posing challenging, thought-provoking questions and require learners to think out of the box rather than expecting them to give straightforward answers. This will develop learners' intrinsic motivation and will give them the freedom to choose what they want to learn and how they want to learn it.

Buzza and Alinotte (2013:61) further point out that, even though learners are encouraged to work independently, teachers should be given ongoing support and encouragement. This will foster and promote learners' SRL skills.

Harding *et al.* (2018:7) add that traditional teaching and learning methods are teacher-centred because teachers are the ones who plan and implement classroom strategies. SRL skills shift the emphasis from teachers to learners; it requires learners to be active participants in the learning process. Harding *et al.* (2018:12) say that it is very important to benefit learners' educational experience when teaching SRL skills. Teachers must encourage learners to construct strategies based on a real problem using discussions that occur between teacher, learners and peers and build on students' existing knowledge.

Zimmerman (2002:69) explains that teachers should prepare learners to use self-regulatory processes and be prepared to learn on their own. Teachers should give learners the opportunity to choose the academic tasks they want to pursue, methods for carrying out complex assignments or working with study partners. Teachers should encourage learners to establish specific goals for teaching academic work evaluate their own or estimate their competence on new tasks. Teachers should assess students' beliefs about learning such as self-efficacy perceptions or casual attributions, in order to identify cognitive or motivational difficulties before they become problematic (Zimmerman, 2002:69).

Zimmerman (2002:70) further maintains that a "self-regulatory process such as goal setting, strategy use, and self-evaluation can be learned from instruction and modelling by parents, teachers, coaches, and peers. Teachers should be aware that SRL skills are not only acquired on socially isolated methods of learning but rather their personal initiative, perseverance and adoptive skill". Zimmerman (2010:13) comments that young children build a set of beliefs about themselves, their confidence, the nature of tasks, the usefulness and availability of cognitive strategies, and the social depositions of other people in the classroom. Teachers should therefore instil in children personal theories of self-competence, academic tasks, cognitive strategies, motivation, and social cognition in the classroom.

2.12 CHALLENGES TEACHERS EXPERIENCE WHEN THEY ARE NOT SELF-DIRECTED THEMSELVES AND HAVE TO MODEL SELF-REGULATED LEARNING SKILLS TO LEARNERS

Geduld (2017:144) points out that while teachers play a crucial role in promoting SRL, several factors hamper SRL development in learners. Geduld (2017:144) further cites the research conducted by Van der Velde *et al.* (2012), in which teachers reported a lack of time, work pressure

and diversity among learners as prevalent barriers to the implementation of SRL where teachers need to expose SRL to learners and guide and assist in developing the skills so that they can overcome barriers to and problems with academic success.

Nilson (2013:8) further says that if teachers lack pedagogical knowledge of SRL, it will be difficult to help learners develop SRL. In her research, Nilson (2013:8) found that while teachers know how to expose learners to learning, they lack knowledge of how much and what support they should provide to enhance learners' SRL skills. This can pose a significant challenge to learning because if teachers do not have self-directed and SRL skills, teaching and learning in such will not be effective. This lack of knowledge is a result of several factors, such as teacher education programmes with a greater focus on content-area knowledge and the mastery of pedagogical methods and less on the principles of learning and development of SRL, while others still prefer to practice transmission teaching approaches that result in rote learning and learning without understanding.

Ariani (2017:64) adds that teachers are the integral component in the classroom environment that should inspire students to create a favourable classroom environment that will make learners feel more motivated and encourage them to work hard to be successful. Teachers who lack self-directed and SRL skills fail to acknowledge the fact that learners do not learn on their own but require the presence of peers and teachers. Teachers should know that they should help to condition the classroom as a social environment by creating norms and regulations for social behaviour in the classroom and providing explicit messages about the interaction with colleagues and peers (Ariani, 2017:64).

Ariani (2017:64) also points out that those teachers who do not possess SRL skills struggle to give learners relevant tasks that can develop their SRL skills. The type of activities or assignments given by the teacher can either encourage or discourage cooperation and sharing capabilities. "The engagement, the willingness of students to perform tasks, the urge to seek a variety of things unknown, and get the same treatment is also a condition for learning environment created by students and teachers" (Ariani, 2017:64).

Leijen and Saks, (2014:191) concludes that the biggest challenge for teachers who lack SRL skills is providing a learning environment that encourages learner motivation. "Motivation is part of complex human psychology and behaviour that affect how individuals choose to invest the time, how much energy is used to perform a specific task, how they think and feel about their duties, and how long they perform their duties".

Teachers that integrate both past and present experiences based on personal interpretations and subject matter will achieve effective learning among their learners. The role of the teacher is to guide and support learners in exploring the world around them, formulating investigative questions, and testing hypotheses. It is therefore crucial for teachers to possess self-directed and SRL skills (Leijen & Saks, 2014:191).

2.13 CHALLENGES TEACHERS EXPERIENCE WITH THE DEVELOPMENT OF SELF-REGULATED LEARNING

Persico, Milligan & Littlejohn (2015:2483) discuss the challenges teachers face in attending to individual learners' SRL skills in class and on a daily basis. The following challenges experienced by teachers are noteworthy in this study and therefore discussed subsequently: the changing teaching and learning environment; teachers' lack of knowledge of SRL; workload, time and overcrowding; teachers' lack of self-efficacy beliefs; collaboration between learners, teachers and parents is lacking.

2.13.1 Changing teaching and learning environment

Triquet, Peeters & Lombarts (2017:6) indicate that teaching and learning environments are dynamic and evolve, becoming more complex and causing more challenges for teachers in general. For example, teachers need to update and upgrade their own knowledge base on an ongoing basis and implement them in the teaching strategies they use in class and their self-regulation skills. Triquet *et al.* (2017:6) maintain that teachers need to improve their own SRL skills continuously so that they will be able to manage and overcome the challenges they encounter in class and address the diverse and individual needs of their learners.

2.13.2 Teachers' lack of knowledge of self-regulated learning

Geduld (2017:144) maintains that teachers who do not have the knowledge of SRL will not be able to develop the SRL skills of their learners. Teachers should know how to prepare learners to learn on their own and how much support they need to give to learners. Geduld (2017:144) further mentions that the main cause of teachers' lack of knowledge of how to develop their learners' SRL is inadequate knowledge about the learning contents of the subjects they are teaching and pedagogical methods, and a smaller focus on principles of learning, development and motivation. Most teachers still seem to prefer the traditional teacher-centred methods of teaching that focus on rote learning without understanding and internalisation.

2.13.3 Workload, time, and overcrowding

Kartika and Mania (2017:69) state that teachers who find self-regulation difficult are often those who have too many demands from their workplace, such as large workloads, and who work in overcrowded classes. These and other conditions make it difficult for teachers to maintain their work schedule while encouraging self-regulation in their classes. Primary school teachers do not teach one subject but several subjects for which they have to do planning individually because the content knowledge of the subjects is not the same. These challenges require teachers who are committed because they need to vary the teaching strategies and self-regulation skills they will apply in their classes according to the individual subjects. Kartika and Mania (2017:69) also mention the all-too-common problem of overcrowded primary school classes which makes it difficult for teachers to attend to the individual needs of all learners in their classes.

Geduld (2017:144) includes factors like time, work pressure and diversity among learners that make it difficult for teachers to assist their learners in developing SRL skills. If learners do not receive the right assistance and guidance from their teachers, they will find it very challenging to develop SRL skills. Girmen (2014:23) mentions one challenge in particular that is experienced by teachers, which is that they do not have the time to allocate for learners with special needs or the appropriate training on how to assist learners with special needs and develop their SRL skills. If teachers have adequate knowledge on SRL, they will be able to assist learners with special needs and this will improve their academic skills as well as the national pass rate.

2.13.4 Teachers' lack of self-efficacy beliefs

Bembenutty (2015:14) points out another challenge teachers encounter when developing SRL is a lack of self-efficacy beliefs. According to Bembenutty (2015:14), self-efficacy beliefs are critical to the performance of teachers and learners and refer to their beliefs in their ability to have a positive effect on someone's learning. Teachers' self-efficacy beliefs influence their attitudes towards helping their students, their level of satisfaction and their desire to motivate their students. Self-regulation involves motivation, cognition and resource management, which can be a challenge to teachers if not managed effectively. Teachers require training in SRL so that they can become effective teaching professionals.

2.13.5 Collaboration between learners, teachers, and parents

Girmen (2014:29) states that when teachers create a working environment where learners work together, they will understand each other better and can easily ask each other what they do not want to ask the teacher and this can allow them to learn the strategies that develop SRL among themselves. The most important factor when learners are working together is communication.

Teachers still lack the skills to plan the activities that encourage collaboration among learners in class, and some teachers feel that group work disrupts the class and they are not able to handle the learners and maintain discipline. Girmen (2014:29) further state that teachers experience the challenges of being able to reach out to the parents of learners especially, those learners with special needs. Teachers claim that most of the parents have a lower educational background and some have no interest in their children's education. The other problem that prevents communication between teachers and the parents of their learners is that teachers find it difficult to reach several parents who do not have phones.

2.14 TEACHING STRATEGIES PRIMARY SCHOOL TEACHERS CAN USE IN GENERAL TO DEVELOP AND ENHANCE SELF-REGULATED LEARNING

Hardey (2018:6) states that teachers are able to monitor, control and guide learners towards effective learning and engage learners in the learning tasks that are goal oriented. Teachers need to plan their lessons, guide and monitor learners, and develop self-regulatory skills for teaching to be effective. Teachers should be able to create an environment that is conducive to the learning of content that learners find interesting and allows active participation from all learners. This means that teachers should not only focus on the curriculum but also, in order to access content, develop in learners other relevant skills such as the ability to organise their materials, manage their time, study a task, read with comprehension, and retain and practice what is learned for their use on graded activities.

Hardey (2018:6) mentions two teaching strategies that can be used by teachers to develop SRL, which are that of scaffolding and discussing and reflecting. Hardey (2018:6) notes that when learners find a task difficult, they become frustrated and refuse to complete the work. In this instance, with scaffolding, which is breaking learning into chunks and then providing a strategy or a structure to make it easier for learners to be able to accomplish each chunk, teachers should be able to identify the strengths and independent capabilities of each learner in their classes. This instructional starting point is called the 'zone of proximal development' (ZPD), and is the difference between what a learner can do independently and what they are able to do with informed assistance. When teachers start instruction at this point, they allow learners to move more easily to the next logical and developmental step. If the learner is struggling, teachers can give the learner a break, determine what they understand and modify the learning task so that it falls within their ZPD.

The second teaching strategy mentioned by Hardey (2018:7) is 'discuss and reflect'. Here, learners need objective, non-judgmental feedback in order to improve their learning. Teachers should hence find an appropriate time to discuss what went wrong, why and how it can be handled

differently next time. When learners get used to the process of reflecting they will also be able to reflect on their own learning through a written activity before talking to a teacher. Reflection help learners to manage their emotions by recognising what they are feeling before it becomes an action.

Cazan (2017:417) explains that learning journals is another teaching strategy that can be used to enhance SRL. Learning journals are used as strategy activators to help learners activate strategic knowledge and apply beneficial cognitive and metacognitive strategies during learning. It is used for learners to make notes on what they have learnt, organise the previously presented knowledge and integrate it with their prior knowledge. For teachers to promote self-regulation, they must assist learners to approach tasks with self-confidence, seek information proactively and engage flexibly and adaptively in a cycle of cognitive and metacognitive activities (Cazan, 2017:417).

Pintritch and De Groot (1990:33) maintain that self-regulation of cognition and behaviour is an important strategy of learner learning and academic performance in the classroom and with content. SRL includes learners' metacognitive strategies for planning, monitoring and modifying their cognition. Learners' management and control of their effort in classroom academic tasks is also a very important strategy of learning. For example, learners who are able to persist with a difficult task or avoid distractions that may occur in class and continue to focus on the task are thus able to perform better. Teachers need to expose and encourage learners to use different cognitive strategies because they foster active engagement in learning, and this will result in higher levels of achievement. Pintritch and De Groot (1990:33) point out that knowledge of cognitive and metacognitive strategies is usually not enough to promote learner achievement; learners must also be motivated to use the strategies and regulate their cognition and effort. Zimmerman (1990:16) also adds that teachers should systematically use strategies that encourage learners to use metacognitive, motivational, and behavioural strategies. Learners should be able to respond to feedback regarding the effectiveness of their learning and their self-perceptions of academic accomplishments.

Modelling is another teaching strategy that can be used by teachers to develop SRL skills in class. Saliso and Ransoma (2014:55) define modelling as an instructional strategy in which a teacher demonstrates a concept or topic and learners learn by observing, based on the premise that learners learn new skills through observation. Modelling describes the process of learning or acquiring new information, skills or behaviour through observation rather than through direct experience or trial and error efforts. Teachers who use this type of teaching strategy will allow learners to observe the teachers' thought processes and encourage learners to imitate the teachers' behaviours that encourage learning. Modelling is an effective method because young children learn through observation.

2.15 Teaching strategies primary school teachers can use in general to develop and enhance SRL

Cabual (2021:3) explains that learning modalities are how we take in, process and learn using our senses. Learning is a continuous process. Cabual (2021:3) further says that in order to overcome the learning barriers teachers need to utilize effective teaching strategies that suit the needs of individual learners.

Learners in the Intermediate Phase need to possess those modalities so that they can be able to acquire meaningful learning and be self-regulated. For learners to acquire visual mode it means they are able to process information in the form of images that communicate major points, provide evidence or reasoning and show relationships between ideas. For example, Intermediate Phase learners must be able to read the text and write it in their own words, look at the pictures and analyse it.

The Intermediate Phase learners should be able to hear and recite information, ask frequent questions and discuss the subject content to get clarity and absorb what they are learning. Learners should actively participate in groups and be able to explain to the teacher or other learners that they have been learning.

In the reading and writing mode Intermediate Phase learners should be able to display the ability to interact with the text and be able to work alone. They should be able to read and then summarise, analyse and respond to reading or class notes. Learners in the reading/writing mode should be able to make visual information from charts and graphs and describe them in writing.

In the kinaesthetic mode learners should be able to experiment with physical materials, watching physical demonstrations of processes or ideas, role playing, dramatising and listening to recording of course content (Fleming & Bonwell, 2019:1).

According to Curriculum Assessment Policy Statement (CAPS) document learners in the Intermediate Phase need to acquire high knowledge and skills that will enable them to identify and solve problems and make decisions using critical and creative thinking. Learners should be able to work effectively as individuals and with others as members of the team. They should be able to communicate effectively using visual, symbolic and/or language skills in various modes. Learners should be able to collect, analyse, organise and critically evaluate information.

When learners move from Grade 3 to Grade 4 they experience many aspects of transition: transition from one environment to another, and transition from being taught by one teacher to being more than one. Manditereza (2021:19) states that learners have difficulties with

transitioning because it involves activities from the unknown and unfamiliar contexts that may be uncomfortable. He further states that immediate experience often results in loneliness, shock and fear therefore learners find it difficult to adapt to the transition. Another example is the language of learning (LOLT) which is African language in African schools. In urban schools the language of learning and teaching is English, where most learners do not speak English as their home language. This transition is a huge challenge for both learners and teachers (Pretorius, 2014:348). It is very crucial for learners in the Intermediate Phase to adjust to the transition so that they can get an opportunity to master the skills of SRL.

Kidane, Roebertsen and Van der Vleuten (2020:2) mention that SDL give learners an opportunity to be accountable and select the learning content and strategies they make to make learning easier. Learners in the Intermediate Phase should be taught to use different learning methods and approaches to make learning more meaningful and satisfactory.

The study explored the Intermediate Phase teachers because in this phase teachers are required to use different teaching modalities to accommodate learners and to ensure that they adapt to the transition from the Foundation Phase. The Intermediate Phase is the crucial phase, even more so for certain mother tongue groupings that are required to make transition to learn and be taught in English. Learners' abilities in effective reading, writing and speaking the language of instruction in a manner which facilitate their own learning and knowledge base are crucial aspects to be considered in creating awareness amongst teachers about SRL and how to develop and promote it.

Vandeveldt, Vandebussche and Van Keer (2015:1563) aver that SRL is strongly influenced by classroom practices and teachers are considered the most important source from which students can learn how to create learning environments that foster SRL. In today's classrooms few teachers effectively and explicitly prepare their learners to learn on their own and struggle to expose them to SRL skills (Vandeveldt, Vandebussche & Van Keer, 2015:1563)

2.16 The role of Life Skills teachers in promoting SRL in the Intermediate Phase

According to the CAPS document Life Skills deals with the holistic development of the learner throughout childhood. It provides learners with knowledge, skills and values that help them to achieve their physical, intellectual, personal, emotional and social potential. Life skills encourage learners to acquire and practice life skills that will assist them to become independence and effective in responding to life challenges and to play an active and responsible role in society. Life skills aims to develop learners through learners through three different, but interrelated study areas that is Personal and Social wellbeing, Physical Education and Creative Arts.

Personal and Social wellbeing is the study of self in the relation to the environment and society. The study area gives learners an opportunity to practice life skills required to make informed choices regarding personal lifestyles, health and social wellbeing. It gives learners skills to relate positively to with and contribute to family, community and society. Learners are equipped with skills that will help them to face challenging situations positively and encourage developing, recognising and communicating their abilities, interests and skills with confidence. They learn values such as respect of rights for others and tolerate culture, religious diversity in order to build a democratic society.

It is stated by Loeng, (2020:2) that self-regulated learning gives learners an opportunity to carry out tasks on their own using different learning methods and approaches to make learning meaningful and satisfactory. It is therefore crucial that life skills teachers teach learners all the necessary skills and knowledge to build learners' confidence and independence so that they can acquire self-regulated skills.

2.17 The roles and responsibilities of the School Management Team (SMT) in promoting SRL

The following are the roles and responsibilities of the School Management Team (SMT) stated in the Personnel Administrative Measures (PAM) document (2016:36):

SMT's provide teachers with latest ideas on approaches to the subject, techniques, evaluation, aids in their fields. They also assist with planning and management of teaching and learning. SMT should cooperate with colleagues in order to maintain a good teaching standard and progress among the learners. They are also required to cooperate with colleagues in order to maintain a good teaching standard and progress among the learners. The SMT must participate in the departmental and professional committees, seminars and courses in order to contribute to and/or update one's professional views. They must participate in agreed school/ educator appraisal processes in order to review their professional practice with the aim of improving teaching, learning and management. SMT' are also required to meet with parents and discuss with them progress and conduct of their children.

Mogashoa (2016:135) mentions that SMT are the backbone of the school and they carry all the responsibilities to support and develop teachers to ensure that SRL is implemented effectively in the school. SMT are responsible for quality teaching and learning and should be able to manage their roles effectively to ensure that teachers are equipped with the relevant skills and knowledge of SRL. Mogashoa (2016:135) further emphasises that SMT are responsible for daily management of activities in the school and should understand departmental policies and acts that

enable them to perform their duties with confidence and should make sure that they develop teachers and learners.

2.18 SUMMARY

In summary, SRL is a process whereby learners actively apply their cognitive skills, behaviours, thoughts and focus on achieving their goals. SRL is a process that assists students to manage their thoughts, behaviours and emotions in order to successfully navigate their learning experiences. Self-regulation is not an academic performance skill or a mental ability but rather a self-directed process whereby learners use their mental abilities to acquire academic skills. Learners are actively involved in seeking solutions to their learning tasks to reach their goals. SRL is characterised by three main features, which are: awareness of thinking, use of strategies, and motivation. Learners set goals and task-related strategies and monitor their behaviour in terms of their goals and self-reflect on their strengths and weaknesses. Self-regulation develops learners' life-long learning skills.

Phenomenological, social, cognitive, volitional, Vygotskian and cognitive constructive theories were developed by different authors, each with its own framework in which it develops and shows its relationship with SRL. Boekaerts' model of adaptable learning, Borkowski's process-oriented metacognitive model, Pintrich's general framework for SRL, Winne and Hadwin's model of SRL, and Zimmerman & Moylan's (2009) social cognitive theory were discussed. The three phases of Zimmerman & Moylan's (2009) model, i.e. forethought, performance and self-reflection, were explained. The constructivist teaching approaches and the link between constructivist teaching and SRL were also explained.

The last part of the chapter discussed the teachers' beliefs about SRL and the values of SRL. The important role of teachers and the strategies they use to develop their SRL, teaching strategies primary school teachers can use in general to develop and enhance SRL, the role of Life Skills teachers in promoting SRL in the Intermediate Phase and the roles and responsibilities of the SMT in promoting SRL were also discussed in detail. SRL is an essential teaching strategy because it helps learners to take charge of their own learning.

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The previous chapter, Chapter 2, presented the concepts of SRL and SDL, the beliefs and perceptions of teachers about SRL, the support they give to learners to develop SRL skills, the challenges teachers experience when they are not self-directed and have to model SRL skills to learners, and teaching strategies teachers can use in general to develop SRL skills.

This chapter gives an outline of the research design, methodology, data collection techniques, study sample and the procedure that were followed to carry out the research study. The sections in this chapter include (§3.2) the research design and methodology (§3.3), research paradigm (§3.4), qualitative research (§3.5), strategy of inquiry (§3.6), population and sampling (§3.7), data collection (§3.8), data analysis (§3.9), trustworthiness (§3.10), the role of the researcher (§ 3.11), ethical considerations (), and (§3.12) and a summary of the chapter.

As already indicated in Chapter 1, the main purpose of this study was to explore which teaching strategies intermediate teachers use to develop SRL skills in their learners. The secondary aims of the study were to:

- explore what teachers know and believe about SRL;
- determine what teaching strategies primary school teachers use to develop their learners' SRL skills;
- ascertain the challenges teachers in primary schools encounter to develop SRL skills; and
- investigate the kind of support, if any, teachers receive from the SMT to develop SRL skills.

Next, the research design and methodology utilised in this study is presented.

3.2 RESEARCH DESIGN AND METHODOLOGY

Creswell and Creswell (2017:11) define a research design as a strategy that starts from an underlying philosophical assumption specifying how the participants are selected, what data collection strategies to be used and what data analysis to be done. Creswell (2014:11) further states that the main purpose of a research design is to provide an appropriate framework for a study. It is therefore important to choose the correct design since it will determine how relevant information should be obtained to be able to answer the research questions in a study. Edmonds

and Kennedy (2017:38) explain that a research design is the actual structure that indicates if one case, one group or multiple groups will be associated with the process when data will be analysed.

Creswell (2014:11) further states that qualitative research uses strategies of inquiry such as narrative phenomenology, ethnography, grounded theory studies, or case studies. Researchers use these designs to collect open-ended, emerging data with the primary intention of developing themes from the data. Maree (2016:162) explains that “a qualitative research approach attempts to gather a rich descriptive data in respect of a particular phenomenon or context with the intention of developing an understanding of what is being observed”. Maree (2007:50) further maintains that a qualitative research design is one in which the inquirer makes knowledge claims based on multiple meanings socially and historically constructed with an intention of developing a theory or pattern.

The researcher chose to use a qualitative research design in this study because of the philosophical assumptions of this research and its potential for exploring teachers’ individual experiences and meanings of SRL and its development in learners.

The research paradigm that underpins this study is discussed in the next section.

3.3 RESEARCH PARADIGM

Creswell (2014:20) states that a research paradigm describes the underlying philosophical views of groups of people about the world they live in and the research they conduct. Edmonds and Kennedy (2017:38) further describe a research paradigm as the reflection of the researcher’s beliefs about the world that they live in and want to live in. It involves the beliefs and principles shaping how the researcher sees the world and how they interpret and act.

Creswell (2014:20) further defines a paradigm as a basic belief system and theoretical framework with ontological, epistemological, and methodological assumptions. It is a way of understanding the reality of the world and studying it. Ontology refers to the nature of our beliefs about reality. This is how reality exists and what can be known about it. In this study, the world of education and SRL and the realities of teachers regarding their knowledge and perceptions about SRL, the teaching strategies they use to develop SRL, the challenges they experience when developing SRL skills among learners and the support they receive from the principal and the SMT were investigated.

Epistemology refers to the branch of philosophy that studies the nature of knowledge and the process by which knowledge is acquired and validated. This is how knowledge can be acquired and how it can be communicated to other human beings (Hofer & Bendiven, 2012:230). In this

study, the researcher engaged with the teachers to gain an understanding of their knowledge of SRL and the teaching strategies they use to develop learners' self-regulated skills.

Methodology refers to the strategy, plan of action, process, or design that informs one's choice of research methods. Methods are specific means of collecting and analysing data such as questionnaires and interviews (Edmunds & Kennedy, 2017:38). The study used qualitative research methodology, and semi-structured interviews were used to collect data.

The literature highlighted different research paradigms such as positivism, post-positivism, interpretivism, and pragmatism. A few of these research paradigms are briefly described. Nieuwenhuis (2016:158) defines positivism as a rejection of metaphysics. It is about finding truth and providing it through empirical means. Researchers who have positivist world views see science as a way to the truth, to understand the world well enough so that it can be controlled by a process of prediction. Positivists believe in empiricism, the idea that observation and measurement is the core of the scientific endeavour. Post-positivists believe that laws or theories govern the world, and these need to be tested or verified and refined so that we can better understand the world. Knowledge assumed in this paradigm stems from experience and observation. Observation usually happens through our senses. Observational data have to be observed through data as well (Nieuwenhuis, 2016:158).

Creswell and Creswell (2018:47) states that post-positivism is sometimes called the scientific method. It represents the thinking after positivism in reaction to the traditional notion of the absolute truth of knowledge and recognising that we cannot be absolutely positive about our claims of knowledge when studying the behaviour and actions of humans. The knowledge that develops through the post-positivist lens is based on careful observation and measurement of the objective reality that exists out in the world.

Creswell and Creswell (2018:51) further mention that pragmatism is derived from the work of Pierce, James, Mead and Dewey. They also explain that pragmatism is not committed to any one system of philosophy and reality. Pragmatists do not see the world as an absolute unity. The research of pragmatist researchers is based on the intended consequences of research in practice. Pragmatists agree that research always occurs in social, historical, political, and other contexts, and they believe in an external world independent of the mind as well as that lodged in the mind.

The interpretivist philosophical orientation in qualitative research is based on addressing the understanding of the world as others see it. Maree (2016:180) states that the purpose of an interpretivist philosophical orientation is to understand the experiences of people. Maree

(2016:180) mentions that an interpretivist paradigm leans towards the collection of qualitative data and uses methods like unstructured interviews and participant observation that provide this type of data. Interpretivists believe that it is important to understand how humans interpret phenomena and activities that they experience in their daily lives, which can also be achieved through methods other than those employed by the positivist approach.

This study followed an interpretivist philosophical orientation given its aim to explore perceptions of individuals, namely primary school teachers, and the teaching strategies they use to develop and enhance SRL. The research in this study took place in the natural setting of the participants, which is the school. The interpretivist approach allowed the researcher to interact with primary school teachers face to face and enquire about their knowledge, beliefs, teaching strategies and challenges they experience when developing SRL skills in their classrooms, based on their own perceptions.

The interpretivist perspective, according to Maree (2016:180), is based on the following assumptions.

- Human life can only be understood from within

This assumption states that the lives of humans cannot be observed separately from their realities. Interpretivists focus on people's subjective experiences, on how they construct their social world by sharing meaning, and how they interact or relate to each other (Creswell (2014:11). In this study, the researcher formed part of the research by interacting with the research participants in order to understand their social worlds and subjective experiences about their daily teaching practices in class and the teaching strategies they use. The researcher interacted with the participants to explore whether their current teaching strategies develop and enhance SRL in their intermediate phase learners through individual, semi-structured interviews with the participants.

- Social life is a distinctly human product

This assumption focuses on the fact that reality is socially constructed and therefore never entirely objective. People need to be placed in their social contexts to understand their perceptions of their own activities. As an experienced teacher, the researcher had the added benefit of understanding the participants' daily social contexts while exploring their perceptions of the teaching strategies they use to develop and enhance SRL in learners in different social contexts.

- The human mind is a purposive source or the origin of meaning

This assumption proposes that there is a need to explore in richness and depth the complexity of a phenomenon so that one can understand the meaning people attach to the phenomenon within their natural contexts (Maree, 2016:180). In this study, the individual semi-structured interviews gave the researcher an understanding of the participants' perceptions as teachers of SRL, the challenges they encounter in fostering and developing SRL, what teaching strategies they use to develop and enhance SRL in their intermediate phase learners, and the support they receive from the SMT to develop SRL.

- Human behaviour is affected by knowledge of the social world

This assumption holds that there is no single reality of a phenomenon, and realities can therefore differ across time and place (Maree, 2016:180). The social world does not “exist” independently from human knowledge, and individuals' understanding and knowledge about a phenomenon continually influence each other and thus also researchers in terms of the questions they ask and ways to conduct research. The knowledge and understanding people possess are limited to the experiences and meanings they have acquired from these. In this study, consideration was given to the participants' various understandings, beliefs, experiences, challenges when developing SRL for learners, and training and strategies to develop or enhance SRL in intermediate phase learners.

In the next section, the research approach that was followed in this study is discussed.

3.4 QUALITATIVE RESEARCH APPROACH

This research followed a qualitative research approach to explore what teaching strategies intermediate phase primary school teachers' use to develop and enhance SRL skills. Johnson and Christensen (2004:318) define qualitative research as research that is built on the collection and analysis of accounts or stories that people offer according to their experiences. A qualitative research approach involves collecting and analysing non-numerical data to understand concepts, options and experiences. Methods used to collect qualitative data include interviews, case studies, open-ended questionnaires, projective techniques, documentary research, and participant observation (Alase, 2017:11). Fraenkel *et al.* (2015:424) mention the following characteristics of qualitative research: it is naturalistic, it relies on words rather than numbers, and it focuses on meaning-based data analysis rather than statistics-based data analysis. Qualitative research is concerned with how people make meaning out of their lives.

A qualitative research methodology was appropriate for this study because the researcher was interested in the participants' own understanding of SRL and related concepts. The study explored the Intermediate Phase teachers because in this phase teachers are required to use different

teaching modalities to accommodate learners and to ensure that they adapt to the transition from the Foundation Phase. The Intermediate Phase is the crucial phase, even more so for certain mother tongue groupings that are required to make transition to learn and be taught in English. Learners' abilities in effective reading, writing and speaking the language of instruction in a manner which facilitate their own learning and knowledge base are crucial aspects to be considered in creating awareness amongst teachers about SRL and how to develop and promote it.

Vandeveldt, Vandenbussche and Van Keer (2015:1563) aver that SRL is strongly influenced by classroom practices and teachers are considered the most important source from which students can learn how to create learning environments that foster SRL. In today's classrooms few teachers effectively and explicitly prepare their learners to learn on their own and struggle to expose them to SRL skills.

Data was collected through semi-structured interviews in the participants' natural settings.

In the next paragraph, the research strategy is discussed.

3.5 STRATEGY OF INQUIRY

The researcher decided to use a phenomenological study to explore what teaching strategies teachers used to develop SRL. Maree (2016:77) explains phenomenological studies as "explorations into the structures of the human life-world, the lived world as experienced in everyday situations and relations". For a phenomenological study to be considered as a qualitative study, the researcher must be interested in the meaning of the experiences to the subjects themselves rather than generalising results to other groups of people (Lewis, 2015:178). Phenomenologists focus on describing what all participants have in common as they experience a phenomenon" (the development and enhancement of SRL in learners.

The aim of a phenomenological study is to discover and understand the worldviews, perceptions, experiences and meaning-making of people involved regarding a situation or phenomenon. Data is usually collected through interviews, observations, and document analysis and presented in thick, rich description.

3.6 POPULATION AND SAMPLING

Maree (2016:198) defines a population as the individuals or objects on which the researcher wants to base the study. A population normally consists of people who share characteristics and are found in the same area of research. The population of a study is the group from which the

researcher intends to generalise results, and it includes all the individuals with certain specified characteristics.

In this study, the population was all the primary school teachers of the Lejweleputswa district. The Lejweleputswa district was selected conveniently because the researcher of this study is a primary school teacher in the district. The Lejweleputswa has 213 schools and 4 528 teachers. Three primary schools were sampled and identified as research sites in this study. The next paragraph explains how sampling was done in this study.

3.6.1 Sampling

Mohsin (2016:11) defines sampling as a means of selecting a subset of units from a target population for the purpose of collecting information. Maree (2016:198) also states that sampling is when the researcher chooses a smaller, more manageable number of people to take part in their research that from the population they are interested in studying. Maree (2016:198) mentions that there are two types of sampling, namely random and non-random sampling. In random samples, all people within the research population have an equal chance of being included in the sample. Random sampling gives a researcher greater freedom from bias. There are four types of random sampling, which are simple random, systematic, stratified, and cluster sampling (Maree, 2016:198; Mohsin, 2016:11).

Non-random sampling, as explained by Maree (2016:199), is used if generalisation is not the goal of the study. The size of the sample will depend on the type and purpose of the research. Non-random sampling is often associated with case study research designs and qualitative research, and not every member of the population has a chance of being included. In non-random sampling, participants or cases do not need to be representative of the population or even a random representation; instead, there is a clear rationale for the inclusion of some individuals rather than others. The types of non-random sampling are quota sampling, snowball sampling, convenience sampling, and purposive or judgemental sampling. Purposive sampling involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with the phenomenon of interest (Maree, 2016:108). In addition to knowledge and experience, they should also be willing to participate and have and have the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner (Setia, 2016:506).

For the purpose of this research study, purposive and convenience sampling was used to select 15 participants from three primary schools. The intermediate phase teachers (Grades 4-6) were purposely selected because the researcher was interested in exploring the teaching strategies

that the teachers use to develop SRL and those participants were able to provide valuable data to answer the research questions.

Convenience sampling was also used in this study based on the fact that the primary schools that were chosen were easily accessible to the researcher, and the participants were conveniently available. Maree (2016:197) describes convenience sampling as quick, inexpensive and useful exploratory research. Maree (2016:197) explains that convenience sampling means that the participants in the study are chosen because they are readily available. Convenient sampling allowed the researcher to select five participants from each of the three schools. The total number of participants from the three primary schools that participated in the study was 15. This means there were five teachers selected from each primary school (one from Grade 4, two from Grade 5, and two from Grade 6).

The following criteria were used for participants' selection:

- Participants had to be qualified teachers.
- Participants had to be teaching subjects in the intermediate phase.
- Participants had to be permanent employees of the selected schools.
- Participants had to be willing to participate voluntarily.

3.6.2 Participants' biographical information

The selected teachers who participated in the study were between the ages of 29 and 55. A total of one male and 14 female primary school teacher took part in the study. Two primary schools are situated in the Thabong township, and one primary school is in Welkom, which is a former Model C school.

Table 3-1: Biographical information of participants

School 1- Quintile 2

Participant	Age	Gender	Highest qualification	Teaching experience	Post Level	Subjects
1	35	F	Bachelor of Education – Intermediate Phase	4	1	IsiXhosa, Life skills

2	49	F	Advanced Certificate in Special Needs Education	19	1	English, Mathematics, Life skills
3	53	F	Advanced Certificate in Special Needs Education	26	1	English, Life skills
4	59	F	Advanced Certificate in Education	37	1	Natural Sciences, Life Orientation. Creative Arts
5	54	F	Bachelor of Education-Honours	18	1	Mathematics, Sesotho

School 2- Quintile 1

1	35	F	Advanced Certificate in Education	6	1	Mathematics
2	29	F	Bed-Natural Sciences	9	1	Mathematics, Natural Sciences
3	37	F	Postgraduate Certificate in Education	10	1 Subject Head-English Home Language	English, Mathematics
4	61	F	Junior Primary Teachers' Certificate	40	2 Head of Department	Mathematics, English, Life skills
5	37	F	Advanced Certificate in Education	10	1	English, Social Sciences

School 3- Quintile 2

1	49	F	Bachelor of Arts in Education	23	1 Subject Head-Lifeskills	Mathematics, Xitsonga
2	38	F	Postgraduate Certificate in Education	4	1	Natural Sciences, Life skills
3	31	F	Postgraduate Certificate in Education	7	1	Mathematics, Natural Sciences
4	54	M	Further Diploma in Education Management	24	1	Sesotho, Social Sciences
5	33	F	Postgraduate Certificate in Education	8	1	English, Social Sciences

It can be concluded from Table 3.1 that the participants in all three primary schools have more than five years of teaching experience. The average teaching experience of the teachers is 14 years from which it could be concluded that they were experienced teachers teaching in primary schools.

3.6.3 Contextual information about the research site

Below follows a description of each school.

School 1

The school is situated in Thabong Township with a total number of 1 065 learners and 34 teachers. The school is a primary school with full-time learners from Grades R to 7. The school is a parallel-medium school with IsiXhosa and Sesotho as the medium of instruction from Grades R to 3 and English from Grades 4 to 7. The school has a library, science laboratory, well-established administration offices, hall, and classrooms. The home languages of the teachers are Sesotho and IsiXhosa. Learners in the school are IsiXhosa and Sesotho speaking and they live near the school.

School 2

The school is a former Model C school and it is situated in Welkom. It has a total number of 815 learners and 26 teachers. It is a well-resourced school equipped with a library, laboratory and fully established sports grounds. It is a multiracial school that accommodates White, Black and

Coloured learners. The majority of the learners are Black. Some learners live in urban areas near the school and other learners live in the Thabong Township and commute to school every day. The medium of teaching and learning is Afrikaans and English from Grades R to 7. The home language of the teachers is Sesotho, IsiXhosa, English, and Afrikaans.

School 3

The school is situated in the Thabong township with a total number of 789 learners and 23 teachers. The school is a primary school with full-time learners from Grade R to 7. The school is a parallel medium school with Xitsonga and Sesotho as the medium of instruction from Grades R to 3 and English from Grades 4 to 7. Most of the Xitsonga-speaking learners' parents come from the Limpopo province, and some are foreign immigrants from Mozambique who walk to school about five kilometres. The school also has some Sesotho-speaking learners whose parents are Lesotho citizens. The majority of the learners in the school are Sesotho speaking who live near the school. The home language of the teachers is Xitsonga and Sesotho. The school has no library and laboratory and few classrooms of which most are mobile classrooms.

3.7 THE ROLE OF THE RESEARCHER

In line with qualitative research, data was collected by means of individual semi-structured interviews which would then be transcribed so that the data could be collected and analysed. Before the interviews began, the researcher explained the aim of the research and what was expected from them as participants. The researcher was also responsible for selecting participants for the study. Since data was collected during COVID 19 pandemic the researcher conducted interviews at quiet places where participants felt safe and comfortable. Therefore, the researcher travelled to the schools and few homes of participants to conduct the interviews.

Bias was avoided by asking the same questions to all participants. If the participants found the questions difficult to answer, the researcher would rephrase the questions in a simpler and more understandable way and ask follow-up questions for more information.

The researcher made sure to establish a relationship with participants to build trust and honesty, which play an important part in the study. The time scheduled for interviews was respected so that the participants could respect them. At the end of the interviews, the researcher thanked all the participants for their voluntary participation.

3.8 DATA COLLECTION

Taylor, Bogdan & De Vault, (2015:51) states that data collection is a systematic approach to gather and measure information from a variety of sources to broaden the understanding of a phenomenon. A person or organisation is approached to answer relevant questions, evaluate outcomes and make predictions about future possibilities and trends. The data collection method that was used in this study is individual semi-structured interviews.

3.8.1 Individual semi-structured interviews (See § addendum F)

Alsaawi (2014:151) describes semi-structured interviews as a meeting in which the interviewer does not strictly follow a formalised list of questions. Adams, W.C. (2015:494) mentions the following advantages of semi-structured interviews:

- Semi-structured interviews allowed the researcher to prepare questions in time so that the researcher could be prepared and appear competent during the interview. Pre-planned interviews also prevented the researcher from omitting or forgetting to ask important questions and allowed them to test whether the research questions could be answered.
- Semi-structured interviews gave the participants the freedom to express their views in their own words, which allowed them to express their views and personal experiences regarding certain phenomena (see §3.1).

In the semi-structured interviews conducted with the 15 intermediate phase educators in this study, they were asked open-ended questions that prompted a discussion rather than a straightforward question-and-answer format. Semi-structured interviews encourage two-way communication because the participants and the researcher ask each other questions, which allow for a comprehensive discussion of the topic. The interviewer also gave the participants opportunities to elaborate and explain their responses in detail by asking open-ended questions (Taylor, Bogdan & De Vault, 2015:52).

Each participant was interviewed at a convenient, quiet and safe place and time agreed on beforehand. Strict COVID-19 regulations, such as using sanitiser, ensuring safe social distancing and wearing a mask all the time, were observed. The interviews were also recorded with the participants' permission. The individual interviews were conducted after school hours to prevent disrupting the participants' teaching time. The approximate time for the interview was 45 minutes to one hour (see also §3.7).

One challenge that the researcher experienced during the interviews was that three of the participants gave elaborate answers with irrelevant information. The researcher then had to ask many follow up questions to keep these participants focused on the questions. Another challenge was that one participant felt uncomfortable to elaborate on responses to questions. The researcher ensured the participant's confidentiality and anonymity will be ensured in the study and the participant eventually eased up and responded more openly.

3.8.2 Procedures to collect data

After obtaining clearance from the North-West University, under whose auspices this research was conducted (ethics number NWU- 01909-20-A2), permission was obtained from the District Director of the Lejweleputswa Education District to do the research. Thereafter, the researcher delivered letters to the principals and the school governing bodies of each of the primary schools where the research took place in person to request written permission to conduct the research. The researcher met the individual teachers during their free time while others were contacted telephonically to schedule an appointment and explain the aim of the study and all the ethical issues to which the study needed to adhere. The intermediate phase teachers at the three schools were given consent forms to read and two weeks to consider participation. After consent forms had been obtained from the 15 participants, interview dates were arranged with them.

During the interview, the researcher explained to the participants the aim of the research and what was expected from them as participants. The participants were also informed about the approximate length of the interview (45 minutes). The researcher travelled to the participants' chosen venues; some were interviewed at their homes and others were interviewed at their schools after school hours. The researcher made sure to listen carefully throughout the interview sessions and pose questions where clarity was required.

After the last question in the interview, the participants were asked whether they had anything related to SRL to ask or add. Ethical principles as stated by Fraenkel and Wallen (2010:57-60) applied throughout the interviews. These principles included professional competence, a professional relationship with participants, privacy, and trustworthiness.

The following section describes how the data was analysed.

3.9 DATA ANALYSIS

Flick (2013:3) defines qualitative data analysis as the classification and interpretation of linguistic (or visual) material from which to draw findings of implicit or explicit dimensions and structures and meaning-making in the material and what is represented in it. The aim of data analysis is to

describe a phenomenon in detail. Qualitative data analysis is an important step in the research process, since it assists researchers to make sense of the collected data. Data analysis is concerned with transforming raw data into information by searching, evaluating, reorganising, coding, mapping, exploring, and describing patterns, trends, themes and categories in order to find and interpret the underlying meaning (Ngulube, 2015:1). The data analysis method used in this study was a hybrid approach that incorporated the inductive and deductive data analysis methods (Swain, 2018).

Data interpretation is the process of making sense of the data that has been collected, analysed and presented through the act of identifying and explaining the core meaning of data, organising and connecting emerging themes, subthemes and contradictions to get the bigger picture of what it all means (Noble & Smith, 2015:18).

The researcher used data analysis to find out whether any patterns or trends could be identified or isolated. The main aim of data analysis in this study was to explore the knowledge and beliefs of teachers about SRL, what teaching strategies these educators use to develop and enhance SRL, the challenges they encounter to develop SRL, and the support they receive from the SMT to develop SRL.

In this study, content analysis and a thematic approach were used to analyse data. Content analysis is defined as a systematic, replicable technique for grouping many words of text into fewer categories based on explicit rules of coding (Maree, 2016:111). To begin the process of analysis, the researcher listened to audio recordings and made notes. This helped the researcher generate a clear understanding of the information gathered on the teaching strategies that the primary school teachers use to develop and enhance SRL.

Data collected through semi-structured interviews was analysed systematically and reliably so that generalisations can be made from them concerning the categories of interests to the researcher. The audio recordings of the interviews were transcribed so that the information gathered from the participants could be available in writing to assist in the coding process. Saldana (2016:43) defines coding as the process of segmenting and labelling texts to form descriptions and broad themes in the data. According to Maree (2016:119), a researcher should read through the data to obtain a general sense of the material. The researcher read through the transcribed interviews many times, which enabled made it easier and quicker to retrieve relevant data related to the thematic ideas the researcher wanted to create. The data was coded by locating text segments and assigning a code label to them (Saldana, 2016:43). Categories of information were noted and identified so that relationships in the data could be examined for contradictions and similarities. The researcher analysed one category at a time and focussed on

the contents of each category intently. In order to interpret the results and draw meaning from them, the researcher compared and contrasted, noted patterns and created themes from the raw data and clustered them (Theron, 2015:8). Of particular interest were patterns that emerged from the responses regarding the primary and secondary research questions of this study. The themes created from the raw data and the a priori themes are discussed in Chapter 4.

The next section offers a description of validity, reliability, and trustworthiness and how it was ensured in this study.

3.10 TRUSTWORTHINESS

Trustworthiness involves how the inquirer persuades the audience that the findings in the study are noteworthy and of high quality (Lincoln *et al.*, 1985 as cited in Maree, 2016). In this study, trustworthiness involved the appropriateness, meaningfulness, correctness, and usefulness of the inferences the researcher made based on the collected data. Trustworthiness was ensured in this study through the following guidelines (Maree, 2016:36):

The researcher was aware of their own biases that stem from their being a primary school teacher and their knowledge of what is happening in the class every day. The researcher was mindful that their own teaching experience and knowledge of teaching contexts would not influence the data collection and research findings. Therefore the aims and objectives of the study were explained clearly to the participants so that they could have the knowledge and understanding of what the study was intended to achieve. The participants were consulted to agree on the dates and times for the interviews that would be appropriate for them. I ensured that there was a response validation that allowed participants to comment on the interview transcripts and whether the transcribed data adequately reflected their responses.

The researcher further engaged with the study supervisor to reduce research bias. Trustworthiness was assured by recording the interviews using an audio recording instrument so that the researcher could obtain verbatim responses to use in the analysis and interpretation of data.

The credibility and validity of what was been recorded were strengthened by presenting some of the participants with summaries of their responses and asking them to determine the accuracy of the researcher's understanding of the response. This process is known as member checking. In cases where participants disagreed with the researcher's interpretation, they were asked follow-up questions to obtain clearer responses. The verbatim responses of the participants from the audio recordings and transcripts also helped to prevent researcher bias.

3.10.1 Validity

Validity is a measure of a research's soundness. It applies to both the research design and methods. Validity of data means that a study's findings truly represent the phenomena under investigation (Leung, 2014:10).

The following strategies, as described by Noble and Smith (2015:18), were used to ensure validity in the study: To prevent an artificial setting, the interviews were conducted at the schools where participants worked or at their homes. Rich, thick, verbatim descriptions of participants' accounts were also used to support findings.

3.10.2 Reliability

Reliability is a way of assessing the quality of the procedure that was used to collect data in the research. In order for the results of a study to be considered valid, the measurement procedure must be reliable (Ary *et al.*, 2018:10). Leung (2014:1) further defines reliability as the degree to which assessment tools produce stable and consistent results.

The following measures were taken to ensure reliability:

The researcher was aware of their own biases which may influence the findings of the research. The aims and objectives of the study were explained clearly to the participants. The participants were consulted in time to agree on suitable dates and times for the interviews. Respondent validation was used to allow participants to comment on the interview transcript and verify whether the final themes and concepts created adequately reflected the phenomena being investigated. Multiple codes were used during the data analysis. The researcher consulted the study's supervisor to reduce research bias.

3.10.3 Credibility

Maree (2016:36) defines credibility as a measure of the qualitative researcher's confidence in the truth of the research study's findings. Credibility is the most important aspect or criterion in establishing trustworthiness. Credibility asks the researcher to clearly link the research study's findings with reality in order to demonstrate the truth of the research study's findings. To enhance credibility, the researcher used member checking and prolonged engagements with the participants. The participants were also asked to clarify what their intentions were, correct errors, and provide additional information if necessary.

3.10.4 Transferability

Transferability is the extent to which results in one setting can be transferred to another. It also implies the applicability of the results of research in one context in another similar context. Transferability is indicated by the extent to which a study invites readers to make connections between elements of the study and their own experiences (Macmillan & Schumacher, 2001:116). Korstjens and Moser (2018:122) further explain transferability as being synonymous with generalisability or external validity. Transferability is established by providing readers with evidence that the research study's findings could apply to other contexts, situations, times, and populations.

The purposive sampling method that was used for this study served to ensure a good measure of transferability. Selected participants were in positions to provide valuable data for the research. Transferability was also ensured during the data description that generated the answer to the research questions. This process gave the researcher the ability to transfer the conclusion of enquiry to other cases or repeat as closely as possible the procedures of this project to a next project.

3.10.5 Confirmability

Confirmability can be seen as the degree of neutrality or the extent to which the findings of the study are shaped by the respondents and are free of researcher bias, motivation or interest (Merriam & Tisdell, 2016:237). Reference was made from the literature review and findings to interpret the findings of the information gathered from the participants in this study. The researcher made sure to clearly describe the procedures for checking, rechecking and analysing the collected data. The participants in the study were asked to review the accuracy of the research report (member checking). Consensus was reached between the researcher and the independent coder on the data codes, which were analysed to confirm the authenticity of the qualitative findings that were reported. Direct quotations were included to confirm the findings.

3.11 ETHICAL CONSIDERATIONS

Ethics can be described as the study of good conduct and the grounds for making judgements about what is good conduct. The dignity, rights, safety and well-being of participants must be the primary consideration in any research study (Merriam & Tisdell, 2016:239).

Maree (2016:37) emphasises that before the researcher conducts research, they must first be granted permission to do so.

Ethical clearance and permission to conduct research were requested from the Ethics Committee of the Faculty of Education of the North-West University, Potchefstroom Campus (see Addendum A).

Permission to conduct research was obtained from the Free State Provincial DoE (see Addendum B) and the principals of the three primary schools (see Addendum C).

Permission of goodwill was obtained from the governing body as representatives of the parents and the community in which the research would take place (see Addendum D). An independent person informed the chairperson of primary schools during a meeting that was arranged once the final permission had been granted to conduct the research.

Principals were recruited and asked to participate voluntarily in semi-structured interviews for the study by an independent person. The participants were first issued a letter from the Ethics Committee of the Faculty of Education of the North-West University, Potchefstroom Campus (see Addendum E) by an independent person, in which the aim of the study was explained.

Informed consent was obtained from all participants with the understanding that they were treated with the appropriate confidentiality and anonymity. Participants were informed that they had the right to withdraw from the study at any stage without any consequences (see informed consent letter in Addendum F).

The following measures were taken during the planning and conducting of the research to ensure that the rights and welfare of the participants were protected (Ritchie *et al.*, 2014: 84). All participants agreed to complete and sign the informed consent form (see Addendum H) giving the researcher permission to conduct the interviews. The consent letters confirmed that participation was voluntary and participants could withdraw from the study at any time. The information gathered and the identities of the participants were treated confidentially. The participants were asked to give their permission to be audio recorded during the interviews. The researcher made sure to explain the aims and objectives of the research to the participants thoroughly. The dates for the interviews were scheduled beforehand to make sure that the interview would not interfere with teaching hours.

Participants were assured that no form of harm would result from participating in the research. The researcher took care that no harm, risks, discomfort, or frustration was experienced by the participants during the research. COVID-19 regulations like using a face mask, sanitising hands with alcohol-based sanitiser and maintaining 1,52 m social distance were properly observed during the interview with participants.

3.12 SUMMARY

In this chapter, the research design, methodology and paradigm were discussed. Qualitative research, individual, semi-structured interviews, population and sampling methods, and the data collection and analysis methods were discussed, followed by considerations pertaining to validity, trustworthiness, and ethical aspects. The ethical guidelines provided by the University were observed at all times. The next chapter, Chapter 4, presents the data analysis and interpretation of findings.

CHAPTER 4 DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

In Chapter 3, the research methodology was discussed, which included the research paradigm, qualitative research approach, semi-structured interviews, sampling strategies, data collection methods, data analysis, trustworthiness, validity and reliability of data, and ethical aspects. This chapter discusses the process of data analysis and presents the empirical findings of the study.

As already mentioned in Chapter 1, the main purpose of this research was to explore the teaching strategies primary school teachers use to develop and enhance SRL in their learners.

The secondary aims of the study were to:

- Explore what teachers know and believe about SRL.
- Determine what teaching strategies primary school teachers use to develop their learners' SRL skills.
- Ascertain what challenges teachers encounter in primary schools to develop SRL; and to
- Investigate the kind of support, if any, that teachers receive from the SMT to develop self-regulated learning.

In the next section, the process of data analysis is described.

4.2 ANALYSIS PROCESS OF QUALITATIVE DATA

Flick (2013:13) defines qualitative data analysis as a classification or interpretation of linguistic (or visual) material to make statements about implicit or explicit dimensions or structures of meaning-making of a phenomenon and its representation. The aim of data analysis is to describe a phenomenon in detail. Qualitative data analysis is arguably the most important step in the qualitative research process, since it assists researchers in making sense of the collected data. Data analysis is about converting raw data into information that is meaningful. Data is analysed through searching, evaluation, reorganising, coding, mapping, exploring and describing patterns, trends, themes, subthemes and contradictions to get a bigger picture of what the data means for a specific purpose (Noble & Smith, 2015:18).

4.2.1 Data analysis of the semi-structured interviews

The following steps were used to analyse the audio-recorded data from the semi-structured interviews (Leedy & Ormrod, 2010:153):

- **Step 1:** Data transcribing

The responses of 15 participants collected through interviews were prepared and transcribed verbatim from speech into words.

A qualified and independent person ensured that the interviews were transcribed correctly in order to enhance the trustworthiness of this study. Participants were also given the opportunity to review the transcribed data to verify whether the transcripts were a true and accurate version of what they had said.

- **Step 2:** Initial exploration of data

First, the researcher read the transcribed responses of interviews meticulously to gain a deep understanding of the data and identify patterns and differences in themes in what participants said. The participants' data was then categorised to identify the themes and sub-themes and take notes about the data.

- **Step 3:** Analysing of the data.

The data was then coded according to categories, themes, and sub-themes.

Content data analysis was used to analyse data in this study, which Wright (2017:2) defines as a technique used to analyse textual data and explain a theme. Data analysis eventually produce categories, themes, and patterns.

A hybrid approach was used as the method of data analysis, which incorporated the inductive and deductive methods of data analysis. A priori themes and sub-themes were identified from the literature on SRL, mainly from Zimmerman's three-phase model for the development of SRL (2000) and the adapted model for SRL from Zimmerman and Moylan (2009). Additional themes were created from the responses of participants during the interviews.

Participants' responses pertaining to their awareness and knowledge of the concept SRL; their perceptions about their roles in the development of SRL skills in certain subjects; the training the participants received from the DoE to use and implement SRL skills; the participants' perception about learners' roles in taking responsibility of their own learning; and the teaching and learning

environments that develop and enhance SRL were categorised under the predetermined themes and subthemes.

Other predetermined themes and sub-themes included the strategies participants use to develop SRL in the intermediate phase, the challenges teachers encounter in primary school to develop self-regulated learning, the support the participants receive from the SMT and the DoE to develop SRL skills (Saldana, 2009:12).

Since the theoretical and conceptual framework in the study is based on Zimmerman's (2000) three-phase SRL model, the three phases in Zimmerman's (2000) and Zimmerman & Moylan's (2009) models were used as main themes, namely the forethought, volition and self-reflection phases. Participants' responses were coded under the processes and sub-processes of each phase, for example, task analysis, goal setting, planning, etc. The theoretical framework was used to identify themes and sub-themes, to analyse, categorise and interpret the data collected.

The a priori coding of data enabled the researcher to obtain or retrieve and gather with relative speed the whole text of the participants and other information related to a given thematic idea, which was then sorted, examined and compared (Saldana, 2009:12). After having identified and noted the relevant categories, the collected data was also compared to identify contradictions, similarities, and relationships.

The data findings were interpreted, from which conclusions could be drawn based on the theoretical knowledge of SRL, the empirical data, and the researcher's current understanding of the Free State DoE's context.

- **Step 4:** Representation and display of data.

Thereafter, the data was interpreted in writing and illustrations in tables.

- **Step 5:** Data validation

Lastly, the data was interpreted and compared with the literature to validate the researcher's own explanations.

Table 4.1 below shows the themes and sub-themes that emerged from the semi-structured interviews, based on Zimmerman's three-phase model for the development of SRL (2000) and the adapted model for SRL from Zimmerman and Moylan (2009) among the other literature reviewed in this study.

Table 4-1: Themes and sub-themes generated from semi-structured interviews

Theme	Sub-themes
4.1.1 Theme 1 Knowledge and beliefs of SRL	
	Familiarity with the concept SRL
	Comprehension of the concept SRL
	Value of SRL for academic learning
	Instruction to utilise and develop SRL
	The roles of teachers to develop and enhance SRL
4.1.2 Theme 2 Knowledge and beliefs of how SRL was developed before task completion in the forethought phase	
	Subtheme 1: SRL development in the forethought phase
	Developing strategic planning
	Developing goal-setting
	Developing motivational beliefs
	Developing self-efficacy beliefs
	Developing learning goal orientation
	Developing interest in learning tasks
	Developing outcome expectations

	Subtheme 2: SRL development while performing tasks in the volitional or performance phase
	Task strategies
	Time management
	Group work
	Self-observing learning
	Help-seeking
	Environmental structuring
	Sub-theme:3 SRL development in the self-reflection phase
	Opportunities for self-evaluation
	Reflection
	Self-satisfaction
	Building realistic attributions for success or failure
	Adapting teaching strategies
4.1.3 Theme 3 Challenges with developing SRL	
4.1.4 Theme 4: The support from the SMT	

The next paragraphs focus on the discussion and analysis of qualitative data.

4.3 DISCUSSION AND ANALYSIS OF QUALITATIVE DATA

The responses collected through the semi-structured interviews on teaching strategies that primary school teachers use to develop and enhance SRL are discussed in this section. The researcher used verbatim quotes, which are printed in italics in this chapter, to present the rich comprehensive and understandable descriptions of the teachers (participants) who teach, the

strategies they use, their beliefs and perceptions about, and challenges with developing SRL. Reference codes are placed after each verbatim quotation to identify the participants and the schools, where 'P' represents the participant and 'S' represents the school.

4.3.1 Theme 1 – Knowledge and beliefs of SRL

The main theme created relates to the participants' knowledge and beliefs of SRL. Five sub-themes that give insight to participants knowledge and beliefs of SRL were created. The five sub-themes are: familiarity with concept self-regulated learning, participants' comprehension of the concept self-regulated learning, the value of SRL for academic learning, instruction to utilise and develop self-regulated learning, and the roles of teachers to develop and enhance self-regulated learning. The following is a discussion about the responses from which the data was generated to interpret participants' knowledge about the concept of SRL.

4.3.1.1 Sub-theme 1: Familiarity with concept self-regulated learning

In this study, of the 15 participants, only four (*P1S1, P3S1, P1S2, P2S2*) indicated that they were familiar with the concept of SRL.

The following are descriptions of how participants responded when asked whether they were familiar with the concept of SRL.

Four participants indicated that they became familiar with the concept during workshops. One participant explained:

Yes I came across this strategy during the workshops that I attended (P1S1)

Six other participants (*P1S1, P4S1, P3S1, P4S1, P5S2, P4S3*) responded that they had not heard of or had no knowledge of SRL. One participant stated:

No, I do not know anything about self-regulated learning, or even heard about it (P4S1).

Five other participants (*P1S1, P2S1, P5S1, P3S2, P3S3*) were unsure of whether they knew about SRL, as with one participant that revealed:

I think self-regulated is when learners push themselves. Self-regulated learning is when you are able to study on your own, independent studying, I can put it that way (P3S2)

The participants' responses indicated that most of them were not aware of the concept of SRL. Zimmerman (2000:16) states that when teachers are not aware of SRL, it can be one factor that prevents them from developing SRL skills in their learners. If teachers are aware of self-regulation, they are going to be aware of the level of SRL skills in learners. Teachers with knowledge of SRL can plan their work effectively and are aware of what teaching and learning strategies they can use when presenting lessons (cf Effeney *et al.*, 2013:59).

4.3.1.2 Sub-theme 2: Participants' comprehension of the concept self-regulated learning

The participants who demonstrated an understanding of SRL described it as a process or strategy that learners use when they learn. The participants described the concept as the behaviour self-regulated learners display when they learn. The following are how the participants explained their understanding of SRL:

Self-regulated learning is to have control, you take responsibility of your work, and you set goals... (P1S3)

Yes, teaching self-regulation in the classroom is important because the emotions and cognitive areas of the brain may not reach the full potential if children do not continually practice at young age. Self-regulated learning helps to support the children ability to handle their emotions and reactions to new situations. (P2S3)

...Self-regulated learning is about/starts from babies to toddlers, pre-school years, adulthood. It is a lifelong learning whereby you are able to monitor the emotional state of learners, e.g. frustrations, whether they are coping or not. (P3S1)

The participants' responses indicate that some of the participants have a general and minimal understanding of the concept of SRL. This finding corroborates that of Geduld (2019:61), who found that teachers' knowledge, perceptions and beliefs about SRL and their current teaching efforts directed at developing SRL is vague and unclear to the teachers. The study of Geduld (2019) also revealed that despite teachers' positive beliefs about SRL, they, especially the inexperienced teachers, do not have a sufficiently broad knowledge of how to foster SRL. Teachers generally accept the important role they play in learners' self-regulatory activities; they often do not know how to teach self-regulatory skills or how to enhance learners' use of self-regulation principles in the classroom (cf Panadero & AlonsoTapia, 2014:451; Carmo, 1989:112).

4.3.1.3 Sub-theme 3: Value of SRL for academic learning

The following are responses of some of the participants on the worth of SRL for academic value and whether teachers have a role to play or not in the development of learners' self-regulated learning:

I think so because things are moving, we are in the 21st century, during lockdown we needed self-regulated learners because they were staying at home, it invited or needed those methods, because when learners are studying from home they need to be independent, they were supposed to do everything at home and submit online, that requires SRL (P3S3)

....if you can see the world outside now, needs people who are motivated and do things on their own (P3S2)

Learners should be made more interested in what I'm teaching, they must be inquisitive, I must push them and give them ideas that there is more to what I'm teaching them(P5S2)

The responses revealed that participants believe SRL is valuable for the development of confident, knowledgeable learners as required in the 21st century as well as for their academic achievement. Participants agreed SRL allows learners to stand on their own and work independently.

Participants' views are supported by Fayombo, (2015:48), who mentions that learners of all ages can successfully apply SRL strategies when offered the opportunity to do so. Primary school teachers should therefore move away from a position in which learners are dependent on them for knowledge. The participants also indicated that teachers should play a crucial role in guiding learners properly and avoid frustrating learners:

Teachers should prepare their lessons because there are learners who are a step ahead and can embarrass them if they did not properly plan their lesson. Some learners can even correct teachers. Teachers should play a role to guide learners properly and avoid frustrating them (P5S1)

Their views are also supported by Bandura (2015:1031), who states that teachers who use SRL teaching strategies not only have a positive impact on learners' academic achievement but also increase their capacity to develop lifelong learning skills.

4.3.1.4 Sub-theme 4: Instruction to utilise and develop self-regulated learning

Training plays an important role in the teaching career for SRL skills to be developed effectively because not only does it help learners improve their academic performance but it also eradicates any misconceptions teachers might have about SRL. When teachers receive training, their pedagogical and practical knowledge on how to use SRL in their own teaching strategies and develop SRL in their learners are most effective. Geduld (2017:144) argues that if teachers lack pedagogical knowledge of SRL, it will be difficult for them to develop their learners' SRL.

This is how participants responded when asked if they had practical or theoretical knowledge on how to develop SRL in learners:

There was no training that I received on self-regulated learning; it is the teacher who must take an initiative by learning more, going to the internet on what strategies to use when I teach learners (P5S2)

No, the curriculum we did that time was different from the one we are doing now but I must say we also like learners to work on their own, to be independent and not always do everything for them (P4S2)

No, I was trained on how to teach learners using different teaching strategies and methods, but nothing on self-regulated learning (P2S2, P5S3)

Not anything I can remember (P3S2, P2S3, P1S2, P4S3, P4S1, P3S3, and P2S1)

Only two participants indicated that they received some information on how to develop and enhance learners' SRL.

I can say truly speaking, I learned about self-regulated learning when I was doing my certificate, when I was furthering my studies (P1S3)

There were some few modules when I was training as a teacher that taught us that learners should be taught to stand on their own, they should own learning and take responsibility, and they should not depend on the teacher. Teachers should promote abstract thinking (P1S1)

The subtheme revealed that the majority of the participants did not receive training on how to develop and enhance SRL during their training as teachers or at the workshops they have attended that were conducted by the DoE. This finding is also supported by Geduld (2019:72), who explains that the lack of knowledge of SRL skills is a cause of factors like teachers'

educational beliefs and educational programmes that focus more on content-area knowledge and mastery of pedagogical methods than on principles of learning, development and, motivation.

4.3.1.5 Sub-theme 5: The roles of teachers to develop and enhance self-regulated learning

Teachers play a crucial role in the development of SRL in their classrooms as they interact with learners. The following are perspectives teachers have on their roles in developing SRL in their learners:

The role that the teacher can play is to teach learners that they can do things without teachers, motivate learners to be self-centred (P4S1)

We as teachers need to start preparing learners to start doing things on their own because the world outside need people who do things on their own (P3S1)

Learners should be more interested in what I'm teaching, they must be inquisitive, I must push them and give them ideas that there is more to what I'm teaching them (P5S2)

The participants also indicated that it is their responsibility to motivate and encourage learners to take responsibility for their own learning.

Teachers need to praise learners once they have done well. Even if they have made incorrect things, they need to be praised and be appreciated for what they have done. This will make them to always be willing to work harder (P1S1)

I think if I see a child in class that has potential, I think you should really work with them individually, you tell the child that you are able to get the answer; I would like you to find the answer. So encourage them to work on their own, and come and ask for help and encourage them, praise them a lot (P4S2)

Teachers must give high-quality feedback information to learners and we must recognise the ability of learners when they have achieved or when they have done something good you must give them some reward to motivate learners, to work hard, to be creative (P1S3)

Before we are teachers in front of the kids, we are parents, we are role models; there are things that they see in us, they want to be like us when they grow up, if

we speak to them with respect, if we treat them with respect, we should push them in the right direction... (P5S3)

Analysing the responses from the participants showed that most of the teachers are aware of their responsibility to foster learners' SRL skills. Most participants explained the role of the teacher as one of guidance, facilitation, mentoring, supervision, acting as a role model, encouragement, giving direction, and monitoring the progress of learners (Clark & Zimmerman, 2014:48; Panadero & Alonso-Tapia, 2014:450). The role of teachers is to support and teach learners to acquire SRL skills gain the confidence to apply those SRL skills in their daily life activities. Teachers should structure the learning situation in a way that will give students opportunities to discover their potential and the strategic procedures for themselves (cf. Dignath van Ewijk & Van der Werf, 2016:2; Ganada & Boruchovitch, 2018:12).

Despite that not all the participants received training and possessed a broad knowledge of the concept of SRL, they still indicated that SRL is a good skill that can promote learners' academic progress, although time and fully resourced classrooms are a necessity for effective SRL (cf. Ariani, 2017:64; Bembenutty, 2015:14).

The above is evidence of the crucial role that teachers play in developing SRL skills in the classroom.

4.3.2 Theme 2: Knowledge and beliefs of how self-regulated learning is developed before task completion

4.3.2.1 Sub-theme 1: SRL development before task completion in the forethought phase

The participants indicated in the semi-structured interviews that they use the following SRL strategies: planning, goal setting, motivation, self-efficacy, goal orientation, task interest, and outcome expectations. All the mentioned strategies are part of Zimmerman's (2000:16) model of SRL. However, the participants did not give much detail on the task analysis process of Zimmerman's model in the interviews nor did they mention how they teach learners task analysis.

(i) Developing strategic planning

The following are the responses of the participants on how they develop strategic planning in their learners:

..I always tell my learners to have a personal journal where they write all important things as a reminder and it helps them to take responsibility of the things they have to do (P1S1)

...we plan our work in class and discuss how they are going to do the task, there has to be questions to lead them and guide them so that they can reach their goals. Questions make it easier for them to complete the task (P4S1)

...normally in my subject, I ask learners to have study time table (P5S1, P4S3)

...I tell them exactly what are they going to write, I would broaden the scope and ensure that they understand, not for the sake of the test, what I wanted for them was to understand the concept and to enjoy the subject (P1S2)

Zimmerman (2015:92) explains that strategic planning involves the selection of actions and strategies to complete and succeed in a learning task. In their responses the participants revealed that they guide learners who do not have the knowledge on how to plan, they advise the learners on timetables and keeping personal journals, and they teach them how to set goals when planning find resources to use in completing tasks. The participants also give their learners clear instructions on what and how they will be assessed.

These responses concur with the findings of Zimmerman (2015:92) who states that learners who are given clear instructions on how to do tasks are able to plan better, set clearer goals and reflect on their own performance.

The participants also mentioned that they always advise the learners on how to complete their tasks individually, in pairs, or in groups and encourage them to always seek help from their peers who understand better, their siblings and parents at home, the library or teachers.

(ii) Developing goal setting

Traga and Zoi (2020:4) states that goal setting is an essential SRL skill because it assists learners in achieving their academic work. Goal setting helps learners to be more aware of their learning, set their standards and choose the appropriate strategies to apply to attain the set goals. The purpose of goal setting is to ensure that learners set the standard for themselves and choose the appropriate strategies to apply to attain set goals and should as such be addressed in the Lejweleputswa District's Policy Documents in the DoE and the Annual Teaching Plans (ATPs). Most of the participants agreed that effective teaching and learning can never occur without setting realistic goals.

... I advise them to prioritise their learning activities, prioritise them according to their level of importance (P1S3)

...Learners should write down how they are going to set goals and what resources are they going to use to accomplish those goals (P3S2)

However, most of the participants did not clarify how they encourage learners to set short- and long-term goals or what strategies they use to assist learners in setting goals for learning.

(iii) Developing motivational beliefs

Teachers use motivation to encourage and inspire learners to work towards attaining their goals. Most participants indicated that learners should have intrinsic motivation, although they also use extrinsic motivation to develop SRL skills in learners (cf Bembenutty, 2015:14).

I think its praise and reward. It makes them much more willing, if let's say so and so does well you know they shine, put star on them, the other one will try better (P1S2)

Okay, I think as teachers we must be able to recognise the performance of learners, we must give them rewards when they have achieved (P1S3)

I always believe that every learner has the capability to do anything on their own. There is a need for intrinsic motivation for learners. Teachers need to build motivation among learners they are teaching (P5S2)

The responses of the participants showed that they acknowledge learners' good work, praise them, and encourage them to work hard. The participants explained that they give learners an opportunity to express themselves in class and give input on what they are learning about. This allows a teacher to see what learners already know and where to start when developing their SRL skills. Applying SRL strategies does not only impact learners' academic achievement but also increases their capacity to develop motivation and life-long learning skills (Bandura, 2015: 256).

(iv) Developing self-efficacy beliefs

Self-efficacy is regarded as the learners' beliefs about their capabilities to carry out a task (Bembenutty, 2015:14).

One participant explained how she develops learners' self-efficacy beliefs:

I think if I see a child in class that has potential I think you should you should really work with them individually, you tell the child that you are able to get the answer, I would like you to find the answer, so encourage to work on their own and come and ask for help and encourage then, praise them a lot (P4S2)

This sub-theme revealed that most participants develop self-efficacy beliefs giving the learners positive feedback about their capabilities and progress. Participants reported that they praise learners when they do well and they believe that this keeps learners motivated. They indicate that self-motivated learners possess high levels of self-efficacy and take responsibility for their own failures and successes, while those with learning problems demonstrate low levels of motivation (cf. Bembenutty, 2015:14).

(v) Developing learning goal orientation

Runhaar, Bouwmans & Vermeulen (2019:370) state that learning goal orientation is when a person is motivated by the opportunity to develop and master new skills. Self-regulated learners have mastery or learning goal orientation, rather than a performance goal orientation. Participants' responses resonate with the following response on how they develop learning goal orientation:

When I plan a task for learners, I make sure that I understand it very well so that I can explain it to learners; I make sure I teach it differently even if they are in the same class. I find different ways of presenting the topic to learners (P5S2)

While the majority of the participants revealed how they go about presenting a lesson and how they assess the learners, they did not give much information on how they develop learning goal orientation or help learners to set and focus on their learning goals. Learners with learning goal orientations do not give up easily, have an intrinsic interest in learning, and put a lot of effort into their own learning to overcome failures (cf Runhaar *et al.*, 2019:370).

(vi) Developing interest in learning tasks

Task interest helps to develop and enhance SRL, because if learners have enthusiastic, caring and well-prepared teachers who are interested in their learning tasks, they will persevere and work harder when they experience difficulty. The following are the responses of how participants explained how they used task interest to develop SRL in their learners:

I think out of the topics that we get, I make them to be more fun, should not be rigid. Not to teach learners and give them assessment. Learners should be more interested in what I'm teaching, they must be inquisitive, I must push them and give them ideas that is more to what I'm teaching them (P5S2)

As a science teacher, I always involve learners in doing experiments in class, they can also do experiments at home, give them some practical activities that they can

do at home. This gives learners confidence and interest in their work because they investigate what they are learning practically (P4S1)

The subtheme revealed that some participants know how to use a variety of interesting learning tasks to keep the learners motivated and focussed on their learning (cf. Zimmerman, 2004:143; Sasai, 2017:57; Panadero & Alonso-Tapia, 2014:458)

The strategies teachers said they use are supported in the literature. When tasks are thought-provoking and relevant to learners' everyday lives, they become motivated to achieve their goals, develop learning goal orientations, become more self-regulated and also improve their academic performance (cf. Zimmerman, 2004:143; Sasai, 2017:57; Panadero & Alonso-Tapia, 2014:458).

(vii) Developing outcome expectations

Participants' responses indicate that they make their learners aware of outcome expectations by making them aware that, despite the challenges and difficulties they are facing at their homes and environments, they can become whatever they want to be when they grow up. This is how some participants responded:

Before we are teachers in front of the kids, we are parents, we are role models, there are things that they see in us, they want to be like us when they grow up, if we speak to them with respect, if we treat them with respect, give them hope, we should push them to the right direction... (P5S3)

This refers to how participants use disposition modelling to develop SRL (cf Saliso & Ransoma, 2014:55), and it means that learners learn self-regulated dispositions by observing the self-directed behaviours of their teachers (cf Saliso & Ransoma, 2014:55).

Learners get motivated when they experience things on their own, they are hungry for knowledge. This opens a lot of worlds for them, the more they discover is the more they want to learn more (P4S2)

These strategies participants use are supported by Bembenutty, 2015:14) who states that learners with high self-motivation and self-efficacy beliefs tend to have more outcome expectations when completing tasks. Bembenutty (2015:14) further points out that self-efficacy beliefs are critical to the performance of teachers and learners.

In the next section, the second sub-theme of SRL in the performance or volitional phase is discussed.

4.3.2.2 Sub-theme 2: Self-regulated learning development in volitional or performance phase

The sections below include participants' responses on how they develop and enhance SRL skills in primary school learners while learners are performing tasks.

(i) Task strategies

Task strategies comprise different types of cognitive learning strategies that are used by learners to make learning more meaningful and successful. By applying different task strategies, learners are encouraged to acquire more knowledge while developing and enhancing their SRL skills. Below are responses by participants' that revealed how they use task strategies to develop and enhance SRL in primary school learners.

P4S2, an English First Additional Language teacher, explained:

I try and overcome the barriers of language barrier to make sure that the child is really understanding, sometimes one on one. Sometimes I communicate with parents, and mostly the major problem that hampers learning and acquiring skills is language. The child understands easier in their mother tongue (P4S2)

P3S1, a Life Skills teacher, explained her strategies:

Activities that I must give to learners are the one that involves the use of technology, if we have computers or laptops to enhance their learning. Activities in class should be more technology-based, using computers, and internet to enhance their thinking skills (P3S1)

The Mathematics teacher gave examples of how she develops task strategies as follows:

I try to break the topic down and bring it to the level of the life we live in, sometimes I do code-switching and explain in Sesotho (their mother tongue) (P1S3)

Another Mathematics teacher revealed:

I advise them to prioritise their learning activities, you give them scope, they must make sure that they learn according to the importance, they start with the topics they find difficult to understand, when the time runs out they must be in a better position (P1S2)

The findings indicate that some of the participants do use different strategies to teach learners how to solve problems. These strategies include encouraging parents to explain to learners in their mother tongue (code-switching), classroom discussion, and breaking topics down or analysing the task requirements and priorities.

(ii) Time management

Time management is a key strategy in SRL. For learners to be successful with their academic work and become lifelong learners, they need to be taught how to manage their study and leisure time (Harding *et al.*, 2018:9). The majority of the participants indicated that they assist learners in learning how to allocate time for different activities. Some of the participants stated that they help learners to plan their time constructing a timetable.

They must have the timetable that at this time for a certain period of time, then from there when they are studying... (P4S3, P5S1, P5S3)

I advise learners to prioritise their learning activities, to check, maybe to give them scope; they must make sure that they learn according to the importance, which one comes first, which one must follow, when they run out of time they must be in a better position (P1S3)

I normally tell them that the correct time to study should be after school, before they can go and play or watch TV (P3S2)

Most of the participants reported that they help learners to develop SRL through time allocation by drawing up a study timetable and advising them on what times to study and how to study by dividing the topics and allocating time to them. This corroborates the literature by Harding *et al.* (2018:9), which mentions that learners who manage their time effectively by spending more time on studying and using their self-regulatory processes effectively will produce positive outcomes and achieve their goals.

(iii) Group work

Group work refers to a collaborative learning environment where students work through problems and assessments together (cf. Peng, 2019:1). Group work builds positive interdependence and accountability towards each learner's own learning. Eight participants (P2S2, P5S1, P5S3, P3S4, P1S2, P1S1, P1S3, P5S2) revealed that they use group work as a strategy for scaffolding and to develop SRL.

As an English teacher, I use group or pair reading, you pair them, those who cannot read with those who can, it can also assist learners who are struggling because sometimes they do not understand you as a teacher, but if you group or pair them with learners who understand, they tend to understand better (P5S3).

I normally use group work because it helps the child because they gain confidence, and once the learner gain confidence they'll love the subject (P5S1)

I think group work is working better for me, because learners don't think alike. Maybe one child can come with his/her own perspective of how things are done, will be much better, they should share ideas (P5S2)

I would say group working , reason being most of the children are not comfortable raising their hand or say they do not understand so if we put them in a group set up they will slowly learn to be independent (P1S2)

Some participants (P3 S2, P4S2, P2S3, P4S3) revealed that, despite their preference for group work, it also has some disadvantages:

Disadvantage of group work is that other learners rely on others to do everything for them (P4S2)

This strategy is preferred by most of the participants who reported being able to develop learners' SRL skills. Schunk (2012:430) agrees in saying that teachers should be able to develop learners' thinking and cognitive skills by exposing them to activities that encourage them to practise cooperative learning. Learners should be given an opportunity to express their views and display their capabilities so that learning can be meaningful and interesting in the classroom (cf Olesgun, 2015:67; Wong & Kerr, 2009:40; Bansode & Bantankar, 2016:56).

(iv) Self-observation of learning

Zimmerman (2002:14) maintains that self-observation is an important SRL skill. Self-observation is characterised by two key processes: self-monitoring (metacognition) and self-recording (Schunk & Zimmerman, 2007:10).

The following are examples of how some participants use self-observation as a teaching strategy to develop SRL:

It motivates them to find out for them to learn, they'll really be hungry for knowledge, to find out on their own on how they get to the answer. And I think it

opens a lot of worlds for them, the more they discover on their own the more they want to learn (P4S2)

I give learners chance as a teacher. Sometimes I am just going to keep quiet, give learners a chance to express what they know about the topic or do not know (P2S2)

I give learners more homework and also give them projects, investigations where they will go and do some research to find information on their own (P1S3)

Participants revealed that they give learners an opportunity to explore and find things on their own and express their own views about the topic they are learning, which helps them to develop their SRL skills. Through self-observation, learners focus more on the content of the task so that they can gain a better understanding rather than focus on how long or short the task is. Schunk & Zimmerman (2007:10) confirm this when they mention that observation is a stage where learners have fully gained their cognition, motivation and time management and learned to understand the learning context and how learning should take place.

(v) Help-seeking

Karabenick and Godina (2018: 237) (cited in Zimmerman, 2001) state that help-seeking is an important developmental skill; a form of behavioural or social self-regulation employed by cognitively, behaviourally, and emotionally engaged learners. Depending on the difficulty of the situations learners encounter in learning experiences, they seek help from their fellow learners or teachers to solve the problem and thus achieve their goals. The following are examples of how participants help primary school learners to develop their help-seeking skills:

...the ones that come and ask, I do help them. I also tell my learners to ask their parents to help them but should not write for them, they must help but parents should allow learners to write on their own and make mistakes of vocabulary but should help them to correct them because their vocabulary is limited, especially the Grade 4's (P5S2)

..I tell them that they should group themselves, those who know the subject and those who are struggling should study together, I advise them when they struggle teachers are always there, they can ask other teachers even if it is those who are not teaching them, to assist them. Even at home, their sisters, aunts or anybody who understand the subject can help them (P5S3).

Hardey (2018:6) avers that it is very important for the teacher to know the strengths of each learner in class and what they are capable of doing on their own because this can prevent learners

from finding the given task overly difficult and becoming frustrated. Teachers are therefore encouraged to use modelling as a teaching strategy where learners observe a concept or topic being demonstrated. Modelling is an effective method especially for young children because they learn through observation (cf Saliso & Ransoma, 2014:55).

Some participants also revealed that the lack of infrastructure like libraries, laboratories and internet (Wi-Fi) at their schools limit the learners' from and seeking help.

Sometimes maybe you refer them to go to the library they don't have time to visit the library because of their surroundings, maybe the library is far from where the learner stays (P3S1)

The resources is a problem at our school, and they play a huge role in our learning, if I need to use internet at school to make some research a don't have access to it (P3S2)

Most of the participants' responses indicated that they help learners when they seek help. They encourage learners to ask people at home who have knowledge on the subject, like their parents, siblings, and neighbours. The participants also encourage learners to work together, share ideas (cf Woofolk, 2016:384; Schunk, 2012:428) and use other resources that are available such as laboratories, libraries, and the internet.

(vi) Environmental structuring

The following response reflects what the teachers do to structure learning environments that are conducive for the development of SRL.

It must be climate conducive to learning, it must be a positive place where learners can come to work towards a specific goal, the last one I can say the teacher should be positive, organised and confident all the time (P4S2, P2S3).

Most of the participants revealed the importance of their classrooms being fully equipped with teaching and learning resources. One participant in particular responded:

There must be charts on the wall; the classroom must have teaching and learning resources (P4S3)

The majority of the participants (P1S1, P2S1, P4S1, P5S1, P1S2, P2S2, P3S2, P4S2, P5S2, P1S3, P2S3, P3S3, P5S3) believed that an ideal classroom environment that will encourage learners to develop SRL must be rich in resources that will stimulate the learners' minds and

encourage them to learn. The participants also mentioned that there must be classroom rules that instil discipline and responsibility among learners.

In the next section, the participants' perspectives on how they develop SRL in the reflection phase are discussed.

4.3.2.3 Sub-theme 3: Self-regulated learning development in self-reflection

Learners' self-reflections include judgement, attributions, and self-evaluation of performance. Assessing performance forms the basis for other efforts to regulate motivation, behaviour, and context (Schunk, 2007:87). Several participants' responses indicated that they give learners opportunities for self-evaluation and reflection and that they also use positive reinforcement and verbal feedback to teach learners how to form realistic attributions about their successes and failures.

The next paragraph discusses the perspectives of participants on how they develop the SRL of their learners in the self-reflection phase.

(i) Opportunities for self-evaluation

All the participants revealed that they give learners classwork, homework, research, investigation, demonstration, and practical work. They also stated that the policy of the DBE stipulates that they should do continuous assessment and learners should also be given an opportunity to assess themselves. Self-evaluation is the best strategy that can be used to develop and enhance SRL skills in primary school learners because it constantly monitors their progress and understanding.

...the extra classes, or it can be giving learners individual attention, have an open door policy. They should also have group discussions; maybe even these groups must compete (P4S3)

...others it's best when you work with them, call them and ask them what is it that they do not understand, so that they can understand well. Learners will see where they have made mistakes. The other way, do practical work because other learners learn by touching and feeling (P5S2)

The participants' responses clearly indicate the different types of assessment strategies and how to assist learners in achieving their learning outcomes. It is essential that teachers provide a variety of strategies that learners can use for completing an academic task. Learners must know the types of available assessment strategies that will lead to understanding and success before they can complete such assessments (cf. Paris & Paris, 2001:93).

(ii) Reflection

The majority of participants (*P1S1, P3S1, P4S1, P1S2, P5S2, P1S3, P2S3, P3S3, P5S3*) revealed that they teach their learners to reflect on the activities they have been given in class. The participants reported that they use opportunities to encourage learners to use reflection as a tool to monitor their own progress, plan how they can improve, and attain the goals they set. The following are some of the participants' responses on how they develop the SRL skill of reflection:

...I normally ask them to show me the steps how did he/she reach the answer so that I can be able to fit into the problem and understand how he/she went wrong or right and know how to remedy the wrong (P3S1)

I ask learners to use something like a questionnaire to assess themselves if this was done successfully or not. They can also evaluate one another, the other one can be able to scrutinise others (P3S2)

Yes, I think as teachers when we give learners tasks we must design assessment tools for learners to assess themselves and also the checklist. After completing the task they use the tool to assess their work (P1S3)

The participants understand that learners need to possess the skill of reflection and that it is a part of learning and thinking. These responses are consistent with research by Chang (2019:95) on the role of reflection in developing SRL skills.

Reflection is necessary for learners to revisit what they have learned for improvement and in-depth learning to take place. Not only that, but the participants also indicated that they understand and apply reflection as a strategy in their different assessment tasks and that, after every assessment they have to compile, they do an item and error analysis during which they identify problems that learners might encounter and come up with intervention strategies on how to remedy those problems.

(iii) Self-satisfaction

Participants' responses reveal that they are aware of the importance of self-satisfaction after completing a task successfully and achieving learning goals. They use praise and positive reinforcement to make learners experience positive feelings about learning. The following are the responses by some of the participants on how they develop self-satisfaction among their learners:

...I think it is praise and reward. It makes them much more willing, if let's say so and so does well you know they shine, put a star on them, and then the other one will try better (P1S2)

I would say prize-giving, I would engage those learners in extracurricular activities such as mental maths competition; Science Expo and Astronomy quiz (P2S3).

The responses are in line with what Zimmerman (2012:430) found, namely that learners are more satisfied with themselves when they have mastered a learning task. Harding *et al.* (2018:10) also explain that self-satisfaction is determined by how learners have motivated themselves intrinsically, and this eventually leads to learners fostering feelings of self-respect and self-satisfaction once they have mastered a task.

(iv) Building realistic attributions for success or failure

The participants disclosed that they can develop learners' realistic attributions for success and failure by exposing learners to a variety of assessments through which learners can learn to accept their failures and successes. This is how some of the participants responded:

I believe that my learners are capable, I give them a research they go and get information on their own, when giving feedback in class and they see that I did this on my own and got good marks this means I have a potential and this motivates them. I also encourage those who did not do well to realise their mistakes and correct them in a positive way (P3S3)

I think it's your personality as a teacher, and you allowing them to always feel free in class, be expressive, nobody should shout at them. They should be free to ask questions if they do not understand and realise their mistakes. Motivate them when they get things right or wrong (P5S2)

The participants' responses are supported by Panadero & Alonso-Tapia (2014:458) when they state that learners display causal attributions when they are given a task; they show their successes or failure and whether the results are negative or positive; they make inferences trying to answer the question. The participants revealed that they help their learners build attributions for success or failure by allowing them to feel free and ask questions if they do not understand. They allow learners to accept their failures but never to get discouraged when they experience failures.

(v) Adaptation of teaching strategies

All the participants revealed that they have formal and informal assessments for learners' work and that they use differentiated learning to accommodate all the learners in class. They also related that they sometimes change the teaching strategies to accommodate the needs of the learners and help them to become self-regulated. One participant said:

I normally see if learners did not understand the content. I give learners individual attention to make sure that they follow my teaching. Sometimes learners fail to understand simple instructions because of language of teaching and learning (English) which might also be a barrier (P5S1)

Another participant explained:

When I do error analysis, I try and change the strategies that I use to teach in class. Learners with barriers I sometimes do oral; work with them. I ask them questions and they can answer them verbally, they call it read and scribe (P2S2)

The participants further indicated that they put learners first and are willing to go the extra mile for learners to help them to understand and develop their SRL skills. It is evident that the participants do make plans to improve learners' knowledge acquisition and understanding.

The most important thing, you must know your learners, if you don't know them you must try and get their profile so that you can have background information of learners, I also conduct extra classes (P1S3, P4S3)

When there is a gap between me and the learners, they misunderstood me, what I normally do especially in Grade 4, I go back to Grade 3 work, I do it with them, when I understand then I can go back to what we were doing, so that I can close the gap (P3S3)

The participants revealed that they use differentiated teaching strategies and assessment, assess learners formally and informally, and give learners individual attention to make sure that they follow the instructions and the language of teaching and learning (English). The participants also do baseline and diagnostic assessments to find out what learners already know and what gaps they need to fill from the previous grades. Other participants also disclosed that they offer extra classes to extend learning and do oral work with learners with barriers.

These strategies are supported by Buzza and Alinotte (2013:61) when they aver that teachers need to support and promote teaching strategies that will support SRL in learners. This will develop learners' intrinsic motivation and give them the freedom to choose what they want to learn and how they want to learn.

The third theme below discusses the challenges the participants as teachers experience when developing SRL.

4.3.3 Theme 3: Challenges teachers experience with developing self-regulated learning

While SRL plays a crucial role in teaching and learning, there are challenges that teachers must overcome so that they can develop it effectively. Ariani (2017:64) describes teachers as the integral component in the classroom environment that should inspire students to create a favourable classroom environment that can make learners feel more motivated and encourage them to work hard to be successful.

Below follow some of the participants' responses when asked about the challenges they experience with developing SRL:

Seven participants (*P1S1, P2S1, P4S1, P5S1, P2S2, P5S3*) indicated that time constraints are a challenge. P2S2 responded:

Time is a challenge because we are forced to cover the curriculum, when it is like that you are forced to rush to complete the syllabus and now it is worse because of COVID 19. There is no longer time to enhance learners to work on their own.

The other two factors that were mentioned as a challenge by most of the participants are insufficient teaching and learning resources and lack of parental involvement.

Lack of resources, in terms of textbooks, posters, atlases, because I am also teaching Social Sciences, we don't have a globe to show learners the world.
(P5S3)

I don't really involve parents because it's actually a waste of time for me because you call parents, sometimes they don't come, when they come if you tell them problems you have regarding their children, they will just say they will be involved but they don't. I see that as a waste of time, I normally want to do things on my own... (P4S1)

Three participants (*P1S1, P4S1, P2S2*) also indicated that one challenge they encounter is that learners do not do their homework, as well as overcrowding.

Majority of learners in my class do not do their homework... (P2S2)

Overcrowding in classes is a problem, it is better now with COVID 19 because learners are rotating because of social distancing, but in normal cases my class

has about 50 learners and it is very difficult as a teacher to give all of them individual attention (P4S1)

One participant indicated that one challenge they experience is that the system of education is more focussed on results than giving quality education to learners.

It plays a huge role because no child should fail... I feel that their marks is not a reflection of their understanding, the marks are just what we want because we want good numbers that is why in the next grade they do not know what they have learned (P1S2)

This subtheme revealed that the majority of the participants indicated insufficient time, overcrowded classrooms, insufficient teaching and learning resources, and the result- rather than quality-orientation of education are challenges to developing SRL skills in their learners (cf. Geduld 2017). Participants revealed that these challenges are exacerbated by the even more limited teaching time and remote teaching due to the COVID-19 pandemic.

Another factor which the participants posed as a challenge is that most of the schools do not have access to internet facilities, which are only available at the administration offices where teachers and learners are not allowed to use them. Literature by Kartika and Mania (2017:69) and Geduld (2017:144) corroborates the challenges reported by the participants when disclosing that most primary school classes in lower quintile schools are overcrowded and there is not enough time for teaching and learning, which makes it difficult for teachers to attend to the individual needs of all learners in class.

In the fourth theme below, the support teachers receive from the SMT and the DoE is discussed.

4.3.4 Theme 4: The support teachers get from the school management team and the Department of Basic Education

Teachers who lack SDL and SRL skills fail to recognise the fact that learners do not learn on their own but require the presence of their peers and teachers. Teachers should know that they must help to condition the classroom and social environment by creating norms to regulate learners' social behaviour in the classroom and providing an explicit message about interaction with colleagues (Ariani, 2017:64). This implies that teachers need continuous support from the SMT and the DBE to allocate learning and teaching resources and receive training. Participants had varied responses on the support they receive. The following are the verbatim quotes from the participants on how the SMT and the DBE support them in enhancing and developing SRL skills for learners.

Nine participants (P2S1, P3S1, P4S1, P5S1, P1S2, P3S2, P5S2, P3S3, P4S3) believe that they do not receive any support from the SMT and DBE.

Not at all, as long as learners pass that's what matters, they put pressure on us, and all that they want is results (P3S3)

Where? Not in my school (P5S1)

To be honest with you, I have never met that. I have never received any support or workshop on SRL; I do everything on my own (P2S3)

On the other hand, some participants (P3S1, P1S2, P3S2, P5S2, P1S3, P2S3, P4S3, P5S3) mentioned that they do receive some emotional support from the SMT that can be indirectly linked to the development of SRL skills.

I think they are assisting because they have designed the policies that we need to give learners, like homework policies, they call parents meetings to encourage parents to assist learners (P1S3)

I was once in a position where I see my learners failing. I was emotionally drowning, my Head of Department (HOD) gave me emotional support, she gave me teaching strategies and slowly and surely I saw improvement (P5S3)

Participants further reported that the only support they receive is when they are given documents they should use in class like textbooks, timetables, annual teaching plans (ATPs) and policy documents from the DBE. Other than this, they report having never received any workshops or training that relate to the development of SRL skills.

This theme revealed that participants do not perceive the support they receive from their SMTs as support relevant for developing SRL skills. Geduld (2017:144) has found that while teachers know how to expose learners to learning, they lack knowledge on how much and what type of support they should provide to enhance learners' SRL skills. This lack of knowledge stems from a lack of support and training on how to develop and enhance learners' SRL. Geduld (2017:144) emphasises the importance of SRL training by mentioning that if teachers lack pedagogical knowledge of SRL, it will be difficult for them to develop learners' SRL skills. In the same vein, Ariani (2017:64) emphasises that for teachers to be self-directed and self-regulated, they need continuous support from the SMT and the DBE and need to be supported with physical resources, emotional and developmental support.

4.4 SUMMARY

Chapter 4 presented the analysis of data of the teaching strategies primary school teachers use to develop and enhance SRL. Data was collected from the participants in three primary schools in the Lejweleputswa District in Welkom, Free State province. Data from the recorded semi-structured interviews was transcribed, analysed by coding, interpreted through writing and illustrations in tables and, lastly, compared with literature and validated with own explanations. The method used to analyse data was a hybrid approach that incorporated inductive and deductive methods of data analysis.

A priori coding of data was used because it enabled the researcher to obtain detailed and insightful information from the participants. The themes and sub-themes were generated from the semi-structured interviews, based on Zimmerman and Moylan's (2009) three-phase model for the development of SRL.

The **first theme** generated from the semi-structured interviews is knowledge and beliefs about SRL, from which the following subthemes emerged: familiarity with the concept of SRL, apprehension of the concept of SRL, the value of SRL for academic learning, instruction to use and develop SRL, and the role of teachers in developing and enhancing SRL.

The **second theme** discussed knowledge and beliefs about how SRL is developed before task completion in the forethought phase. The first subtheme that emerged is SRL development in the forethought phase, and the strategies explored therefor were: teaching learners to develop strategic planning, teaching learners to set goals, teaching strategies to intensify learners' motivational beliefs, teaching strategies to promote learners' self-efficacy beliefs, expanding learners' goal orientation, teaching learners how to generate interest in a task, and establishing learners' outcome expectations.

In the second subtheme, the participants discussed SRL while performing a task in the volitional phase, under which the following were discussed: generating task strategy, establishing time management, group work, initiating self-observation of learning, advancing help-seeking, and enhancing environmental strategies. In the third subtheme the participants talked about the SRL development in the reflection phase and the following were explored: possibilities for self-evaluation, reflection, self-satisfaction, construction of realistic attributions for success or failure, adopting teaching strategies self-satisfaction, and establishing realistic attributions for success or failure.

In the **third theme**, the participants revealed the challenges they encounter with developing and enhancing SRL.

Finally, in the **fourth theme**, the support, if any, that teachers receive from the SMT in developing SRL was discussed.

In the next chapter, Chapter 5, a summary and the findings in line with the four research questions are discussed, which serve to answer the primary research question, followed by the study's recommendations, conclusion, and limitations.

CHAPTER 5 FINDINGS AND RECOMMENDATIONS

5.1 INTRODUCTION

The main purpose of this research study was to explore the teaching strategies primary school teachers in the intermediate phase use to enhance and develop learners' SRL. In order to answer the primary and secondary research questions, a theoretical study was conducted to review relevant literature and an empirical study was conducted to collect data through semi-structured interviews.

5.2 SUMMARY OF THE RESEARCH

Chapter 1 provided the overview and orientation of the study. It began with an introduction and clarification of the core concepts of the study (§1), followed by the problem statement (§1.2) and the rationale for the study (§1.3). Next, it presented the preliminary literature and theoretical perspectives (§1.4), aims of the study (§1.5), research questions (§1.6) and research design and methodology (§1.7). Chapter 1 further discussed philosophical orientation (§1.8), target population and sampling (§1.9), methods of data collection (§1.10), procedures for collecting data (§1.11) and data analysis (§1.12). Finally, validity, reliability and trustworthiness (§1.13, 1.14, 1.15), ethical issues (§1.16) and contributions of the study (§1.17) were presented.

In Chapter 2, a literature review regarding SRL was presented. The following theoretical perspectives of SRL were discussed: The behaviourist theory of the operant theory (§2.5.1), phenomenological theoretical perspectives (§2.5.2), the information processing theoretical perspective (§2.5.3), the volitional theoretical perspective (§2.5.4), the cognitive constructivist perspective (§2.5.5), the Vygotskian or sociocultural theoretical perspective (§2.5.6), and the social cognitive theoretical perspective (§2.5.7). Chapter 2 also discussed models of SRL, namely Boekaerts model (§2.6.1), Borkowski's process-oriented model (§2.6.2), Pintrich's general framework (§2.6.3), Winne & Hadwin's (1998) model (§2.6.4), and Zimmerman & Moylan's (2009) cyclical phases (§2.7). Constructivist teaching approaches (§2.8), the link between constructivist theories (§2.9), the role of teachers' beliefs and knowledge about the development of SRL (§2.10), teachers' roles in supporting and promoting SRL (§2.11), challenges teachers experience when they are not self-directed themselves and have to model SRL skills to learners (§2.12), and teaching strategies primary school teachers can use in general to develop and enhance SRL (§2.13) were also discussed. Finally, Chapter 2 concluded with a summary of what was discussed in the chapter (§2.14).

Chapter 3 discussed the research design and methodology that were used in the study. Chapter 3 began with the introduction (§3.1) and purpose of empirical research (§3.2), followed by the research questions (3.2.1), research design and methodology (§3.3), research paradigm (§3.4), qualitative research design (§3.5), strategy of inquiry (§3.6) population and sampling (§ 3.7), the role of the researcher (§3.8), data collection (§3.9), procedures to collect data (§3.10), and data analysis (§3.11). Finally, trustworthiness (3.12), validity (3.12.1), reliability (3.12.2), transferability (3.12.3), conformability (3.12.4) and ethical considerations (3.12.5) were explained.

Chapter 4 revolved around the data collection and interpretation as well as the aims and the research questions of the empirical data (§4.2). The sample (§4.3), analysis process of qualitative data (§4.4) and data analysis of the semi-structured interviews (§4.4.1) were discussed next. The chapter also presented the thematic content analysis of the research and the themes and subthemes that were created (§4.5).

Chapter 5 outlines the research findings (§5.1), presents a summary of the research (§5.2) and the findings of the research (§5.3). Findings on the first secondary question (§5.4), second sub-question (§5.5), teaching strategies primary school teachers use to develop SRL skills in the self-reflection phase (§5.6), as well as findings concerning the third sub-question are discussed (§5.7), followed conclusions with regard to the fourth sub-question (§5.8). After the findings regarding the research questions are discussed, recommendations are made from these findings (§5.9). These findings and recommendations were supported by the literature study in Chapter 2 and the data analysis from Chapter 4. Finally, the chapter concludes with the contributions to the study (§5.10), contribution to the research focus area (§5.11), limitations to the study (§5.12), and recommendations for further study (§5.13).

5.3 FINDINGS OF THE RESEARCH

The findings discussed next are based on the literature review and data analysis of the data that was collected through the semi-structured interviews.

The primary question of the study is:

What teaching strategies do Intermediate Phase educators use to develop SRL skills in learners?

The following secondary questions were addressed in order to respond to the primary question:

- What do intermediate phase teachers know and believe about SRL?
- What teaching strategies do primary school intermediate phase teachers use to develop their learners' SRL?

- What challenges are encountered by intermediate phase teachers to develop SRL?
- What support, if any, do intermediate phase teachers receive from the SMT to develop SRL?

In an attempt to answer the main research question of the study, the findings are discussed with regard to the secondary research questions as indicated above.

5.3.1 Findings concerning the first sub-question (cf. 1.6)

What do intermediate phase teachers know and believe about SRL?

The responses of the participants indicated that the majority of them are not familiar with the concept of SRL. Likewise, Zimmerman (1990:16) has found that sometimes, teachers are not aware of SRL, and this can be one factor that prevents them from developing and enhancing SRL in learners. When teachers know and understand the concept of SRL, they are able to plan their work effectively and are aware of what teaching and learning strategies they can use in the classroom. However, it emerged from the findings that even though the teachers are not familiar with the concept of SRL, they unwittingly apply some of its strategies in their daily lessons in class. This phenomenon can be attributed to the fact that SRL skills and strategies are underpinned or implied in the general aims of the South African curriculum, which include ensuring that children acquire and apply knowledge and skills in ways that are meaningful to their own lives (CAPS, 2018:3). “The National Curriculum Statement Grades R-12 gives expression to the knowledge, skills and values worth learning in South African schools. The curriculum aims to ensure that children acquire and apply knowledge and skills in ways that are meaningful to their own lives. In this regard, the curriculum promotes knowledge in local contexts, while being sensitive to global imperatives” (National Curriculum Statement Grades R-12, 2011:4) The National Curriculum Statement Grades R-12 (2011:4) is based on the principles that emphasise active and critical learning and encourage an active and critical approach to learning, rather than rote and uncritical learning. Active and critical learning are also key elements of SRL.

The participants also revealed that they believe SRL is valuable for the development of confident, knowledgeable learners as required in the twenty-first century as well as their academic achievement. The participants acknowledged the value of SRL and agreed that having SRL skills empower learners to be independent and life-long learners. Their perceptions of the value of SRL skills are aligned with the aims of the National Curriculum Statement (2018:3), which envisions producing learners who are able to identify and solve problems and make decisions using critical and creative thinking required in the twenty-first century.

Teachers' knowledge and beliefs are influenced by the training and professional development they receive (cf. Geduld, 2019:72). It becomes difficult for teachers to develop learners' SRL skills when they do not have clear instruction or guidelines on how to develop SRL skills in the first place (Geduld, 2017:144). The majority of the participants revealed that they had never received any instruction on utilising and developing SRL while they were training as teachers or from any in-service workshops and training conducted by the DBE. All the participants also indicated that the concept is not used or promoted by their SMTs. The participants also reported that when they attend workshops conducted by subject advisors, much emphasis is placed on the subject content and none on what teaching strategies to use to deliver self-regulated learners with lifelong learning skills.

The participants agreed that even though they are not familiar with the concept of SRL and have never received any training on it, they have a great role to play to motivate and encourage learners to take responsibility for their own learning. The participants believed that their role is to guide, facilitate, mentor, supervise, act as role models, encourage, give direction, and monitor the progress of learners. The participants felt that SRL is a good teaching strategy that can develop learners' academic progress but also admitted that it needs time and fully resourced classrooms. Van Ewijk & Van der Werf (2016:2) agree that the role of teachers is to support and teach learners to acquire SRL skills and have the confidence to apply those SRL skills in their daily activities. Furthermore, some participants revealed that they believed that learners should be given the chance to do things on their own with minimal assistance from the teacher, although they also mentioned that the majority of learners are lazy and always rely on the teacher for everything and that few learners can persevere when faced with challenges. The findings also revealed teachers' perception that it is only learners who are gifted or perform well academically who can be self-regulated; they fail to realise that learners who are slower to progress or have barriers to learning can also be motivated and taught to be independent.

Even though teachers do not seem to have theoretical knowledge of the concept of SRL, their beliefs about teaching and their attitudes about what the aim of teaching should be, as well as their knowledge and practical implementation of the CAPS curriculum, reflect the positive beliefs they have about the value of SRL skills. This finding is supported by Ganada and Boruchovitch (2018:2) and Van Ewijk and Van der Werf (2016:3) (see chapter 2), who state that determining teachers' beliefs on SRL requires a complex construction of knowledge that involves some attitudes of teacher beliefs.

5.3.2 Findings concerning the second sub-question (cf 1.6)

What teaching strategies do intermediate phase teachers use to develop their learners' SRL?

The findings on the teaching strategies primary school teachers use to develop their learners' SRL are discussed according to the three phases of Zimmerman and Moylan's (2009) model. The strategies teachers perceive themselves as using to develop SRL skills are illustrated in the forethought phase, then the volitional phase, and lastly, the self-reflection phase.

(i) Findings on teaching strategies intermediate phase teachers use to develop SRL skills in the forethought phase

Zimmerman and Moylan's (2009) model of SRL illustrates the following SRL skills in the forethought phase: planning, goal setting, motivation, self-efficacy, goal orientation, task interest, and outcome expectation. The findings on how the participants use teaching strategies to develop these skills are presented in the discussion below.

With regard to strategic planning, participants revealed that they give learners opportunities to plan their work by guiding them. The participants advise learners to make use of timetables and personal journals and teach them how to set goals when planning and what resources to use. The participants also indicated the importance of giving learners clear instructions on what they should expect when they are assessed and how they are going to be assessed. The participants broaden the skills of learners by allowing them to ask their peers, teachers, siblings and parents at home, use the library, and also work in groups. This finding is supported by literature from Zimmerman (2015:92), which states that learners who are given clear instructions on how to do tasks are able to plan better, set clearer goals, and reflect on their own performance.

Most of the participants agreed that effective teaching and learning take place only when realistic goals are set. The participants revealed that they advise learners to prioritise their learning activities according to level of importance; they teach learners to write down how they are going to set goals and what resources to use to accomplish those goals. Nevertheless, the participants did not reveal with clarity how they teach learners to set short- and long-term goals or what teaching strategies they use to teach learners how to set goals.

The participants perceive themselves as developing learners' motivational beliefs and emphasised that it is important to use motivation to encourage and inspire learners to work towards attaining their goals. The participants disclosed that they acknowledge the good work done by learners and praise and encourage them to work hard. The participants also indicated

that they take into consideration the individual differences of learners in class and their different capabilities. The participants allow learners to express themselves freely and give their inputs about what they are learning about and motivate learners – because their feelings are recognised and appreciated, students will be driven to learn more. The findings revealed that the participants perceive themselves as developing learners' self-efficacy beliefs by giving them positive feedback and praise even when they not have done exceptionally well. They furthermore build learners' beliefs in their own capabilities by encouraging them to work on their own and to ask for help when they need it. The participants thus focus on the individuality capability of learners and push them to work harder by giving them praise and motivation.

The participants did not give much information on how they develop learning goal orientations; they only revealed that they plan and present their lesson and, when they realise that the learners do not understand, they repeat the lesson and change their teaching strategies. The participants only mentioned that they teach differently but did not explain or give examples of how they motivate learners to master and develop new content. To develop positive outcome expectations, participants revealed that they encourage learners to persevere when they experience difficulties with learning and in their personal lives so that they can one day achieve their proximal goals. Participants believed that learners should be given hope and respect and be guided in the right direction and that teachers should act as role models to display the characteristics of a self-regulated person.

(ii) Findings on teaching strategies intermediate phase teachers use to develop self-regulated learning skills in the volitional phase

The participants believed that exposing learners to different teaching strategies assist them in acquiring more knowledge and making learning more meaningful and successful. The majority of the participants revealed that they use different strategies to help learners to understand the learning content. The strategies that are mostly used by the participants are task strategies, time management, group work, self-observation, help-seeking and environmental structuring. The participants, however, did not mention how to develop imagery, which is when learners use mental pictures or images to organise information and which is known to intensify learning and improve memorisation skills (*cf* Harding *et al.*, 2018:8). The other strategy that the participants did not develop is metacognitive self-monitoring, where learners think about their thinking as they are learning, which enables learners to self-monitor and track their progress and learning outcomes (*cf* Schunk & Zimmerman, 2007:10).

The participants identified time management as one of the crucial strategies in SRL (*cf* Harding *et al.*, 2018; Zimmerman, 2011:142). The participants indicated that it is very important to teach

learners how to manage time, and they do that by encouraging learners to draw up a study timetable, advising them on what times to study and dividing the topics and allocating time to them. The development of time management skills is one of the factors that the majority of the participants complained about. They believed that the rigid syllabus in the annual Teaching Plans does not allow them to develop learners' SRL skills effectively because teachers are under pressure to complete the curriculum and thus have to rush over some concepts, even if they know that learners do not understand and have not acquired all the skills.

The participants furthermore revealed that they use group work as a teaching strategy because it builds positive interdependence and accountability towards learners' own learning. Group work or pair reading are used so that learners can assist one another, which can make learners gain confidence and encourage them to share ideas (*cf.* Erdem *et al.*, 2014:26). The participants also prefer group work because they believe that some learners are shy to talk to the teacher but feel free when they are working as part of a group or in pairs with their peers.

Although group work is one strategy that is preferred by most participants, others believe that group work can make other learners lazy to think and express themselves because they will rely on others to do everything for them. It means that it is crucial for the teachers when using group work as a teaching strategy to ensure that they plan their lesson well and give each learner a role to play so that all learners have an equal opportunity to learn.

Zimmerman (2002:14) maintains that self-observation is an important SRL skill. The participants revealed that they offer opportunities to learners to explore and find things on their own and express their own views about the topic they are learning (*cf.* Bansode & Bantankar, 2016:56). The participants in this study believe that learners are not empty vessels that are waiting to be given all the information by the teachers in class. The participants give learners the chance to discuss and debate in class, and they give learners projects and investigations to complete on their own at home or the library (*cf.* Schunk & Zimmerman, 2007:10). The development of self-observation allows learners to focus on the content of the task, analyse it and come up with ways to complete it. The participants believe that if learners are given an opportunity to express themselves, they can realise their strengths and weaknesses, and this can develop their SRL skills.

In order for effective and quality learning to take place, learners need to learn to work with others and also with their parents, members of the community and teachers at school so that they can develop their SRL. The participants agreed that it is essential for them to know the strengths and weaknesses of the learners in their class, what they are capable of doing on their own, and how to assist them when they need help.

The participants stated that they always ask learners to seek help from their parents at home, although not all parents are able and willing to assist their children. They also ask learners to work in groups so that they can assist one another and ask teachers at school. Some participants indicated that a lack of resources like libraries, laboratories and internet facilities at their schools limit the learners from seeking help and getting relevant information. One participant indicated that it is very difficult these days to ask learners to go and look for information from the local library and internet café because of the high levels of crime in the community, as it is not safe for young children to move around the townships.

Effective teaching and learning take place in conducive classroom environments. The participants agreed that for learning to take place, the classroom environment must be welcoming, fully resourced with teaching and learning materials like charts, posters on the walls, concrete objects like counters and shapes when learning mathematics, and reading books with pictures. The participants also revealed that teachers should ensure that the classroom environment accommodates the diversity of all learners, learners must accept working together, and teachers must be positive, loving, caring, and confident (*cf* Harding *et al.*, 2018:9). The participants also mentioned that there must be classroom rules that instil discipline and responsibility. However, the majority of the participants disclosed that they have not reached that level where their classrooms are well equipped with teaching and learning resources. The participants complained that the SMT does little to provide them with resources such as science equipment, reading books for languages, and models and maps to teach social sciences, which prevents them from creating well conducive classrooms that encourage learners to enjoy learning.

(iii) Findings on teaching strategies intermediate phase teachers use to develop self-regulated learning skills in the self-reflection phase

Most of the participants revealed that they give learners a variety of activities like classwork, homework, research, investigation, demonstration and practical work to develop self-evaluation skills. The participants also stated that they allow learners to do self-evaluation and peer evaluation, since these types of evaluations enhance learners' SRL skills because it motivates their progress and understanding.

The participants also develop learners' reflection skills by asking them to monitor their own progress and encouraging them to explain how they have reached the answers (*cf*. Panadero, 2017:12). This strategy helps the learners to realise their mistakes and success, accept there is still room for improvement when they experience setbacks, and never feel discouraged. Some participants explained that learners are given a questionnaire and checklist to assess themselves with and reflect on the work that they have done. The teaching strategies participants claim to

apply are supported by Chang (2019:95), who avers that reflection is necessary for learners to revisit what they have learned for improvement and in-depth learning. The participants also explained that they also reflect on their own work after every assessment they give they give to learners by using item and error analysis. Item and error analysis allows the participants to identify problems that learners might experience and come up with intervention strategies on how to overcome those problems.

Harding *et al.* (2018:10) state that self-satisfaction is determined by how learners motivate themselves intrinsically, and this eventually leads to learners having the feeling of self-respect and self-satisfaction because of excellent performance in a learning task. The participants disclosed that they are aware of the importance of self-satisfaction after learners have completed the task successfully and achieved the learning goals. The participants encourage learners by praising and rewarding them when they have achieved a learning task, and this makes learners more motivated and want to try harder.

The participants also mentioned that they can build realistic attributions for success or failure by giving learners more assessment activities that allow them to accept their failures and successes. Learners are given assessments such as research or investigation, where learners have to find information on their own and give feedback in class. Learners build confidence when they realise that the responses they present to class are good and acceptable and they have potential. The participants also state that learners who do not do well can also realise where they went wrong and learn to correct their mistakes in a positive way. However, the participants also warned that for students to build realistic attributions for success or failure, the teacher should have a welcoming personality and allow learners to always feel free in class to express their views. Teachers should also avoid shouting at learners and degrading them when they make mistakes.

The majority of the participants revealed that they give learners a variety of assessments in class, both formal and informal. The participants also use different teaching strategies to accommodate all the learners in class and by doing so assist learners to become self-regulated. The participants indicated that they give learners individual attention to make sure that they understand, create a special time for learners with barriers, and give them oral work, especially those who struggle with reading or writing. Some participants mentioned that it is crucial for a teacher to understand that all their learners come from different backgrounds that make them different, and therefore teachers should ensure that they attend to their learners' individual needs appropriately.

The participants revealed that they conduct extra classes to cover the work that they did not complete in class, and they also use diagnostic and baseline assessments to find out what learners already know and where they lack so that they can know where to start when they plan

their work. The teaching strategies that are used by the participants show their attempt to promote and develop SRL skills. SRL focusses on learners being able to make independent decisions and taking charge of their own learning, through which they are able to monitor, direct and regulate their actions towards achieving their goals, becoming experts of what they are learning, and improve where they lack (*cf* Paris & Paris, 2001:90).

The participants also mentioned that they use disposition modelling where they act as role models because young children learn from observing. Task and performance modelling and modelling as a scaffolding technique are further used when the participants have to demonstrate a task to learners before they can do it on their own, at their own pace. The participants did not clearly explain how they use metacognitive modelling, which is where learners use their thinking skills to focus on interpreting information, analysing statements, and making conclusions about what they have learned (*cf.* Saliso & Ransoma, 2014:55). Modelling can be understood as a method for learning and acquiring new information, skills or behaviour. This approach is based on observation rather than effort of trial-and-error or direct experience (*cf.* Saliso & Ransoma, 2014:55). When teachers use this type of teaching strategy, learners can observe the teachers' thought processes and be encouraged to imitate the teachers' behaviour, which in turn encourages learning. Modelling is an effective method because young children learn through observation.

5.3.3 Findings concerning the third sub-question (*cf.* 1.6)

What challenges do intermediate phase teachers encounter with developing self-regulated learning?

Seven participants revealed that time is one of their biggest challenges because they are forced to complete the curriculum and do not have enough time to develop learners' SRL skills (*cf.* Van der Velde *et al.*, 2012; Kartika & Mania, 2017:69). The National Education Evaluation and Development Unit (NEEDU) report (2018) supports participants' perceptions that time can be one of the factors that hamper quality teaching and learning, since many schools experience time management issues like late coming and absenteeism of teachers and learners and teachers not following the time management allocated to subjects on the timetable.

The majority of the participants mentioned two other challenges that prevent them from developing learners' SRL skills, which are insufficient teaching and learning resources and a lack of parental involvement. The participants revealed that they do not have enough textbooks, atlases, posters on the walls like maps and pictures, concrete objects that learners can use to read and count, libraries, laboratories and internet facilities at their schools. These resources have

a substantial impact on creating a classroom atmosphere that is conducive for the development of SRL (*cf* Ariani, 2017:64). According to NEEDU (2018), there is a budgetary allocation to purchase teaching and learning for all schools by the DBE, and the problem of insufficient learning and teaching support materials (LTSM) is caused by an ineffective retrieval system from previous learners in a grade.

The participants disclosed that most parents show little to no interest in their children's schoolwork (*cf*. Girmen, 2014: 29). They do not help them with their homework and only a few parents respond when they are asked by teachers to come to school to discuss their children's academic progress and the social and economic conditions that sometimes influence learners' academic progress. Parental involvement is important in assisting teachers to have a better understanding of their learners, because parents are their children's first teachers and continue to play an active role in their education and lives. However, most participants revealed that they have lost trust and hope in parental support when it comes to learners' academic learning. The common view amongst the participants that a lack of parental involvement and support negatively influences the achievement of learners is supported by Liu *et al.* (2020:2), who aver that parental involvement at school improves learners' social, emotional, intellectual, and developmental needs at home and school.

One participant mentioned that one big challenge is the system of education, which focuses on results and pass rates rather than the quality of education in developing SRL skills in learners, and in most cases, learners are progressed to the next grade without having acquired all the necessary skills and knowledge in the previous grade. Progression is the movement of a learner from one grade to another in the form of 'automatic promotion' or grade promotion in spite of the learners not having complied with all the promotion requirements (*cf*. Pretorius, 2014:348). Progression is used to prevent a learner from being retained in a phase for a period exceeding four years (DoE, 2011:11).

Munje and Maarman (2016:194) explain that the advantage of progressing learners is that they are allowed to stay in the same class with their peers in their year group, and when proper progression policy is in place at schools to support those learners to cope, this measure can work. However, the progression policy does not work because teachers struggle to cope when using differentiated teaching as a strategy in class given the already limited resources, overcrowding, and lack of pedagogical knowledge on how to teach learners with learning barriers. Consequently, the development of SRL skills received less attention.

Few participants mentioned that learners are lazy to think on their own without the assistance of teachers and also that learners fail to complete their tasks given in homework and classwork. The participants, however, did not mention what strategy they use to find out what might be the cause

of learners' unwillingness or failure to complete their work and not having confidence and motivation to work independently. This shows that, in this regard, teachers still use traditional teaching methods where the main task of teaching is for learners to master the subject content while failing to find out why other learners are not showing interest in their learning. It means that these learners lack motivation and the knowledge to apply self-regulated skills to keep on pushing until they achieve the learning outcomes. The participants mentioned that their classrooms have diverse learners who learn at different paces, yet they never mentioned how they plan their lessons to make sure that all the different learners in class are accommodated.

5.3.4 Findings concerning the fourth sub-question (cf. 1.6)

What support, if any, do intermediate phase teachers receive from the school management teams to develop self-regulated learning?

The main function of the SMT is the responsibility of quality teaching and learning. The SMT is responsible for the daily management of activities in the school. They should understand the departmental policies, which also enable them to perform their duties well with confidence (DoE, 2002).

The SMT should know the prescribed National Curriculum, including the values and goals which shape it, as well as effective teaching and learning that supports the delivery of the National Curriculum's strategies and approaches to help schools to develop a learning culture and raise levels of achievement and excellence in context. The Curriculum also includes methods for building and developing a nurturing and supportive environment for effective teaching and learning and standards that will ensure equity in learner access for quality teaching and learning. The SMT should promote strategies aimed at encouraging high expectations and setting realistic targets to achieve and facilitate the on-going monitoring and evaluation of educators in all classroom practices (Policy on the South African Standard for Principals, 2015:14).

Teachers need continuous support from the SMT and the DoE in order for them to be self-directed and self-regulated (Ariani, 2017:64). The participants gave varied responses regarding the support they receive from the SMT and DoE. Nine participants revealed that they do not receive support from the SMT and the DBE. Some participants expressed their frustration with the limited support in saying the only thing that matters is pass rates, and the SMT and the DoE put pressure on them for results.

Some other participants disclosed that their head of department (HOD) gives them emotional support by giving them hope and comfort when they cannot cope with the workload and discipline of learners. This type of support can indirectly be linked to the development of SRL, because

emotional support keeps teachers motivated to teach. An unmotivated teacher who does not believe in their own capabilities will not be able to develop SRL skills very effectively in learners (Zimmerman, 2008:167).

Another type of support mentioned by the participants was support with teaching and learning resources and documents in the form of textbooks that should be used by learners, timetables, ATPs, circulars, and policy documents from the DoE. The participants revealed that they attend meetings with the SMT and the subject advisors where the main discussion is learning content, assessment, and planning instead of teaching strategies that develop SRL.

Some participants also mentioned that the SMT is interested in learners getting good grades but places no emphasis on how to assist teachers with teaching and learning strategies that can assist learners to pass. One participant mentioned that after every formal assessment, they are required to do an item and error analysis and devise a subject improvement plan in where they note common items in which learners underperformed, the reason for said underperformance, and intervention strategies that they can use to correct those mistakes. The participant pointed out that they always do an item and error analysis and submit them to the SMT and the subject advisors. However, they do not receive any feedback or interaction during which to discuss those intervention strategies and receive assistance and development. This means that the item and error analysis and subject improvement plans are just submitted for compliance, where it could have been used to develop pedagogical knowledge that is beneficial for the development of SRL skills in the various subjects. Teachers who find it difficult to self-regulate typically encounter too many demands in their workplace, such as workload and overcrowding in class, which the SMT is supposed to address. These factors affect teachers' ability to maintain their work schedule and encourage self-regulation in class (*cf.* Kartika & Mania, 2017:69).

5.4 RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

5.4.1 Training on how to develop and improve teachers' self-regulated learning skills

Developmental workshops organised by the DBE should not only focus on content knowledge but should also involve training and development for teachers on different teaching strategies that enhance SRL. The SMT must revive professional learning committees (PLCs) from the school level up to the district level, where teachers meet and share learning content knowledge and teaching strategies they use, which will promote collaborative work toward developing and promoting sufficient and effective SRL teaching and learning practices. Teachers need to be given feedback and development on the item and error analysis and subject improvement plans they

submit to the SMT and supported with teaching strategies that are beneficial for the development of SRL skills that will improve learners' academic performance.

There should be clear guidelines developed by FSDoE/DoE and SMT for earmarked staff development sessions for SRL at school level, but more in particular for the Intermediate Phase.

Learners with learning barriers and differently abled learners should be included in differentiated school curricula or learner support programmes and teachers should be trained on regular basis on how to support these learners.

Primary school teachers need to be trained and be familiar with SRL and its related aspects. Intermediate teachers need to be guided on issues relating to learner diversity and inclusivity and also be capacitated in developing metacognitive self-monitoring and self-observation skills.

The SMT should engage the relevant stakeholders to assist with funding, resources and sponsorship for crucial resources needed for the promotion of SRL.

The SMT should cater the needs of learners and teachers to promote SRL at school.

There is a need of a prolonged school wide approach to support the development of SRL, more especially the Life Orientation teachers and the effective use of Life Orientation subject contents in advancing SRL in the Intermediate Phase.

5.4.2 Curriculum and policy reviews

Teachers need to be trained on how to assist learners who have been progressed to the next grade. The Policy Pertaining the Programme and Promotion Requirements of the National Curriculum Statements (2012) that deals with progression should have guidelines on how to assist teachers to overcome challenges with supporting and teaching progressed learners, and there should be training on how to use differentiated teaching in class. The curriculum designers should also review the time allocated to each topic in the different subjects; they should be realistic in considering whether the time allocated gives allowance for diverse learners in class. They should also give due consideration to the issue of overcrowding, which hampers teachers from giving learners individual attention, insufficient teaching and learning resources and teaching strategies that develop SRL. The curriculum should not overemphasise factual content that results in rote memorisation of facts and produces good marks while learners are not able to apply what they have learned in other situations. Teaching and learning should be life-long, and learners should

not be forced to learn; they should be independent and be motivated to engage in their learning tasks.

Teachers need to be developed in SRL skills, especially metacognitive self-monitoring, which enables learners to self-monitor and track down their progress and learning outcomes. Furthermore, teachers need to know how to develop metacognitive modelling where learners use their thinking skills to focus on interpreting information, analysing standards, and making conclusions about what they have learned. Training on SRL should focus more on equipping teachers with methods to deal with learners that display adaptive or defensive behaviour when learners do not perform well in a task. Teachers also need training on how to teach learners to set short- and long-term learning goals and what teaching strategies to use to teach learners how to set goals.

5.5 CONTRIBUTIONS TO THE STUDY

The main aim of this study is to explore the teaching strategies primary school teachers use to develop and encourage SRL in learners. The study provided data on primary school teachers' knowledge about SRL. The research offers an opportunity to understand the challenges primary school teachers encounter in their efforts to develop SRL. Lastly, data was provided on the support primary school teachers receive from the SMT in developing SRL. In light of the hierarchical nature of schooling and that higher education access and success are grounded in the foundations built in primary school and high school (Spaull, 2018), the development of SRL skills are vital for the achievement of academic goals and improving pass rates.

5.5.1 Contribution to the research focus area

The aims of this study are in line with the mission of the Research Focus Unit Self-directed Learning at the North-West University, because the findings of this study contribute to knowledge and understanding of the development of self-regulated learning and self-directed learning in different educational contexts, such as quintile 1 and 2 schools. Findings from this research contribute to knowledge of factors that promote or inhibit the development of self-regulated learning, which in turn broadens knowledge about self-regulated learning theories and praxis in the South African education landscape.

5.6 LIMITATIONS TO THE STUDY

This study is limited in that it only focuses on the intermediate phase teachers in the Lejweleputswa District, Thabong township. Lejweleputswa is very big and has many primary schools; if more teachers are interviewed in the district, more responses could be gained that may

add more value to the research. The other limitation is COVID 19 pandemic because, even though the participants agreed to be interviewed and all the regulations of COVID 19 were followed, it appeared as though some of the participants were in a hurry to finish the interview because they were anxious about being in contact with other people.

5.7 RECOMMENDATION FOR FURTHER STUDY

The following recommendations are made for studies:

- The Free State province is big and has primary schools situated in the rural villages, farms, towns, and townships. A similar study should be conducted in the whole province to find out how teachers develop SRL in primary schools.
- The research should be extended to foundation phase teachers, because they are the ones who should lay the foundation for SRL, and there is a need to find out how they develop learners' SRL.
- The research should also include subject advisors, who are the curriculum experts and who should be knowledgeable on how to guide teachers on implementing the curriculum effectively.

5.8 CONCLUSION

The aim of this study was to explore the teaching strategies primary school teachers (intermediate phase) use to develop and enhance SRL in the Lejweleputswa District, Welkom. The research findings revealed that even though the majority of teachers are not familiar with the concept of SRL, some of their teaching strategies do enhance and develop SRL in learners. Primary school learners develop SRL in learners by giving them group work, work in pairs and one-on-one learning, investigation, research, and discussions.

However, the participants still lack knowledge on how to teach learners to set short- and long-term goals and what teaching strategies they can to teach learners how to set goals. Some participants' responses showed that they still use traditional methods of teaching because they feel that learners are lazy to think and work independently and they think that it is only the 'intelligent' learners who can acquire SRL skills.

Teachers need regular training on teaching strategies that develop SRL. The chapter also discussed the findings pertaining to the research questions, followed by recommendations on how to improve teaching strategies teachers use for further studies and the limitations of the study.

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ADDENDUM A ETHICS APPROVAL LETTER



Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
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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 24 June 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: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

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

Student / Team: K Agbenyegah (MEd student – 24770027)

Ethics number:

N	W	U	-	0	1	9	0	9	-	2	0	-	A	2
Institution				Study Number						Year			Status	

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

Application Type: Single study

Commencement date: 24/06/2021

Risk:

Low risk

Expiry date: 24/06/2022

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: (22351930) C:\Users\22351930\Desktop\ETHICS APPROVAL LETTER OF STUDY.docm
8 November 2018

Current details: (22351930) M:\DSS1\8533\Monitoring and Reporting Cluster\Ethics\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

ADDENDUM B FREE STATE PROVINCIAL DOE PERMISSION

Enquiries: MZ Thango (082 537 2654)
Ref: Notification of Research: K.B.Agbenyegah
Email: MZ.Thango@fseducation.gov.za



District Director
Lejweleputswa District

Dear Ms. Zonke

NOTIFICATION: PERMISSION TO CONDUCT RESEARCH PROJECT IN THE LEJWELEPUTSWA DISTRICT

This letter serves to inform you that **Ms. K.B Agbenyegah** has been granted permission to conduct research in the Lejweleputswa District under the auspices of the North West University (Potchestroom). The details in relation to the research project are as follows:

- 1) **Topic:** Primary School teachers teaching Strategies that develops and enhance self-regulated learning.
- 2) **List of schools involved:** Bedelia Primary School, Hani Park Primary School and Mokgwabong Primary School.
- 3) **Target population:** 15 Educators from each school teaching Intermediate Phase
- 4) **Period of research:** From the date of signature of this letter until 30 September 2021. Please note the department does not allow any research to be conducted during the fourth term (quarter) of the academic year nor during normal school hours. The researcher is expected to request permission from the school principals to conduct research at schools.
- 5) **Research Benefits:** The main aim of this study is to explore the teaching strategies primary school teachers use to develop and encourage self-regulated learning in learners. The study will provide data on primary school teachers' knowledge about self-regulated learning. The research offers an opportunity to understand the challenges primary school teachers encounter in their efforts to develop self-regulated learning. Lastly, data will be provided on the support primary school teachers receive from the School Management Team (SMT) to develop self-regulated learning. In light of the hierarchical nature of schooling and that higher education access and success are grounded in the foundations built in primary school and high school, (Spaull, 2018), the development of SRL and SDL is vital for the achievement of academic goals and to improve pass rates.
- 6) The Sub-directorate of Research & Policy will make the necessary arrangements for the researchers to present the findings and recommendations to the relevant officials in the district.

Yours sincerely

Mr. MZAMO W. JACOBS
DIRECTOR: QUALITY ASSURANCE, M&E AND STRATEGIC PLANNING

DATE: 27/08/2021

RESEARCH NOTIFICATION: K B AGBENYEGAH 26 AUGUST 2021. LEJWELEPUTSWA DISTRICT
Strategic Planning, Research & Policy Directorate Private Bag X20565, Bloemfontein, 9300 - Thuto House, Room 101, 1st Floor, St Andrew Street, Bloemfontein

www.fsdoe.fs.gov.za

Enquiries: MZ Thango (Tel. 082 537 2654)
Ref: Research Permission: K B Agbenyegah
Email: MZ.Thango@feducation.gov.za

12 Wicocks Street
Naudeville
Welkom
9459



Dear Ms. Agbenyegah

**PERMISSION TO CONDUCT RESEARCH IN THE FREE STATE DEPARTMENT OF EDUCATION:
LEJWELEPUTSWA DISTRICT**

This letter serves to inform you that you have been granted permission to conduct research in the Free State Department of Education within the Lejweleputswa Education District. The details in relation to your research project with the University of The Free State are as follows:

- 1) **Topic:** Primary School teachers teaching Strategies that develops and enhance self-regulated learning.
- 2) **List of schools involved:** Bedelia Primary School, Hani Park Primary School and Mokgwabong Primary School.
- 3) **Target population:** 15 Educators from each school teaching Intermediate Phase.
- 4) **Period of research:** From the date of signature of this letter until 30 September 2021. Please note that the department does not allow any research to be conducted during the fourth term (quarter) of the academic year. Should you fall behind your schedule by three months to complete your research project within the approved period, you will be required to apply for an extension. The researcher is also expected to request permission from the school principals to conduct research at schools.
- 5) **Conditions:** Please note that the permission granted is subject to the following conditions:
 - The collection of data must not interfere with the normal tuition time or teaching process.
 - A bound copy of the research document must be submitted to the Free State Department of Education, Room 101, 1st Floor, Thuto House, St. Andrew Street, Bloemfontein.
 - You will be expected, on completion of your research study to make a presentation to the relevant stakeholders in the Department.
 - The ethics documents must be adhered to in the discourse of your study in our department.
- 6) **Financial implications:** Please note that costs relating to all the conditions mentioned above are your own responsibility

We wish you all the best with your research project.

Yours in education

Mr. MZAMO W. JACOBS
DIRECTOR: QUALITY ASSURANCE, M&E AND STRATEGIC PLANNING

DATE: 27/08/2021

RESEARCH NOTIFICATION. K.B. AGBENYEGAH 26 AUGUST 2021. MOTHEO DISTRICT
Strategic Planning, Research & Policy Directorate Private Bag X20565, Bloemfontein, 9300 - Thuto House, Room 101, 1st Floor, St Andrew Street, Bloemfontein

www.feducation.gov.za

ADDENDUM C PERMISSION FROM SCHOOLS



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

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: 0834853725
Email: keneilwesep@gmail.com

Date 10 May 2021

PERMISSION LETTER: SCHOOL PRINCIPAL/OTHER RELEVANT PERSON

I herewith wish to request your permission for teachers to participate in this research, which involves completing an open-ended questionnaire and having a follow up telephonic interview. Prior to granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

ETHICS APPLICATION NUMBER

xxx

PROJECT SUPERVISOR: Professor B W. Geduld
ADDRESS: The Faculty of Education
School for Professional Studies in Education
Building B11A
North-West University
Internal Box 539
Potchefstroom
2520
CONTACT NUMBER: 018 299 4583/ 0764039583

MEMBER OF PROJECT TEAM MEd-Student: Keneilwe Agbenyegah
ADDRESS: 12 Willocks Street
Naudeville
Welkom
9459

CONTACT NUMBER: 0834853725

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 primary aim of this research is: To explore the teaching strategies primary school teachers use to develop and encourage self-regulated learning (SRL) in their learners.

Secondary aims:

- To explore what teachers know and believe about self-regulated learning.
- To determine which teaching strategies primary school teachers use to develop their learners' self-regulated learning.
- To determine the challenges encountered by teachers in primary schools to develop self-regulated skills.
- To determine the kind of support, if any, teachers receive from the School Management Team (SMT) to develop self-regulated skills.

Participants

- Primary school teachers (teaching Intermediate Phase Grades 4-6)

What is expected of the participants?

They will be expected to participate in semi-structured individual interviews that will take approximately 45 minutes to one hour to complete. The interviews will be conducted after school hours. 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 of their own perceptions of 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

The risks anticipated is minimal in this research. Should participants feel uncomfortable, they will be allowed to withdraw from participating in the research at any time. During the individual face-

to-face interviews, the researcher will ensure that she and the research participants adhere to safe social distancing principles by wearing masks and keeping a distance of more than 1,5m between them. In addition, the voice recorder will be thoroughly cleaned and will only be used by the researcher. Hand sanitizer (with at least 70% alcohol content) will be available during the data collection period. The number of individuals involved in the data collection process should be kept as low as possible, therefore only the researcher and one participant will be in a safe, quiet and well ventilated space during the interviews. No face-to-face research will be conducted with research participants if the researcher or any participant are positive for COVID-19 during the data collection period. Therefore, research participants will be asked to declare the Covid-19 health status.

Should the Covid-19 regulations change before the researcher has conducted the interviews and face-to face interviews become prohibited, the researcher will adjust the data collection method to online interviews. Permission to change the data collection method of the study will be requested from the SDL Research Unit Executive Committee. The ethics application will be resubmitted to the EduRec committee of the North West University.

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 at 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: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

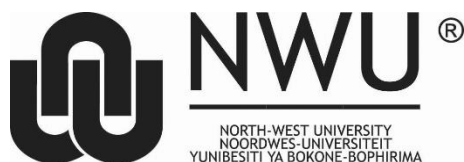
I declare that:

- 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

ADDENDUM D GOODWILL PERMISSION FROM SCHOOL GOVERNING BODY



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

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: 0834853725
Email: keneilwesep@gmail.com

Date 10 May 2021

GOODWILL PERMISSION: SCHOOL GOVERNING BODY/OTHER RELEVANT BODY

I herewith wish to request your permission for teachers to participate in this research, which involves participation in an individual interview. Prior to granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

ETHICS APPLICATION NUMBER

NWU-XXXXXXXX

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/ 0764039583

ADDRESS: MEMBER OF PROJECT TEAM MEd-Student: Keneilwe Agbenyegah
12 Willocks Street
Naudeville
Welkom
9459

CONTACT NUMBER: 0834853725

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:

The primary aim of this research is: To explore the teaching strategies primary school teachers use to develop and encourage self-regulated learning (SRL) in their learners.

Secondary aims:

- To explore what teachers know and believe about self-regulated learning.
- To determine which teaching strategies primary school teachers use to develop their learners' self-regulated learning.
- To determine the challenges encountered by teachers in primary schools to develop self-regulated skills.
- To determine the kind of support, if any, teachers receive from the School Management Team (SMT) to develop self-regulated skills.

Participants

- Primary school teachers (teaching Intermediate Phase Grades 4-6)

What is expected of the participants?

They will be expected to participate in semi-structured individual interviews that will take approximately 45 minutes to one hour to complete. The interviews will be conducted after school hours. 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 of their own perceptions of 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

The risks anticipated is minimal in this research. Should participants feel uncomfortable, they will be allowed to withdraw from participating in the research at any time. During the individual face-to-face interviews, the researcher will ensure that she and the research participants adhere to safe social distancing principles by wearing masks and keeping a distance of more than 1,5m between them. In addition, the voice recorder will be thoroughly cleaned and will only be used by the researcher. Hand sanitizer (with at least 70% alcohol content) will be available during the data collection period. The number of individuals involved in the data collection process should be kept as low as possible, therefore only the researcher and one participant will be in a safe, quiet and

well ventilated space during the interviews. No face-to-face research will be conducted with research participants if the researcher or any participant are positive for COVID-19 during the data collection period. Therefore, research participants will be asked to declare the Covid-19 health status.

Should the Covid-19 regulations change before the researcher has conducted the interviews and face-to face interviews become prohibited, the researcher will adjust the data collection method to online interviews. Permission to change the data collection method of the study will be requested from the SDL Research Unit Executive Committee. The ethics application will be resubmitted to the EduRec committee of the North West University.

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 at 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: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

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

ADDENDUM E LETTER FROM ETHICS COMMITTEE TO PARTICIPANTS



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

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: 0834853725
Email: keneilwesep@gmail.com

Date 10 May 2021

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: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

ETHICS APPLICATION NUMBER

NWU-

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/ 0764039583

ADDRESS: MEMBER OF PROJECT TEAM MEd-Student: Keneilwe Agbenyegah
ADDRESS: 12 Willocks Street
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9459

CONTACT NUMBER: 0834853725

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 the teaching strategies primary school teachers use to develop and encourage self-regulated learning (SRL) in their learners.

Secondary aims:

- To explore what teachers know and believe about self-regulated learning.
- To determine which teaching strategies primary school teachers use to develop their learners' self-regulated learning.
- To determine the challenges encountered by teachers in primary schools to develop self-regulated skills.
- To determine the kind of support, if any, teachers receive from the School Management Team (SMT) to develop self-regulated skills.

Participants

- Primary school teachers (teaching Intermediate Phase Grades 4-6)

What is expected of you as participant?

You will be expected to participate in a semi-structured individual interview, that will take approximately 45 minutes to an hour to conduct. 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-regulated learning and its value for academic achievement. You as a teacher will be in a position to reflect on how you develop or enhance learners' use of self-regulation learning in the subjects you teach.

This study might also 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. However, should you feel uncomfortable, you will be allowed to withdraw from participating in the research at any time. During the individual face-to-

face interviews, the researcher will ensure that she and the research participants adhere to safe social distancing principles by wearing masks and keeping a distance of more than 1,5m between them. In addition, the voice recorder will be thoroughly cleaned and will only be used by the researcher. Hand sanitizer (with at least 70% alcohol content) will be available during the data collection period. The number of individuals involved in the data collection process should be kept as low as possible, therefore only the researcher and one participant will be in a safe, quiet and well ventilated space during the interviews. No face-to-face research will be conducted with research participants if the researcher or any participant are positive for COVID-19 during the data collection period. Therefore, research participants will be asked to declare the Covid-19 health status.

Should the Covid-19 regulations change before the researcher has conducted the interviews and face-to face interviews become prohibited, the researcher will adjust the data collection method to online interviews. Permission to change the data collection method of the study will be requested from the SDL Research Unit Executive Committee. The ethics application will be resubmitted to the EduRec committee of the North West University.

Confidentiality and protection of identity

The information collected from you through the interview 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
Keneilwe Agbenyegah

DECLARATION BY PARTICIPANT:

By signing below, I agree to take part in a research study entitled: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

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

ADDENDUM F SEMI-STRUCTURED INDIVIDUAL INTERVIEW QUESTIONS

Title of project: Primary school teachers' teaching strategies that develop and enhance self-regulated learning

Questions and possible follow up questions or probes	Aim of question and possible follow up questions when participants give vague responses
1. The concept of self-regulated learning is widely discussed in current literature, as well as among teachers, and is perceived as an important aim of teacher education and development of learners. What does this concept self-regulated learning mean to you? An explanation of the concept will be given if the participant does not have any knowledge of the concept. Characteristics of self-regulated learners will be explained. 2. Did you ever come across learners with these characteristics in your teaching career? How would you describe these learners?	To determine whether teachers are aware of the concept self-regulated learning. To determine what are teachers' perceptions of the concept self-regulated learning.
3. Does the Annual Teaching Plans (ATP) and Policy Documents provided by the Department of Education and Subject Advisors assist and enhance the development of SRL?	To determine whether teachers are trained to use and implement self-regulated learning strategies. And whether the Department of Education give to teachers to develop SRL.
4. Tell me about the times when you were trained or have received information on how to develop self-regulated learning in learners.	To determine teachers' knowledge of SRL.

5. Do you think teachers have a role to play, or not in the development of learners' self-regulated learning?	To determine teachers' perceptions about their roles in the development of self-regulated learning skills.
6. What teaching strategies that apply in your daily teaching do you find very effective to develop or enhance self-regulated learning skills? Please explain your answer.	To determine whether teachers know and apply teaching strategies that assist learners to develop SRL.
7. Please describe the activities you think teachers should do stimulate the development of self-regulated learning skills in the subjects in which you are involved.	To determine teachers' knowledge and perceptions about their roles in the development of self-regulated learning skills in specific subjects.
8. What do you think motivates learners to be self-regulated?	To determine teachers' perceptions about the learners' roles to take responsibility for their learning.
9. How do you think should an ideal classroom look like to develop self-regulated learning skills in learners?	To determine teachers' perceptions about the role of the teaching and learning environments that develop and enhance self-regulated learning skills.
10. How do you improve performance of learners who are underperforming in your subject?	To determine the self-regulated strategies teachers use in the Intermediate Phase.
11. What do you do when your learners experience problems with reading or writing or understanding new content you teach?	To determine which self-regulated learning strategies teachers use while teaching different subjects.
11. Do you believe your learners can take responsibility for their own learning? Please give a reason for your answer.	To determine which self-regulated learning strategies teachers use to help learners take responsibility for their own learning.
12. Please explain what you do to help your learners make their own decisions	To determine which self-regulated learning strategies and instructional designs such as

on where, when, how and with whom to study.	problem-based learning or cooperative learning etc. teachers use to help learners take responsibility for their own learning.
16. Which specific actions do you take to develop self-regulated learning skills in your learners? If vague answers are given the above question, follow-up questions will be asked to clarify what is meant by specific actions and to determine how SRL skills are developed: For example: How do you teach your learners to: Plan time and strategies and resources when they have to complete learning tasks? Set goals for themselves at the beginning of a lesson? (proximal goals) Set goals for themselves that they want to achieve at the end of the year in your subjects? (distant goals) Use different learning strategies such as underlining, minds maps making summaries? Think and to reflect about the new things they learn in your subject? Evaluate whether they understand the content in your subject? Evaluate whether they are making progress to complete learning tasks successfully?	To determine which self-regulated learning strategies teachers use while teaching different intermediate phase subjects.
17. What factors at this school make it challenging or difficult for you to develop or enhance learners' self-regulated learning skills at your school?	To determine the challenges encountered by teachers in primary schools to develop self-regulated skills. Probing questions can be asked about parental support for learner academic work, the socio-economic situations of the school community, the

	teaching and learning culture of the school and learner characteristics that might make the development of self-regulated learning skills challenging.
18. Do you think the SMT at your school value the development of Self-regulated learning skills in the learners of this school? Please give reasons for your answer. 19. Can you give examples of things that your School Management Team (SMT) does to support you with the develop self-regulated skills in your teaching?	To determine the kind of support, if any, teachers receive from the School Management Team (SMT) to develop self-regulated skills. Possible follow up questions can be asked to determine how the SMT ensure that learning resources are available, or school rules and policies such as homework policies to fosters independent work are adhered to.

ADDENDUM G LANGUAGE EDITOR'S CERTIFICATE



Language Editor's Declaration

■ Language Matters Pty Ltd
■ info@languagematters.co.za
■ 082 920 2991
■ www.languagematters.co.za

Language editing – Translation – Transcription – Simultaneous interpreting

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2531

This document certifies that the manuscript/title listed below has been edited, within reasonable, ethical and professional limits, for syntax, grammar, spelling, punctuation and specific stylistic requirements of the English language by one or more qualified language practitioner(s) at Language Matters. The editor's revisions and comments serve as recommendations; the overall quality of the final manuscript's contents remains the responsibility of the client/author. The language editor does not accept responsibility for any changes made to the manuscript after issuing this declaration.

Manuscript title: "Primary school teachers' teaching strategies that develop and enhance self-regulated learning"

Author(s): KB Agbenyegah

Date Issued: 8 December 2021

Issued by: BGS Language Matters and Media Services